Contraceptive Use and Infertility: A Dilemma in Bolgatanga (Upper East Region) Ghana

Master African Studies

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Abstract

Teenage pregnancy is a major issue in Ghana and could be reduced by increasing the use of contraceptives. Contraceptive uptake in Ghana has doubled since 1989, but is still relatively low (GSS, 2013). One of the reasons is the fear of side effects of which infertility brings the biggest fear (Krugu, 2016; Bratton, 2010). This study looked at those fears in the Bolgatanga municipality and analysed the origin of these fears, attitude towards Family Planning (FP) and intention to use contraceptives. Focus Group Discussions (FGDs), Key Informant Interviews (KIIS) and a questionnaire for Senior Highschool students were used to get insight in the influence of education, the healthcare system and religion on the usage of contraceptives and beliefs related to FP.

An abstinence-only method is still dominant in the educational system. Information provision is often scarce, incomplete or incorrect which leads to mixed messages which results in an increasing lack of trust in modern FP methods. The healthcare system has to deal with this distrust and also faces challenges concerning the supply and distribution of contraceptives. Religion, although not significantly associated with intention to use contraceptives, still plays an important role in decision-making in sex-related issues.

Knowledge, attitude, fears and cultural or religious norms are all contributing factors to contraceptive uptake and should thereby all be incorporated in policies and programs to increase this uptake. A comprehensive approach is acquired, which includes the home, the school, the healthcare sector, the community and religious groups to discard existing beliefs which obstruct the use of contraceptives.

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LIST OF ACRONYMS

CPR	Contraceptive Prevalence Rate
FP	Family Planning
GES	Ghana Education Service
GHS	Ghana Health Service
GSS	Ghana Statistical Service
IUD	Intrauterine Device
JHS	Junior High School
LAM	Lactational Amenorrhoea Method
NGO	Nongovernmental Organisation
SHS	Senior High School
SRHR	Sexual and Reproductive Health and Rights
WASSCE	West African Senior School Certificate Examination
WHO	World Health Organisation
YHFG	Youth Harvest Foundation Ghana

CHAPTER 1 Introduction

Teenage pregnancy is a major issue on social and health level in Ghana (Ghana Statistical Service (GSS), Ghana Health Service (GHS), and ICF International, 2015). According to the Ghana Demographic and Health Survey 2014, 14% of women in the age of 15-19 have given birth or are pregnant with their first child. Not only can a pregnancy at a young age be dangerous for a girl with an immature body, it also prevents girls from completing their education and above that, teenage mothers outside the marital context are seen as deviant (Bratton, 2010). Teenage pregnancies can have multiple consequences (psychological, physical and social) for both mother and child (Cantlay, 2015).

A study in the Bolgatanga Municipality of Ghana shows that low-income, lack of sex communication at home, abstinence-only messages at school and the lack of knowledge of contraceptives are risk factors for teenage pregnancy (Krugu et al., 2016). Also, there are still firm beliefs that some types of contraceptives, besides condoms, will cause infertility (Krugu, 2016; Bratton, 2010). These beliefs are contributing to a lower use of contraceptives and therefore indirectly also contribute to a higher risk for teenage pregnancies. Still, very little is known about how these beliefs originate, spread and continue to exist. More insight in the perpetuating factors of such beliefs could help form recommendations for helping discarding these misconceptions.

Research objective and research questions

The original plan was to administer a questionnaire to students and interview three generations of females within one family, employees of fertility clinics and teachers to study the perception on FP in relation to fears for infertility. During the orientation phase of this study, I found out that there were enormous conflicting opinions about the use of family planning methods and sex education between the health sector and the educational sector. This made me decide to focus on the discrepancies between these sectors instead of possible

discrepancies between generations. Also, in this region in Ghana, there would not pass a day without conversations where opinions seemed to arise from religious beliefs. As the African writer Ngũgĩ wa Thiongo (1972, pp. 31) describes in one of his essays: *"I cannot escape from the church. Its influence is all around me."* This made me also focus on the influence of religion within this discourse.

The focus of this research lies on the attitude towards contraceptive use and its associated beliefs. The main objective of this research is to get insight on how these beliefs originate and give recommendations to discard these beliefs. This by answering the following research questions:

1. To what extent do the healthcare sector, educational sector and religion influence the attitudes of the people from Bolgatanga towards contraceptive use and to the belief that the use of contraceptives can lead to infertility?
2. In which way do the healthcare sector, educational sector and religion influence the attitudes of the people from Bolgatanga towards contraceptive use and to the belief that the use of contraceptives can lead to infertility?
3. Where do people in the Bolgatanga municipality get their information about FP?
4. Which misconceptions about FP are present in this municipality?

This research can be divided in four parts. The first part, about FP in general, describes the presence of attitudes, communication, fears and intention to use FP. The objective in this part is to give an overview of perceptions and attitudes from people with different backgrounds within the municipality of Bolgatanga and surroundings. What is their attitude towards FP? What is their own experience with FP? Do they have a fear for infertility or other side effects? Are there any other beliefs or myths that guide their perception of contraceptive

use? Whom are they getting their information about FP from? What is their intention to use FP? Which factors influence this intention?

The second part looks at FP within the context of education. The objective here is to find out what role education plays in the transfer of information about FP to children. What information about FP is covered in the text books? What is the attitude of teachers towards sex education? What is the attitude of Secondary High School students towards sex education and do they think they get sufficient information? What is their knowledge about contraceptives?

The third part of this research deals with FP within the context of healthcare and developmental organisations. The attitude of healthcare professionals towards contraceptive use is central here. In addition, the challenges these organisations are facing are discussed. The influence of religion on FP is described in the last part. Is there a difference in attitude towards FP between the main religions in this region? Is the declining influence of religion, as described in other literature, also noticeable in this region? Does religion allow contraceptive use within as well as before marriage?

Conceptual framework

Theoretical models can be used to characterise the underlying factors of health behaviours (Reid and Aiken, 2011). Contraceptive use can be considered as such a health behaviour. The objective of these models is to predict future behaviour. The theory of planned behaviour and the theory of reasoned action are comprehensive theories which specify variables that can influence behaviour (Albarracín et al., 2001). These variables are a) intention; b) attitude; c) subjective norm; d) perceived behavioural control and e) behavioural, normative and control believes. The difference between the theory of planned behaviour and the theory of reasoned action is that within the theory of reasoned action it is not believed that perceived behavioural control can influence behaviour directly in contrast to the theory of

planned behaviour where encountered obstacles in the past can have an effect on future behaviour. Figure 1 presents both hypothesised models.

Intention is influenced by subjective norms, attitude towards the behaviour and perceived behavioural control (Guan et al., 2016). The assumption of the theory of planned behaviour is that other demographic and/or environmental factors operate via these three indicators. Subjective norms can be defined as how significant others (family, friends) think the individual should behave (Eggers et al., 2016). Attitudes are the positive or negative evaluations concerning the desired behaviour. Perceived behavioural control is the expectation one has of his own ability to perform the desired behaviour.

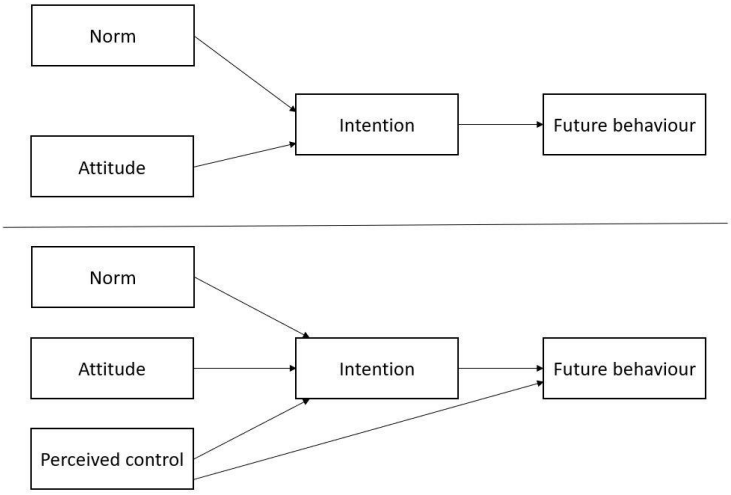

Figure 1: The theory of reasoned action (top) and the theory of planned behaviour (bottom) adapted from Albarracín, Johnson, Fishbein, & Muellerleile (2001).

Theory of planned behaviour is one of the most frequently used models in the field of HIV/AIDS (Espada et al., 2016). It is the most suitable model for predicting frequency of condom use among young people as well. Research has shown that the theory of planned behaviour as a predictive tool for condom use in sub-Saharan Africa is moderately successful and can be used for development and evaluation for interventions (Eggers et al., 2016). Though, the contribution of attitude, social norms and perceived behavioural control seem to differ across regions. Both the theory of reasoned action and theory of planned behaviour are

equal when it comes to predicting condom-use behaviour, but the theory of planned behaviour seems to predict the intention to use better (Muñoz-Silva, Sánchez-García, Nunes, & Martins, 2007). Research by Peyman and Oakley (2009) support the utility of the theory of planned behaviour for predicting contraceptive behaviour among married women. Therefore, both the theory of planned behaviour as the theory of reasoned action will be used to construct the interviews and questionnaire and to explain the results of this present study.

Family Planning policies in Ghana

The World Health Organization (WHO) defines family planning as the "ability of individuals and couples to anticipate and attain their desired number of children and the spacing and timing of their births" (Lauro, 2011, p.14). Lauro considers low levels of development and governance and decline in international investment for FP as underlying factors for the slow changes in fertility rates (total births per woman) in sub-Saharan Africa. Other factors are less urbanization, lower education among married women and off course the cultural and economic based high value of having many children (Lauro, 2011).

In the mid 1960's, Ghana came with a FP policy to try to reduce the high fertility number of five children per woman (Darteh and Doku, 2016). Ghana was the third African country to adopt a comprehensive population policy under the name 'Population Planning for National Progress and Prosperity' (Kwankye and Cofie, 2015). The main reason to reduce the high rate of population growth was to facilitate socio-economic development. This policy provided an opportunity for people to decide on the number and spacing of their children. The first implementation failed to reduce the fast population growth in the country. Mainly due to ignoring cultural and population issues, political willingness and service provision.

In the revised Population Policy and Action Plans of 1994, the government used a more systematic approach which integrated population variables (Kwankye and Cofie, 2015). The emphasis was from that moment not only on fertility reduction but in the context of

economic growth and sustainable development. The last couple of years, the policy is supplemented with the objectives of provision of information, education and counselling of individuals and couples next to providing affordable contraceptive services (GSS, GHS and ICF International, 2015).

Contraceptive methods

Contraceptive methods can be divided into two groups, traditional methods and modern methods (GSS, GHS and ICF International, 2015). Sterilisation (male and female), intrauterine device (IUD), implants, injectables, the pill, condoms and the lactational amenorrhoea method (LAM) are examples of modern birth control methods. This latter method means that women who are fully breastfeeding and are still amenorrhoeic (absence of menstruation) can use this period as a contraceptive method till at least six months after giving birth (Van der Wijden and Manion, 2015). Though, the end of the amenorrhoeic period is highly unpredictable.

Traditional methods include the Calendar Rhythm Method, The Billings Ovulation Method and withdrawal. (Hubacher and Trussell, 2015). Although these methods are in base natural, technological enhancements are sometimes used to improve effectiveness. A bead necklace and calendars, for example, help women to keep track of their fertile period and high-technology devices can predict the fertile period.

Contraceptive use in Ghana

According to the Ghana Demographic and Health Survey 2014, modern methods are more widely used than traditional methods. Injectables (8%), implants (5%) and the pill (5%) are the most popular modern methods used by married women (GSS, GHS and ICF International, 2015). According to research conducted by Abubakari et al. (2015), adolescents prefer to use injectables (48.6%) followed by the pill (29.6%).

Although the contraceptive use of women in Ghana has doubled since 1989, it is still quite low. The 2011 Multiple Indicator Cluster Survey reported a national average Contraceptive Prevalence Rate (CPR) of 34.7% (GSS, 2013). The CPR of the Greater Accra Region is the highest with 43.5%. The CPRs for the three northern regions of the country were much lower with 20%, 21.6% and 27.1% for the Northern, Upper East and Upper West Regions respectively.

There has been an increase in the use of modern contraceptives among lower educated women, but it remained constant among women with a higher education (Askew et al., 2017). This resulted in the CPR of modern methods being higher now among women with only primary education. Research in the Upper-West region shows that proximity to a health facility and having attained formal education have a strong association with contraceptive use (Achana et al., 2015). Other characteristics that influence contraceptive use are marital status and type of marriage, ownership of a mobile phone, couples desire to have children and the level of socioeconomic status.

The main reasons for discontinuation of the use of contraceptives are the wish to become pregnant (27.2%), becoming pregnant while using (20.4%) and the concern about side effects and health problems (21.6%) (GSS, GHS and ICF International, 2015). Women are mostly concerned about the side effects of implants (55.4%) followed by injections (39.2%) and the pill (20.7%). Only a small percentage stops using contraceptives for religious reasons. Does that mean that religion does not play a big role in actual contraceptive use?

Organization of the thesis

Chapter two elaborates on the study area. It starts with the choice of Bolgatanga as fieldwork location and continues with background information about this area. Chapter three is the method section where the design, ethics, data collection and data analysis will be reflected on in detail. The results of this research are divided in four parts. Chapter four gives

an overview of the attitudes, beliefs and concerns regarding FP from the perspective of people from the communities. Chapter five consists of the results concerning FP in relation to education. Chapter six focuses on information on FP in relation to healthcare and development organisations and chapter seven describes the results concerning religion. This thesis will end with a chapter with a final overall conclusion and recommendations.

CHAPTER 2 Study area

Before I began the Masters African Studies programme in Leiden University, I was already a premaster student Forensic Child and Youth Care Sciences at the University of Amsterdam. From the beginning, I knew I wanted to complete an internship on the African continent. For orientation in the possibilities, I went to an information meeting of study and internships abroad. There I met John Krugu, a director of a Nongovernmental Organisation (NGO) in Bolgatanga, Ghana. He was very enthusiastic about my intentions to combine the master Forensic Child and Youth Care Sciences with the Master African Studies. He invited me to come to Ghana and conduct research in the field of Sexual and Reproductive health and rights (SRHR). At that time, I did not know yet what my research questions would be, but one thing was for sure. I would go to Bolgatanga.

Bolgatanga

Bolgatanga is a municipality located in the centre of the Upper East Region of Ghana and is at the same time the regional capital (GSS, 2014). It has a total population of 131,550 people (48% male, 52% female) and the main occupation is agriculture. English is the official language of Ghana, but there are many local Ghanaian languages (Anyidoho and Kropp Dakubu, 2008). Gurene (or Frafra) is the largest indigenous language used in the Upper East Region. Poverty indications of Ghana show that Northern Ghana, where the Upper East Region is part of, continues to be the poorest area in the country. The type of family household which is dominant in this region is the extended family (GSS, 2014). Family is considered paramount in Ghanaian society (Cantalupo et al., 2006).

Ethnic groups

The main ethnic group in Upper East Region is the Mole-Dagbani (GSS, 2013). They form approximately 75 percent of the population in this region. Under this group one can make a further distinction in the Dagomba, the Nanumba, the Mossi, and the Mamprusi (Salm

and Falola, 2002). Mole-Dagbani is followed by Grusi, Mande and Gurma. The GSS uses the following main classification: Akan, Ga-Dangme, Ewe, Guan, Gurma, Mole-Dagbani, Grusi, Mande and others. Ethnic groups can, besides religion and language, also differ in traditions and perspectives on certain issues.

Religion

According to the 2010 population and housing census (GSS, 2013) the main religion practiced in Ghana is Christianity. In the Northern Region, Islam is the main religious affiliation. Christianity (57.6%), Traditional religion (22.3%) and Islam (17.1%) are the three main religious groupings in Bolgatanga (GSS, 2014).

Educational system Ghana

The education system in Ghana is a 6-3-3-4 system (EP-Nuffic, 2015). The first six years of primary school is divided in a 3-year lower primary phase and a 3-year upper primary phase. This is followed by three years of Junior High School (JHS) leading to the Basic Education Certificate Examination. After that, students can continue with Senior High School (SHS). This type of education leads to the West African Senior School Certificate Examination (WASSCE). After passing SHS, higher tertiary education of four years is possible.

The official language of instruction is English, except for the first years of primary school, where the most common language of the region is being used (EP-Nuffic, 2015). Between the ages of 6 and 15 years, education is compulsory. The Free Compulsory Universal Basic Education Programme founded in 1996, made primary school and JHS free of charge to ensure that every child of school age has access to basic education.

Still, in 2010 in the Upper East Region, about 51.9% of women had never attended school, 27.4% completed primary education, 10.5% JHS and only 0.3% completed secondary education. For males, these numbers are 39.1%, 32.6%, 11.8% and 6.1% respectively (GSS,

2013). The proportion of people with no education is higher among older people and in rural areas. According to the 2010 population and housing census of the Bolgatanga municipality (GSS, 2014), around 36% of the population never had any form of formal education and the majority of the people who had, only attained basic school education level (40.7%).

Contextual observations

Compound. To experience the local lifestyle at the fullest, I decided to stay at a traditional compound for the complete duration of my research period. The household consisted of approximately 20 individuals divided over five core families of which two were part of a polygamous family. Most of them were relatives, but the family also offered shelter to a friend of the family and two adopted sons. It was a mix of Traditionalists, Catholics and Pentecostalists. I stayed at a small private house (one room) with a mattress, a couch and a chair. There was a small place on the compound to wash myself with water which had to be personally fetched. There was a small building outside the compound in a field which served as a toilet.

Religion. From my experience, the three main religions coexist harmoniously. This was clearly visible in the way that my host family members respected each other's religion and even actively participated in practices of the different religions at special occasions. A Moslem colleague though, was of the opinion that Moslems were subordinated in this region. Also, during one of my visits to a SHS, students seemed almost insulted when I asked whether someone in the class practised the traditional religion. Their reaction was "*of course not."* Traditional religion was according to them something from the past. Nowadays, you are either Moslem or you practise one of the Christian religions.

During my stay, I visited different churches of different religious affiliations and was lucky to witness a lot of traditional practices as well. These traditional practices were shown primarily on funerals. Other practices took place more hidden from the outside world.

Everyday life. Bolgatanga is a small vibrant town with still a very rural atmosphere. Every three days, people from the area come to the market to sell their goods. Because of the dryness of the area, the food supply varies around the year. The price of fruit is in comparison with regions further south relatively high. Next to selling her goods on the market, my host mother also had a little shop (container) a couple metres from the compound, like a lot of people in Bolga, as the town in called by the locals. Most of the young people speak some English. From the older generation it is mostly the men who speak English.

There is not a lot of tourism in the region. Most of the foreign visitors are volunteers or travellers passing by from Burkina Faso. Therefore, the businesses are mostly targeting locals. There are mainly one-storey buildings with a maximum of three storeys. Although, nuclear families are rising, the percentage of extended families living in compounds is still very high.

The dry season which runs van November till June is also called the funeral season. During this season, people attend a lot of funerals. They feel obliged to show their respects to the family of the diseased. There is an element of reciprocity in this as well. When you visit another person's funeral and contribute financially, members of that family will also make their contribution when there is a funeral in your family. During my stay, two members of my extended family died. So, I was able to witness all the preparations, activities and practices. Especially when an older person dies, a lot of time and effort is put in the farewell ceremony to celebrate the life of that person.

My overall impression of Bolga is that it is a town in development where people with different background live harmoniously and cultural practices are still visible in everyday life. People are very friendly and helpful to one another. Maintaining relationships is considered to be very important.

CHAPTER 3 Method

Design

This study is a mix-method research with a qualitative driven approach. Information obtained from Key Informant Interviews (KIIs) and Focus Groups Discussions (FGDs) form the core of this thesis. A questionnaire is used to gain more insight in the attitude towards, intentions of using and communication about FP among youth. The study took place from the beginning of January till the end of July 2017.

Ethics

An ethical accountability was written and handed over to the supervisor at Leiden University prior to the departure to Ghana. All participants from the KIIs and FGDs were recruited by approaching them individually or via mediation by individuals I already talked to. After consent from the regional director of the Ghana Education Service (GES), three Senior High Schools were asked to select students to complete the questionnaire and one teacher for an in-depth interview. The schools were asked to select students from the age of 18 only. Permission from the regional director of the Ghana Health Service was granted to interview one of the executives.

All participants were provided with information about this study and about the voluntary, anonymous and confidential nature of their participation. Participants of the KIIs and FGDs signed a consent form, students who filled in the questionnaire added their names and signature on a list. In one FGD, the participants only spoke the local language (Frafra). The content and voluntary, anonymous and confidential nature of the study were translated and the forms were in these cases signed by a witness and supplemented with a fingerprint of the participants. The male translator was asked to sign a confidentiality form. The structure of the meeting and the questions were discussed with the translator prior to the discussion.

To guarantee anonymity, no names are used and for storage of the data all names were replaced by a participant number.

Data Collection

Instruments. For the qualitative part of this research, KIIs and FGDs were used. The researcher followed a schedule for these interviews and discussions (See for full protocol appendix 1). All participants were asked for demographic information (age, religious affiliation, ethnic group and educational level). This was followed by questions related to knowledge, attitude, usage and fear regarding FP like: What is your personal opinion about FP? Which birth control methods can you enumerate? Do you use or ever used contraceptives yourself? Do you think there are side effects when using contraceptives?

A questionnaire was developed to administer to SHS students (See appendix 2). The design and content were based on the conceptual framework mentioned in the introduction and examples from previous research conducted in Bolgatanga. This questionnaire consisted of 28 questions assessing demographic variables, attitude, knowledge, usage, intention and communication regarding FP. Religious affiliation was classified into Traditional worship, Islam, Christianity and other/no religion. Ethnicity was divided into Gurunsi/Frafra, Talensi, Nabdam and other to be specified. Some questions about the living conditions were added.

There were multiple types of questions. Yes and no questions were used to assess the marital status, sexual experience and current or past contraceptive use. Knowledge about FP methods was measured by a three- point scale Likert Scale (No, never heard of it, Yes, I know and Maybe, not sure). Sources of information were measured on a four-point scale (Never, a couple of times, one time and often). An open question to assess the age of first exposure to FP information was added to this section. Intention to use contraceptives was measured on a three-point scale (No, never, Yes, I would and Maybe, not sure). Eight statements about opinion from significant others about FP, side-effects, communication and knowledge were

answered on a five-point Likert scale from strongly agree to strongly disagree. The open questions, “Please state why a person should NOT use family planning methods” and “Please state why it’s good for people to use family planning”, were added at the end to get more insight in the thoughts behind the attitude towards FP. Answers were coded and some of the data had to be recoded

Procedure. Three Senior High Schools were randomly selected and visited after approval was granted by the director of GES. The objective of the research and ethics were explained to the headmasters/mistress. All schools cooperated and selected 33 of their students to administer the questionnaire. During data entering, I found out that the distribution of different religions made it impossible to analyse differences between groups. Therefore, one of the schools was approached to select 50 more student who practised the Islamic religion. This to make comparison possible.

To assess whether the questions were understandable for the target group, the questionnaire was checked by an employee of the Youth Harvest Foundation Ghana (YHFG) and a researcher from the Navrongo Health Research Centre. After that, it was administered to a representative sample of adolescents (N = 10) from the remedial school of YHFG. This pre-test data was not included in the final analyses.

The researcher was present during all questionnaire administrations. All students were informed about the purpose of the questionnaire and the anonymity and confidentiality of participation. It was emphasised that they were allowed to skip any question they did not want to answer. To ensure privacy, all students sat at separate desks and were asked to respect other students if they did not want to talk about the given answers. At two schools, a teacher was present in the classroom. Only at one school I was allowed to administer the questionnaire without the presence of a teacher. During one administration, the headmaster came into the

room and asked the remaining students why it took them so long. At that time, they all had finished the items, but it could have affected their answers on the last two open questions.

All KIIs and FGDs, with the exception of one KII, were taped with a voice recorder and transcribed verbatim. Participants of the FGDs received drinks and a little snack after the discussion or during a short break when they participated in another study as well.

Participants. The participants were mainly recruited by convenience sampling of already existing groups or individuals known by the researcher. In the next section the average age (M_{age}) of all participants is given. For the participants of the questionnaire this is supplemented with the Standard deviation (SD_{age}). The standard deviation is an indication of how all data points tend to be close to the mean. *N* indicates the number of participants of the different components of this study.

FGDs. In total 26 individuals participated in FGDs. They were divided over five groups. The first two groups with Moslem boys and Moslem girls were recruited through the youth organisation 'Lights of Islam' situated in Bolgatanga (girls *N* =5*;* M_{age}= 17.40, boys *N* = 5; M_{age}= 19.60). They were all SHS students or just graduated. The third group comprised married women (*N* =6*;* M_{age}= 27.20) at a health clinic at Bolgatanga. They were all there to vaccinate their child. With the exception of two Moslem women, all practised a Christian religion. One completed JHS, one stopped after JHS 3, one completed SHS and the rest followed tertiary education. The fourth FGD included married women (*N* =6*;* M_{age}= 49.20) from a rural village around twenty minutes from Bolgatanga where they produce local baskets. They all practised a Christian religion and were the least educated of all groups. The last FGD was held with four Catholic priests (M_{age}= 45.80).

KIIs. Participants of the KIIs were al professionals in the field of education, health, religion and development. In the category education, the regional director of The Ghana Education Service, three teachers and one head of housing were interviewed (*N* =5 (4

females); M_{age}= 47.60). Four of them were Catholic and one practised another Christian religion. The deputy director of The Ghana Health Service, two nurses and a health worker of the health directorate of the catholic church were interviewed in the category health (*N* = 4; M_{age}= 38.00). This group also included just one male. All of them were Christians from which three Catholic. The category religion included interviews with three Moslem scholars and the secretary of the 'Light of Islam' (M_{age}= 42.7 years). The last KII was with the programme director of 'Afrikids' (41 years, Catholic) to hear about the challenges NGOs are facing in this region relating to FP.

Questionnaire. The questionnaire was administered at three SHSs in the Bolgatanga municipality. The first school was Bolgatanga Senior High School (BigBoss) situated in Winkogo (8km from Bolgatanga), which is actually within the Talensi-Nabdam District. It is a mixed school. Their vision in to contribute to the development of students to be self-motivated, self-disciplined, with excellent leadership skills to compete in the globalised world. In the academic year 2016-2017, a total of 2864 students were registered and approximately 120 teachers (36 females) were employed at the school. The school runs six programmes leading to the WASSCE.

The second school was Zuarungu Senior High School based in the town of Zuarungu (5km from Bolgatanga) and is a mixed school as well. Their mission is to ensure increased access to SHS education by providing quality teaching, adequate facilities and a good atmosphere for teaching and learning. In total, 2059 students (1089 boys, 970 girls) were enrolled in the academic year 2016-2017. The 108 teachers of which 22 females are preparing the students for examination in five programmes.

The third school is the Bolgatanga Girls' Senior High School (BOGISS) and is the only single-sex school in this study and is situated closest to Bolgatanga town. The school has a religious, Catholic foundation and considers the training of Ghanaian girls to be productive,

disciplined and responsible citizens as part of their vision. The population of the school during the study included approximately 1948 students and 67 teachers (22 female). The school runs five programmes.

In total 150 students (59.3% female; M_{age}= 18.42; SD_{age}= 1.27) completed the questionnaire. Of all the students, only 2% of the participants indicated to practice a traditional religion, 42.7% Islam and 55.3% Christianity. In total, 77 respondents claimed to be sexually active (51.3%), out of which 2.6% (N = 2) indicated to be married. Only 23 students (16%) claimed to have used contraceptives in the past. At the time of this study, 21 students (14.6%) indicated that they were using contraceptives at that moment.

Next to the information retrieved from FGDs, KIIs and questionnaires, observations of the work of YHFG and informal conversations with multiple individuals are being used to illustrate the challenges organisations and teachers face when it comes to sex education.

Data analyses

SPPS Version 23 was used for the data analyses of the quantitative part of this research. For the qualitative part, the software programme atlas.ti was used. The analysis of the FGDs and KIIs was based on the phases of Grounded Theory (Glaser and Strauss, 1967): (1) Exploration (discovering concepts); (2) specification (working out concepts); (3) reduction (determining core concepts and underlying relations) and (4) integration (answering research questions) (Peters and Wester, 2007).

Descriptive analyses, frequencies and mean scores were calculated first. Only three participants indicated to practice a traditional religion. These participants were excluded from analyses and leaving religion recoded into a binary scale with 0 representing Christianity and 1 for Islam. Ethnic group has also been recoded into a binary scale with 0 representing Gurunsi or Frafra, the main ethnic group in Bolgatanga, and 1 representing all other ethnic groups. Because only three participants indicated to be married, the variable marital status

was not used for further analyses. To be able to analyse the influence of age on the knowledge, attitude and intention to use FP, the participants were divided in two age categories: 0 = 15-18 years and 1 = 19-23 years.

Two reasons for not using contraceptive methods are fear of side effects and lack of knowledge of methods (Tiruneh et al.,2016). For this reason, knowledge of FP methods and fear of side effects were included in the questionnaire. Item 12 of the questionnaire was used to calculate the sum score for knowledge on FP methods with a maximum score of 24. The answers were recoded into: 0 = no, never heard of it, 1 = maybe, not sure and 2 = Yes, I know. The fear of side effects is calculated by combining the scores on item 20, 21 and 22. Since only around 15% of the students indicated to use or have used contraceptives, only intention to use FP methods is used for further analyses. Intention to use contraceptives not always results in actual use, but intention is closely associated with behaviour in the decision-making process (Tiruneh et al., 2016). Item 26 was used to calculate the sum score for intention to use FP methods. Answers were recoded into: 0 = no, never, 1 = maybe, not sure and 2 = yes, I would. All sum scores were recoded in such way that a higher score reflected a higher presence of knowledge, fear of side effects and intention to use FP.

First, to determine whether there are differences between groups (gender, age, religion, ethnic group) in sum score of knowledge, fear of side effects and intention to use FP, Independent T-tests has been performed with the sum scores as dependent variable. Differences between the three schools were examined by a one-way ANOVA with a Bonferroni post-hoc test. Bivariate associations among sociodemographic (gender, age group, religion, ethnic group), sexual experience, knowledge, fear and intention measures were calculated using Pearson correlation coefficients. Finally, a hierarchical Regression Analysis for variables predicting Intention to use contraceptives was performed with variables that showed to be significantly correlated with intention to use contraceptives.

CHAPTER 4 Attitudes, Communication, Fears and Intention to use FP

Before I left for Ghana to conduct this study, multiple people warned me about the sensitivity of this topic and the very negative attitude towards FP, especially the use of modern FP methods. Luckily for me, all participants were willing to talk to me very open about FP and their perspectives on this topic. Yes, there is a negative attitude present towards FP, but I soon found out that we cannot speak of a general attitude for the whole community and that it is not all about fear of infertility. First the attitude towards FP will be discussed followed by, communication and the fears of negative consequences. The last part of this chapter will go deeper into how these attitudes and fears influence the intention to use FP methods.

Attitude

According to the programme director of 'Afrikids', a local NGO with programmes concerning child protection, education and health, there is a general acceptance or at least some kind of improved understanding on the usage, consequences and benefits of modern contraceptives in the Bolgatanga municipality. According to two nurses from the Bolgatanga Health Centre, the reason for this improved understanding is education on this topic and information spread through radio. Though there are some differences in this changing attitude between certain groups. Differences related to gender, religion and profession will be described in more detail in further chapters. The next paragraph will focus on the attitude of adolescents towards FP.

Since all adolescents participating in this study were enrolled in Senior High School, it was expected that because of the years of education they received, there would be a basic knowledge on FP and a somewhat more positive attitude in comparison with the less educated older generation, but the opposite turned out to be true as two of the many negative statements written down in the questionnaire indicate: *"Let's come together to avoid Family Planning*

(female Christian student, 18 years old). *"Contraceptives are silent killers, but we don't know* (female Christian student, 18 years old). Item 11 of the questionnaire gives more insight in the perspective of the students on FP (see Table 1).

Table 1

Item 11: What is your opinion about Family Planning (contraceptives)?

Information sources FP	**% students *N* = 150**
Very bad, you should never do it	15.3
Bad, but in some situations, it is the only option	37.3
I don't know	4.7
Good, some people should use it	19.3
Very good, everybody should have the choice if they want to use it or not	23.3

Despite of their exposure to many years of education, still more than 50% of the SHS students had a negative attitude towards FP and only 23.3% believed that the usage of contraceptives for FP should be a free choice. Among the participating students, both Christian and Moslem students had a negative attitude towards FP. Although the differences were not significant, Christian students (M = 3.11; SD = 1.48) seem to have a slightly more positive attitude towards FP, were able to sum up more reasons why to use FP and gave less reasons against the use of FP than the Moslem students (M = 2.80; SD = 1.43). But what is the reason why these students have such a negative attitude towards FP and what leads to such an attitude?

Looking at the open questions of the questionnaire, the main reasons for this given by the students themselves are the lack of knowledge and fear of side effects as indicated by the following statements:

> Please I have heard of it but never seen it before or know how it is and I also read books about Family Planning but has not been discussed yet. I think it is very bad to use contraceptive because to me, I strongly believe that after the contraceptive it may block your womb which may lead to not having children when you want to. Please, I disagreed with this idea about contraceptive and hope that it will be stopped. (female Christian student, 19 years old)
>
> It sometimes causes side effects, it sometimes can cause you to bleed, it sometimes fails you, so need to know if these are true about contraceptives. (female Christian student, 18 years old)

To understand better where these fears and lack of knowledges come from, it is important to look closer to where the adolescents get their information from and with whom they communicate about FP.

Communication

An important role in communicating messages about FP is reserved for media (GSS, GHS and ICF International, 2015). Exposure to this type of messages is more common among men and adolescents age 15-19 are the least exposed. There is a difference in exposure between the regions in Ghana as well, with the lowest levels in rural areas due to the lower educational level and wealth in these parts.

Information sources for FP which are indicated by the students the most are media sources (tv 89.2%, radio 83.2% and internet 77.2%), teachers 89% and classmates 85.8% (see Table 2). These results suggest that although Bolgatanga is a rural and one of the poorest areas in Ghana, access to tv, radio and internet is common in this age category. Research in

the area shows that the emphasis in sex education at school is on abstinence-only (Krugu, 2016; Nyarko et al., 2014). Nonetheless, the high percentages of teachers and classmates as information source, suggests that school is the place where adolescents get the most information about FP. Around 54 percent of the students even hear about FP for the first time from a teacher.

The results also suggest that not a lot of parents seem to talk to their children about contraceptives. This could be explained by the fact that parents often feel embarrassed talking about sexual issues with their children and are not always aware of the importance of early sexual discussions for the sake of the child's development (Nyarku et al., 2014). As the next quote indicates, there are also parents that do see the importance of providing information to their children although they are from a religious perspective against the use of contraception and sex before marriage:

> If I have my daughter and I realise that this my daughter she does not have control of herself. She goes in for men. What do I do? ……Personally, I will call her and give her an advice as a matured person…. Islam does not permit this, but that is my daughter. You are likely to contract such a disease or something like that or come to the house with pregnant. What I will advise you is that you either go in for a Family Planning or we start the use of condom. Just to prevent, protect my family (Moslem Scholar, 48 years old)

FP is the least talked about with the chief (6%). Remarkable is the fact that in 42.9% of the cases, information was given at least one time by a religious leader. This is not what you would aspect since the religious view in Ghana is that talking about sexual issues could make them start experimenting (Nyarku et al., 2014). A possible explanation is that religious bodies do give information about FP, but more as a warning message or to promote natural methods. Chapter six goes more into detail about FP and religion.

Table 2

Percentages of students who received FP information per source

Information sources FP	**% students *N* = 150**
Mother	38.9
Father	18.9
Grandparents	18.4
Uncles/aunties	26.4
Siblings	41.2
Teachers	89
Classmates	85.8
Chief	6
Religious Leader	42.9
Television	89.2
Radio	83.2
Internet	77.2

The results of this current study indicate that students get their information about FP mainly from the media, teachers and classmates, but what about the adults? The FGDs point out that media and especially the radio plays an important role in passing on information to adults as well. Other information sources for adults are the durbars and health clinics. Though, these sources are not always accessible for everyone and structural in nature. Adults are still often dependent on information by hearsay as the next quotes indicate:

> They'll be talking to their friends ooh this thing is no good.……But the older ones they might be thinking oh my friend told me this, my friend said this, so I won't take it. But the younger ones they really understand (nurse Bolgatanga Health Centre, 27 years old)

As another nurse describes this way of passing on information as following: "*So, the colleague can pollute their mind".* This is how misconceptions about FP in general come to life. It spreads certain fears throughout the communities.

Fears

As could be expected from previous research on contraceptive use, also in the Bolgatanga area there are certain fears related to the usage of certain contraceptive methods. As described in the previous sections these fears are fed by different sources of communication. But what are the exact fears and how do they arise? The participants I spoke to all had different fears themselves or either heard about it from others. Roughly, the fears for usage of contraceptive methods can be categorised into five different types of fears (see Table 3).

In total, 67 participants described mild side effects of modern contraceptives like gaining weight, dizziness and feeling sick. Some women who experienced these side effects, changed contraceptive methods, but it also makes women stop taking contraceptives immediately or it keeps them from taking contraceptives in the future.

Among both adolescents and adults there is the assumption that modern contraceptives can lead to promiscuous behaviour like the next quote indicates: *One thing is about ah even the artificial contraceptives. You might think they are preventing ah pregnancy. But they also in a way promoting teenage pregnancy… Promiscuity* (FGD, priests and Monsieur Catholic Church). One female teacher (37 years) even relates this type of promiscuity with a certain type of method: "… *especially those who take the injectables they go free and they don't care they can practise any time."*

Table 3

Fears of side effects

Types of fears	**Representative quotations**	**No. of response***
Mild symptoms	"some say they grow big and they feel dizzy aha. That's what I've heard. And that is when they take it, they look plumpy, they grow fat" "others could raise issues like ah stomach pains, yeah. Pains during menstruations" "And the first day she took the pills, she vomited the whole day" "Aha, and then when they do that such ladies do easily get hypotension. They get hypotension"	67
Promiscuous behaviour	"So, if you advise them to go for the injection and the person is active in sex. Because she has taken the injectable, she would just be misbehaving" "sometimes women also say it can even teach Catholics to be unfaithful. Because if you not with your husband, or your wife and you can protect it. You can go ahead to have extramarital affairs"	29
Illnesses and diseases	"It can lead to a permanent cancer" "Then by the end of the day, you can pick so many diseases and that is a challenge" "So, if they take the injectables, that girl would not go in for let's say that ah ask the man to use condom. So, at the end of the day she can get gonorrhoea, she can get AIDS, she can get syphilis out of that"	47
Menstrual cycle	"Because me for instance when I was using it, my husband was looking at how I have with my menses. Sometimes I will get it and more than a week and it's still coming small. So, because of that, that made him to tell me not to use it again" "it will change the menstrual cycle of the person and change the system all together"	24
Infertility	"Family planning can lead to infertility, so you please stay away from it" "The use of the contraceptive is very high in the region which may lead to infertility in the society and the country as a whole. So, wish if this can be abolished in the societies" "People say it has dangerous side effects but I don't know. People also say it is not good, you will not have children"	132

* Numbers indicate the amount of times each category was mentioned and the line items are examples of some of the responses in that category

It is this promiscuous behaviour which make people have other fears related to modern contraceptives, namely illnesses and even death. The question remains, is it the contraceptives that lead to the illness or is it the lack of knowledge? As a health worker of the Catholic church points out correctly: *"So, with artificial Family Planning methods, yes. The lady can*

protect herself against pregnancy. But you cannot protect yourself against sexual transmitted diseases like HIV, Gonorrhoea even Hepatitis B." He had a woman on consultation once and they were talking about HIV. She was telling him that she was safe for this disease because she was on an artificial contraceptive method. She was very surprised to hear from him that contraceptives only protect her for pregnancies. Also, the next quote from a female student (18 years) makes you wonder whether she knows exactly which contraceptives protects you from what.

> In this, our modern world, I think the use of contraceptives is very good because people are now sexually active and diseases too are spreading everywhere. So, I think there should be more education on it and also more health centres and other health organisation should help to spread more of the information to the rural communities or area.

The fourth type of fear, fears related to the menstrual cycle, seem to have originated from lack of knowledge as well. Especially, the lack of provided information when women want to choose a method or even already started using. As one of the nurses explains:

> They have misconception in the community. For example, a client being on implant not bleeding. For some time, starting bleeding more than a month, every month bleed between portions small small bleeding……. Either they bleed or they don't bleed. But since clients see that, clients don't come back here to consult more what happened and why it happened that way. Client can go about and telling people that if you put on the long method, you may bleed and die.

During this study, I came across many individuals who were either afraid of excessive bleeding or the absence of menstruation. A great value is attached to the structural presence of menstruation as indicated in the next quotes:

> Women in the Moslem community do not use the injectable because of the irregular menstruation. I think they appreciate it every month having to see blood. So, I was told by one of them that they don't like to use it because they don't see blood (Deputy Director GSS)

But why are changes in the menstrual cycle bring so much fear among the people? The next quote from the health worker of the Catholic church gives an explanation why people have fears related to the menstrual cycle:

> So, I have had complaints from ladies who say after the artificial contraceptives, they don't see their menses. And they are worried. Because they now want a baby. And if the menses is not coming, they think they cannot conceive. But that is a big worry to some of them

This brings us to the last and at the same time biggest fear of all, infertility. It is this fear of not being able to conceive children in the future that worries a large proportion of the students as can be seen in the next quotes:

> *"Family Planning can lead to infertility, so you please stay away from it"* (male Christian student, 19 years old)
>
> *"The use of the contraceptives is very high in the region which may lead to infertility in the society and the country as a whole. So, wish if this can be abolished in the societies"* (male Christian student, 21 years old)
>
> *"People say it has dangerous side effects but I don't know. People also say it is not good, you will not have children"* (female Moslem student,19 years old)

The next quote illustrates why conceiving children is so important in the eyes of one of the adolescents:

> The Family Planning methods to my understanding can cause infertility. In our society if you can't give birth that can make you lose respect, honour among the rest which I

think to prevent infertility you avoid contraceptives. (female Christian student, 17 years old)

Corresponding with previous literature, the belief that some contraceptives will lead to infertility or other side effects is still very present in the Bolgatanga area. But how big is this fear and does it vary between certain groups? Table 4 shows the sum score on Fear of side effects and the differences related to religion, ethnic group, age and gender.

Table 4

Independent Samples t-test Total sum score of Fear of side effects

Variable		*n*	*M*	*SD*	*t*	*p*
Religion	Christian	82	12.37	2.08	.88	.38
	Moslem	64	12.06	2.07		
Ethnic group	Frafra	50	12.42	1.85	.84	.40
	Other	97	12.12	2.12		
Age	15-18	91	12.55	1.91	2.47	.015*
	19-23	57	11.70	2.21		
Gender	Male	60	11.67	1.90	2.73	.007*
	Female	88	12.59	2.10		

Note: FP = Family planning; *M* = Sample mean; *SD* =Standard deviation; *t* = t test statistic; *p* = probability value
* $p < .05$

Results suggest that religion and belonging to a certain ethnic group does not contribute to a significant difference in sum score of fear of side effects. Though there are differences found in relation to age and gender. Students in the age category from 15 to 18 years old seem to be more afraid of side effects in comparison to students in the age category 19 to 23 years. Statistical tests also suggest that female students fear side effects more than their male counterparts.

The differences between the two age categories cannot be explained by the results of the Ghana Demographic and Health Survey of 2014, where adolescents between 15 and 19

years old are found to be the least exposed to information about FP spread through media. Because on the contrary, in this study, the younger age category scores slightly higher on information about FP retrieved from internet, tv and radio on the one hand, but score higher on fear of side effects on the other. A plausible explanation for this contradictory finding is that the influence of media among early adolescents is stronger than compared to older adolescents (L'Engle, Brown and Kenneavy, 2006). Thus, making the younger age category also more sensitive for statements about possible side effects. The fact that female students scored higher on fear can be explained by women's social roles, where maternity is seen as necessary to ensure a respectable adult identity as well as social and economic stability (Gonçalves et al., 2011).

Intention to use FP methods

According to the theory of planned behaviour and theory of reasoned action, subjective norms and attitudes can influence the intention for a certain behaviour (Guan et al. 2016). When we apply this to the intention to use contraceptives in this study, there indeed seem to be an association between norms and attitudes.

This present study revealed a clear norm where appropriate sexual behaviour and bearing children is seen as very important within society. As could be seen in the previous paragraph, most fears are related to these two themes. There is the fear that the use of (modern) contraceptives stop people from meeting the norm of conceiving. Next to that, lack of knowledge on FP seem to result in fears as well. On the one hand, the attitude towards contraceptives seem to be influenced by knowledge, subjective norms and fears. On the other hand, subjective norms are influenced by attitudes (see figure 2).

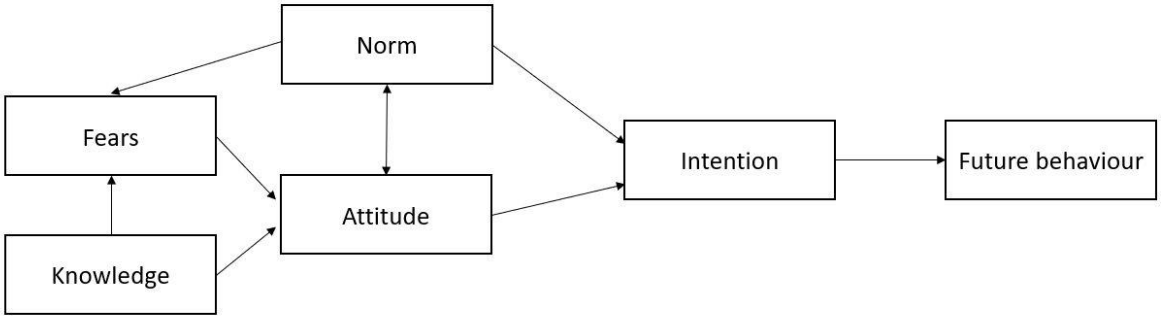

Figure 2: Interaction subjective norm, fears, knowledge and attitude within the theories of planned behaviour and reasoned action.

But in what extent do all these factors have an influence on intention to use FP methods and does this vary between the different methods? From the students, 89.8% agree that some contraceptives have dangerous side effects, 91.1% agree that it can even lead to infertility. In total, 61.3% of the students indicated that the risk of side effects would keep them from using contraceptives in the present and in the future. Table 5 shows the percentages of intention to use contraceptives in the future per method.

Among the students, the intention of using the male condom is the highest (46.6% yes, 14.4% maybe) followed by the female condom (39.7% yes, 18.5% maybe) and the rhythm or calendar method (37% yes, 20.5% maybe). The students are the least inclined to use an IUD (4.9% Yes, 12.5% maybe). These results are inconsistent with the results from Abubakari et al. (2015), where injectables and the pill were preferred the most. Also, the overall intention to use contraceptives was higher in comparison with this current study. A possible explanation for these divergent results is the difference in area where the research was conducted. This present study is conducted in a more rural area. Also, Abubakari uses the intention of contraceptive use in the context of marriage. This emphasis on marital status could have had a positive influence on the intention to use FP methods.

Table 5

Item 26: I would use or let my girlfriend/wife use the following contraceptives

Method		% students n = 147
Male condom	No, never	37.0
	Yes, I would	48.6
	Maybe, not sure	14.4
Female condom	No, never	41.8
	Yes, I would	39.7
	Maybe, not sure	18.5
Foaming tablet	No, never	70.5
	Yes, I would	9.6
	Maybe, not sure	19.9
Oral contraceptive pill	No, never	69.2
	Yes, I would	16.4
	Maybe, not sure	14.4
Injectable	No, never	63.7
	Yes, I would	19.9
	Maybe, not sure	16.4
Implants	No, never	78.6
	Yes, I would	4.1
	Maybe, not sure	17.2
Intra Uterine Device (IUD)	No, never	79.2
	Yes, I would	4.9
	Maybe, not sure	16.0
Intra Uterine System (IUS)	No, never	81.3
	Yes, I would	6.3
	Maybe, not sure	12.5
Male sterilisation	No, never	74.5
	Yes, I would	11.0
	Maybe, not sure	14.5
Female sterilisation	No, never	71.9
	Yes, I would	8.2
	Maybe, not sure	19.9
Rhythm or calendar method	No, never	42.5
	Yes, I would	37.0
	Maybe, not sure	20.5
Emergency contraception	No, never	50.7
	Yes, I would	24.0
	Maybe, not sure	25.3

Table 6

Independent Samples t-test Total sum score of Intention to use FP methods

Variable		*n*	*M*	*SD*	*t*	*p*
Religion	Christian	80	7.44	5.11	2.46	.015*
	Moslem	61	5.38	4.66		
Ethnic group	Frafra	48	7.19	4.88	.90	.37
	Other	94	6.38	5.12		
Age	15-18	88	6.32	4.51	-.98	.33
	19-23	55	7.16	5.80		
Gender	Male	57	6.91	5.16	-.77	.44
	Female	86	6.28	4.60		

Note: FP = Family planning; *M* = Sample mean; *SD* =Standard deviation; *t* = t test statistic; *p* = probability value
* $p < .05$

To see whether Intention to use FP methods differs between religion, ethnic group, age group and gender, four t-tests were performed with the total sum score (0-24) of Intention to use FP methods as dependent variable (see table 6). Christian students scored significantly higher (p = .015) on total sum score Intention to use FP methods (*M* = 7.44; *SD* = 5.11) in comparison with their Moslem counterparts (*M* = 5.38; *SD* = 4.66). No differences have been found in intention to use FP methods based on ethnic group, age and gender.

To see which variables have an influence on intention to use contraceptives, the bivariate associations were calculated using Pearson correlation coefficients (see Table 8). A positive correlation is found between knowledge on FP methods and intention to use these methods. This means that the more knowledge the students have, the more they have the intention to use FP methods. There is a positive correlation between opinion about FP (attitude) and intention as well. Fear of side effects does not seem to be directly correlated with the intention to use, but it is negatively correlated with the opinion about FP. This means

that the more fear there is for side effects the more negative the attitude towards FP seem to be.

Two models with variables that were correlated with intention to use contraceptives were created in a multiple regression analysis (see table 7) of which model 1, with opinion about FP (attitude) as the only predictor, explained 5.8% of variance and was significant ($F(1,124) = 7.60$, $p < .01$). Model 2, in which knowledge on FP methods was added, explained significantly more variance (R^2change = .189, $F(1,123) = 30.92$, $p < .001$). This model explains almost 25% of the variance in intention to use contraceptives (adjusted R^2 = .247) and was significant ($F(2,123) = 20.18$, $p < .001$). It was found that both opinion about FP ($\beta = .166$, $p < .05$) as knowledge on FP methods ($\beta = .441$, $p < .001$) significantly predicted intention to use contraceptives.

Conclusion

Also, this present study shows that there is still a negative attitude towards FP present in this region. Though, professionals do see some improved understanding of the benefits of FP and the use of contraceptive methods. Surprisingly, the most negative attitudes were expressed by adolescents. This seem to have arisen from the abstinence-only message they receive from adults and the warnings they get, that the use of modern contraceptives can lead to infertility and other negative side effects.

In accordance with the theories of planned behaviour and reasoned action, attitude towards FP is positively correlated with the intention to use FP methods. In addition to that, knowledge on FP methods is positively correlated with intended usage as well. A model which includes knowledge on FP methods and attitude predicts the intention to use contraceptives better than a model with attitude as only predictor. Although not directly correlated with the intention to use, the influence of fears of side effects on usage can be derived from the results as well. The fear of side effects is negatively correlated with the

attitude towards FP and therefore can influence the intention to use negatively in an indirect manner. Results indicate that the Christian students in this region have a higher intention to use FP methods in comparison with the Moslem students.

Table 7

Summary of Hierarchical Regression Analysis for variables predicting Intention to use contraceptives (N = 126)

	Model 1					Model 2				
Variables	*B*	*SE B*	*β*	*t*	*p*	*B*	*SE B*	*β*	*t*	*p*
Opinion about FP	.796	.289	.240	2.76	.000	.551	.263	.166	2.10	.038*
Knowledge FP methods						.409	.073	.441	5.56	.000**

Note: B = unstandardized beta; *SE B* = standard error unstandardized beta; *β* = standardized beta; *t* = t test statistic; *p* = probability value
* $p < .05$; ** $p < .001$

Table 8

Correlations, Means and Standard Deviations of the determinants of intentions to use contraceptives

Variable	*M(SD)*	**1**	**2**	**3**	**4**	**5**	**6**	**7**
1. Intention to use FP methods	6.65 (5.02)							
2. Fear of side effects	12.21 (2.06)	-.199						
3. Knowledge FP methods	9.99 (5.30)	.469**	-.025					
4. Opinion FP	2.98 (1.46)	.235**	-.189*	.176*				
5. Age	.38 (.49)	.082	-.200*	-.070	-.052			
6. Ethnicity	.66 (.48)	-.076	-.069	-.210*	-.050	-.077		
7. Religion	.44 (.50)	-.205	-.073	-.271**	-.106	.095	.332**	
8. Gender	1.40 (.49)	.065	-.220**	-.078	.062	.418**	.100	.129

* $p < 0.05$; ** $p < 0.01$

CHAPTER 5 Family Planning and education

Research shows that children who are not introduced to sex education have a higher risk of teenage pregnancy (Krugu, 2016). Nevertheless, the attitude of the Ghanaian government is ambivalent. Although sex education is part of the curricula, in practice it is not taught effectively (Nyarko et al., 2014). In 1996, the government introduced the Adolescent Reproductive Health Policy which included teaching family life education in pre-tertiary educational institutions (Awusabo-Asare et al., 2006). Unfortunately, the fear that sex education will lead to promiscuous sexual behaviour frequently leads to education with emphasis on abstinence-only messages (Krugu, 2016).

As indicated in the previous chapter, knowledge is positively correlated with intention to use FP methods. Results also indicate that school is the place where most adolescents obtain their information. More than half of the students indicated that they heard about FP for the first time from a teacher. Still, there is a negative attitude towards sex education in this region. The first part of this chapter will look into the information about FP given at schools and described in school textbooks. The second part discusses the knowledge of FP at the three SHS's and the different opinions about the need for FP education at schools regarding the age, content and effects of this form of education. The last part elaborates on the willingness of teachers to teach sex education and the experiences and attitudes students and parents have.

Information about FP given at schools

Whether FP is part of the Ghanaian school curriculum or not seems to be unclear at the schools visited during this study. Some teachers mention it is in the syllabus, so teachers have to follow the syllabus. Others teachers are of the opinion that it depends on the school and that it is part of extra curriculum meetings. Even the Regional Director of GES could not tell whether the topic FP is mandatory at schools or not. There are some subjects at school which

covering contraceptive use. These subjects are Integrated Science in which biology is taught and Social Studies.

Looking at some of the textbooks of these subjects, FP is only mentioned in at most a couple pages and the information is very basic, limited to only the definitions of reproductive health and reproductive rights and some examples of FP methods. The definition of reproductive rights given in one of the Social Studies books is as following:

> Reproductive rights are the basic rights of all couples and individuals to decide freely and responsibly the number, spacing and timing of their children and the means to do so. It is also the right to attain the highest standard of sexual and reproductive health. They include, the rights of all to make decisions concerning reproduction, free from discrimination, coercion and violence. These rights prevent an individual from forcing another individual to engage in sexual intercourse against his or her will. (pp. 16, Mintah-Afari, 2008)

When talking to adolescents, these definitions are most of the times memorized by heart. The existence of FP and its usefulness is mentioned in the textbooks, but the actual use of FP is being repelled by contradictory messages. On the same pages where FP is discussed, chastity is mentioned as well. As one of the teachers of BigBoss explains:

> Okay, we teach Family Planning. We teach the natural method of using practising contraceptives, the natural way if they don't want to and sometimes, we teach some of the contraceptive items that they can use, the pills, the injectables and others that they can use to prevent them from becoming pregnant and we sometimes go ahead with even advise them on not even having sex …….. So, there's a topic there that says and that is chastity. After teaching them those who are not in to it, then we teach them how to live a chaste life until they get married.

The Regional Director of GES adds to this: "*educating them it is purely fine for them to know the positive and the negative aspects of contraceptive usage. But to encourage them to use contraceptives. We are saying no."*

So, there is some information about FP in the textbooks, but students even in the same class use different books or students do not have books at all. Next to that, the given information about FP is given simultaneously with an abstinence only message and presents FP as something you can use later when you are married.

The importance of FP education

The fact that teenage pregnancy numbers are still high in this region could be explained by the average age of 14.5 years that these students heard about FP for the first time. This age seems to be too late when you consider that young people have sexual intercourse at much younger ages than in the past (Nyarko et al., 2014). Sometimes even from the age of eight years old. The aim of sex education is to reduce potentially negative outcomes from sexual behaviour like unwanted pregnancies and catching STIs. All respondents can list some benefits of FP education in schools, but there are some differences of opinion when it comes to the age of first acquaintance with contraceptive use and content of the given information.

According to a teacher at Zuarungu SHS, sex education at schools helps adolescents to understand the changes they experience in themselves and prevents them for getting the wrong information:

> So, we can talk about it. We let them know that what they feel is a natural desire. But looking at their situation, if they abuse that desire, these are the consequences. So, the child knows that what I'm feeling is not bad…… But when the child is not even aware of himself or herself, begins to become worried and may like to even ask a

> friend, to find out whether the way I'm feeling is normal or it's abnormal. So, if the child asks the wrong person, you get the wrong information and it won't help.

Also, amongst the students the opinion about the need for sex education varies. As one of the female Moslem students indicates:

> I think like when we are educated on like sex education, as adolescents we are growing. So, there are certain changes in our system. Let me say you start to menstruate. So, when they educate us, we'll learn that like when you start menstruating, there's the likelihood that you can easily get pregnant. So, you know how to handle yourself and other things.

Another girl indicates that in this modern world, where people are more sexually active and diseases are spreading, there should be more education on this topic especially in the rural areas. A Christian boy who filled in the questionnaire, stresses the importance of knowledge of how to use contraceptives when you are up to 18 years or above in order to prevent premature pregnancies whereas a Moslem boy from the FGD indicates that sex education has a negative influence on the religion.

The head housing of BOGISS SHS explains why FP education at schools is so important.

> It's very important because if this girl gets other information about Family Planning, she can share that at home even with the mother, who has not been to school. With her friend who has not been to school. And maybe at the JHS-level, the community. So, if one girl's information, it will go far.

Because in her school she sees young girls already pregnant at the age of 12 years, she thinks it is wise to start sex education at primary school. A teacher of that same school indicates that FP education should not be taught before students enter SHS level. As reason she gives that contraceptives come with costs, expertise and responsibility. According to her, students at

primary school or JHS are not mature enough to provide for that themselves. The proof that guidance and counselling on this topic is not effective at this level is according to her the following:

> You realise that the teenage pregnancy cases we have most of them from the primary and the junior high, as compared to the senior high. By the time they reach the senior high, it gets better. It reduces. So, one can rather now see that. It's because guidance and counselling are not effective at the primary and the junior high level. It exposes the children to all kinds of practices that get them involved in teenage pregnancy. But by the time they will get to the senior high, where guidance and counselling becomes very effective, the rate reduces. The records come down.

There could be multiple reasons why the rate of teenage pregnancies reduces at the senior high level. One, is the relatively late medium age found during this study of hearing about FP for the first time. When teenagers do not know anything about FP when they reach their reproductive age, they are at a higher risk of teenage pregnancy during this period. This corresponds with the idea that being introduced to sex education reduces the risk of teenage pregnancy (Krugu, 2016). Secondly, contraceptive use is also strongly associated with age of sexual initiation (Oindo, 2002). Younger girls are more likely to never use contraceptives or just sporadically. This could also explain why the records of teenage pregnancies come down at SHS level. Mahy and Gupta (2002) found an association between educational level from girls and early first pregnancy. Better educated girls are less likely to conceive at a young age or even have early sexual initiation.

The lower rate of teenage pregnancy among higher educated girls does not only have to do with a better knowledge on FP methods. Higher educated girls most of the times also have greater geographical and financial access to FP (Emina, Chirwa, and Kandala, 2014).

Level of education only explains a small part of fertility decline. Access to and the cultural attitude towards FP are perhaps even more important (see more in chapter 6).

The reginal director of GES makes a distinction between education about FP and encouraging to use FP. She believes that the use of FP should not be encouraged before students reach the SHS level. According to the director of 'Afrikids' there are two reasons why this is a big mistake. Firstly, a large percentage of the students find themselves in classes which are not age-appropriate. So, you will find young adults in JHS. Secondly, not even 40% of the girls who finish JHS will make it to SHS.

In rural Ghana, teenage pregnancy is one of the major factors for girls to drop out from school (Adam. Adom, & Bediako, 2016). So, it is very important that these pregnancies are being prevented. Since pregnancies in this region are already being observed at age 12, intervention and provision of FP information also need to take place in this age category. The official primary school age is between 6-11 years and the official secondary school age is between 12-18 years (Shabaya, & Konadu-Agyemang, 2004). Though, there is also the case of over-aged students. Many of enrolled students in Sub-Saharan Africa are not at the appropriate grade for their age, sometimes even several years over age (Lewin, 2009). Curricula are generally not organised with multi-aged classes in mind

In Ghana, in SHS, students can be as young as 14 years and as old as 20 years of age. So, the given information in textbook and from teachers can be highly age-inappropriate. Thereby, being over-aged has adverse effects on female students, because from a cultural perspective, there is a preference for boys' schooling and marriage of girls at a young age Lewin, 2009). Puberty regularly occurs whilst still at primary school. The participating schools in this study do not seem to take into account these multi-age tendency in their classes.

Attitudes towards FP education

As could be seen in the previous section, people differ from opinion when it comes to age of first education about FP. This has a lot to do with the attitudes towards FP. All respondents agree that when the topic FP is in the syllabus, it has to be taught. Still, 11% of the SHS students indicated in the questionnaire that they had never had any information about contraceptives from a teacher. The biggest fear that emerged from the interviews is that sex or FP education will encourage students to have sex. That is why adults prefer to emphasis abstinence and for students to focus on their studies. There is also a fear that when you teach the students about other contraceptives than condoms, they will catch a Sexual Transmitted Infection (STI).

> So, if you advise them to go for the injection and the person is active in sex. Because she has taken the injectable, she would just be misbehaving. And she can get disease out of that. So, if they take the injectables, that girl would not go in for let's say that ah ask the man to use condom. So, at the end of the day she can get gonorrhoea, she can get AIDS, she can get syphilis out of that (Head Housing BOGGISS).

In multiple informal conversations, teachers explained the difficult position they sometimes find themselves in. On the one hand they feel obliged to teach FP when it is in the syllabus, but on the other hand this sometimes contradicts with their own attitude towards FP or their religion. And then there is also the opinion of parents as one of the teachers explains:

> Some of them immediately you mention a thing like that, they will tell you let that child come and sit at home. Aha, because I'm not sending you to school to go and practise sex. I'm not sending you to school for sexual relationship, I send you to school to go and learn. So, a parent will not be happy where a teacher is teaching that thing. For who to be responsible. Aha, are you teaching it because the school be responsible for it? Will the school be giving the things free, will the school when there

> is a problem, there's a side effect or any problem at all, will the school be responsible? No, if no then please parents are saying don't introduce our children to it now.

As emerges from the questionnaire, only 38.9% of the students had some information about contraceptives from their mother and only 18.9% from their father. Teachers are aware that parents don't talk about these issues at home and that this attitude seem to be culturally based.

> If you abstain from sex and keep your virginity until marriage. You'll be respected. You'll be honoured within the community. They see you as a reliable person. Then it prevents sexual transmitted diseases. You give honour to your parents. It means you are coming from a discipline (Health worker Catholic Church)

There are cases where teachers are even called names in the community after they have introduced the topic in class. This causes some teachers to even skip the topic even when it is in the syllabus. Since it is sometimes hard for teachers to talk about sexual issues in their classes, NGOs and healthcare professionals are visiting the schools to teach about SRHR. An example is YHFG. They introduced a program called Friendship, Love and Sexual Health (FLASH). In this program they train teachers in three districts from upper primary to SHS level to teach SRHR classes. After the training the teachers are being monitored by YHFG by visiting them on a regular base. After visiting multiple schools with one of the fieldworkers, it turned out that the FLASH lessons are often being shortened or skipped. Also, in one district they recently got a new district head of education. She is against the FLASH program and ordered to stop the lessons. Since then teachers in that district are afraid to teach FLASH and being caught giving the lessons.

It is not only the adults that hold a negative attitude towards sex education. As one of the respondents of the Moslem boys FGD indicates*: "sex education is doing more harm than good to African society"*. According to him it is affecting their religion and encourages

introduction to sex before marriage. Judging from the negative view on contraceptive use by the respondents of the questionnaire, they did not seem to see much benefits of FP education. Some even indicated that they should be warned about the dangers of contraceptives: *"Teachers, mass media and personalities should try their possible best to educate us on the negative effect it has on us the individual"* (female Christian student, 17 years old). There are clearly two camps when it comes to sex education at schools. One that sees this type of education as an instrument to prevent teenage pregnancies and the second that considers it as an encouragement to sexual activities before marriage.

Knowledge of FP methods

Multiple students indicated that they heard certain things about contraceptives, but that they did not know whether this information was true or false. To look at how many FP methods the students really know, they had to indicate whether they never heard of it, maybe heard of it or definitely heard of it. The method least known by the students was the Intra Uterine Device (IUD). 77.2 percent of the students never heard of this method. Other methods where students never heard of were Intra Uterine System (72.2%), Implants (66.9%), Foaming tablet (64.6%), Emergency contraception (56.6%), female sterilization (52.4%), male sterilization (49.7%), oral contraceptive pill (47.6%) and the Rhythm or Calendar method (37.5%). Condoms are most known by the students, but still 25.5% indicated not ever heard of the female condom and 12.4% indicated not knowing the male condom either.

To see whether knowledge of FP differs between religion, ethnic group, age group and gender, four t-tests were performed with the total sum score (0-24) of knowledge on FP methods as dependent variable (see table 9.1). The results indicate that Christian students have a significant higher knowledge on FP methods compared to Moslem students and students belonging to the Frafra ethnic group score significantly higher than students from

other ethnic groups. This latter can be explained by the fact that most Frafra people practise a Christian religion. No differences were found between the two age categories and gender.

Table 9.1

Independent Samples t-test Total sum score of knowledge on FP methods

Variable		*n*	*M*	*SD*	*t*	*p*
Religion	Christian	73	11.22	5.26	3.15	.002*
	Moslem	54	8.31	4.96		
Ethnic group	Frafra	42	11.60	4.45	2.43	.017*
	Other	88	9.23	5.52		
Age	15-18	79	10.29	5.20	.80	.43
	19-23	51	9.53	5.46		
Gender	Male	55	9.42	4.79	.88	.30
	Female	74	10.23	5.45		

Note: FP = Family planning; *M* = Sample mean; *SD* =Standard deviation; *t* = t test statistic; *p* = probability value
* $p < .05$

Table 9.2

Differences between schools in knowledge on FP methods, Bonferroni post-hoc

Variable		*N*	*M*	*SD*	*Mean Difference*	*p*
School	Zuarungu SHS	76	8.86	4.61		
	BOGGISS	30	12.57	5.90		
	BigBoss	24	10.38	5.58		
Zuarungu SHS * BOGGISS					-3.711	.003*
Zuarungu SHS * BigBoss					-1.520	.620
BOGGISS * BigBoss					2.192	.360

Note: FP = Family planning; *M* = Sample mean; *SD* =Standard deviation; *t* = t test statistic; *p* = probability value
* $p < .05$

A one-way ANOVA with Bonferroni post-hoc test was conducted to examine the differences between the three participating schools (see table 9.2). A significant higher score in knowledge on FP methods was found at BOGGISS in comparison with Zuarungu SHS.

This higher score at the Girls' Senior High is contradictory what you would expect on a Catholic school. On the other hand, these results match with the overall results where Christian students seem to have more knowledge on FP methods in comparison with their Moslem counterparts.

Conclusion

Although students are largely dependent on school for their information on FP, the provided information is scarce and not neutral from religious or cultural norms. Results indicate that the Christian students in this region have a better knowledge on FP methods and a more positive attitude towards FP in comparison with the Moslem students. There are indications that there are misconceptions that all contraceptives also protect against STIs. There is no common agreement about the age from which students should get sex education and what the content should be. This seem to be largely caused by the fear that sex education will lead to promiscuous behaviour and early sexual initiation. An additional problem is the multi-aged population within classes. This makes decisions on sex education content linked to grades ineffective.

CHAPTER 6 Family Planning and healthcare and development

Information on FP is not only obtained at schools. Information is distributed by health centres and developmental organisations as well. Next to the provision of information, health providers play a very important role in the access to FP methods (Paul et al., 2016). Visits by a FP worker and information about FP at a health facility are positively associated with the use and intention to use contraceptives (Tiruneh, Chuang, Ntenda and Chuang, 2016). Yet, statistics show that 77% of all women who had access to health facilities that offer information about FP, did not discuss FP during a field visit or visit to a clinic (GSS, GHS and ICF International, 2015). According to the Director of Afrikids, there are three key issues relating to FP services: service availability, attitude of healthcare personnel and the environment in which women live. This chapter elaborates the challenges professionals face and the ways the healthcare sector tries to improve the situation and promote the use and knowledge of FP.

Challenges

One of the difficulties healthcare professionals have to face is the negative attitude towards FP that is still present in this region. This negative attitude is according to most participants particularly present among the male population. According to the 'Afrikids' director, the more you give birth, the more you yield in society. Also, men often do not feel the negative consequences of having a lot of children.

> In our culture, the males do not embrace it so much. They don't embrace it so much because it's like they're not much into handling the children when they are growing. So, there's less pressure on them here. So, because of that, they may not be the people in the forefront fighting for you to use the contraceptives. And even at times there are some women who even need their permission to take it and it's difficult because they won't agree. Because they tell her they want to have more children. So, you the

> woman, you can't take that decision alone. And most of our men here really do not support (Teacher Zuarungu SHS).

Because a lot of men still not embracing FP, some women go to the clinic secretly. From the six women from the FGD at the health clinic, three used artificial contraceptives of which two without the knowledge of their husbands. Both women were Moslem. The three Catholic women made it very clear that FP is something you decide together with your husband and if you two decide to plan, it must be by the natural method.

It is not only the opinion of the husbands that make it hard for professionals to reach out to women. "*Because, whilst the health workers are ready to encourage you, the people you sit in the car with before going, the people you will bypass on the way before going. They will never support you for it"* (Teacher BOGISS). Women are even being stigmatised for using contraceptives. They are seen as very bad women who cannot control their sexual emotions and want to keep sleeping with men without getting pregnant. The negative attitude is being spread as well as misconceptions about the use of FP.

Next to the negative attitude towards FP, there are some practical issues as well. Although Ghana has implemented a community health and FP system in the form of CHPS (Community-based Health Planning and Services) compounds, according to the director of 'Afrikids', this is not as outreaching as these compounds supposed to be. Instead of visiting women in the community from house to house on a regular base, the nurses are still sitting in the offices expecting the women to come to the office. The main cause for this, according to the director, is the lack of motorcycles and fuel for the healthcare professionals. The supply of contraceptives is also an issue:

> I think it's a major problem and there should be consistency with the supply. Because if someone develops the interest, and they come for one month and month two is not there. They may not come again for the rest of the year and that can revolve into a lot

> of consequences. So, the consistency of supply is also very very important (Director 'Afrikids').

Lack of supply is the main challenge the nurses of the Bolgatanga Health Centre face. Sometimes there is enough supply in a village nearby, but nobody takes the responsibility to distribute this to other healthcare facilities. Sometimes the nurses can borrow some supplies, but eventually have to give the women a different kind of contraceptive.

Another problem at the clinic is the lack of privacy. Some women are afraid that they will encounter someone they know at the clinic. Especially when a woman uses FP behind the back of her husband. There is a risk that that person will inform the husband which can lead to domestic fights or even divorce. This is also one of the reasons why women avoid FP services. Avoidance of this services is according to some participants also caused by healthcare professionals themselves.

Some healthcare professionals bring their religious or cultural opinion about FP to their work. This is especially the case with adolescents who come to the clinic for contraceptives. There are examples where adolescents were sent away, because the professionals believe that contraceptive use is not for teenagers. Even with adults, professionals can be very judgemental and even share private information about patients with others in the community.

Activities for sensitisation

The previous chapter showed that the healthcare sector is sometimes involved in school programmes. Nurses and midwifes are invited to talk about SRHR topics in schools with the hope that these children will spread the information in their communities. This method for sensitisation unfortunately is not embraced by all schools yet. During a stakeholders' meeting of YHFG, a nurse indicated that at some schools, appointments are being cancelled or they are not even invited.

According to the deputy director of GHS, some schools have school clubs that provide their members with information about FP. The GHS trains peer educators to spread the information. This method is commonly used and has some advantages:

> If they hear it from a young girl of their age, it's good…….. So, if you want information to get back to the students at where the smaller numbers. Then they pass it through the peer counsellors. Yes, you can come for this meeting and then tell the students that this is what we have learned. So, it goes a long way for them to understand when they are in a smaller group. The smaller, but if you just maybe if it's the whole school and you talk. Some might not even get you right (Head Housing BOGGISS)

To improve the access for adolescents, the GHS trained their staff on adolescent friendly services and even opened some adolescent friendly corners, where information is given and contraceptives are provided. The deputy director of GHS emphasises that these corners are not widespread yet.

Next to school programmes there are other community-based initiatives. The director of 'Afrikids' explains why it is important is to target the so-called gatekeepers (important individuals within the community), especially female gatekeepers.

> In the sense that, because of the sensitivity of the issue, you don't put so many people together. So, we do it on clan-based. So, if we're going on clan A, we are meeting the gatekeepers of that particular clan. Because they have same norms, social norms and customary practices. So, if the customary practise within my clan says that no FP, it's the same for everyone in that clan. So, you meet them and then they're able to tell you why they have this perception. And through the nurses' intervention, they going to change, are being able to change that attitude.

Another community-based approach used by ‘Afrikids’ is empowerment. Economic empowerment of women increases their ability to take independent decisions regarding healthcare including FP. A great example of how economic empowerment can help to increase the use of FP or at least creating awareness is the women weaving group of Sumbrungu.

> When they come, they’ll sometimes also discuss Family Planning, how it is helping them to space their children and they can take care of their children. And sometimes the health workers, the nurses also come and talk to them about Family Planning (female gatekeeper, 60 years old).

Also, when women have their own income, they can go to the clinic for FP services independently as the director of ‘Afrikids’ explains:

> We introduce them microfinance loans. But at the back of those loans, it’s the fact that we’re able, it’s easy to mobilise them and educate them on why this facility. So, they are able to take independent decisions especially with regards to their healthcare.

There are different ways in which the healthcare sector tries to create awareness on FP. The most common methods are organising community durbars, conferences and spreading information via radio. Another effective way is to provide women with information whilst they are at the clinic for another reason. One of the participants from the FGD with women at the Bolgatanga Health Centre was introduced to FP in this way. This 18 years old Moslem girl had her first baby. She is married, but the pregnancy was an accident. She loves her son dearly but does not want a second child immediately. The nurses advised her to go on FP. Now, when she comes to the clinic to weigh her child, she comes for her periodic injectables as well.

Conclusion

There are many initiatives and activities in this region with the objective to increase the utilisation of modern contraceptives. Professionals face resistance from different groups. These groups differ in religious norms, cultural norms, gender and age. All groups have their own reasons for their positive or negative opinions on FP and therefore should be targeted separately to bring about change. An effective method is to approach the gatekeepers of these groups first. School programmes, peer educators, adolescent friendly corners and female empowerment all seem to have a positive effect on contraceptive utilisation, but are not yet widespread or implemented effectively in the whole municipality. Other big challenges the professionals face, are the access to FP (financial, geographical and cultural), the supply of contraceptives and medical tools and means of transportation.

CHAPTER 7 Family Planning and religion

Religious affiliation is an important social identity in Ghana and is used as force in social and political life (Addai, 1999). From the perspective of the characteristic hypothesis of Goldscheider (1971) as referred to by Addai, people who possess similar socioeconomic and demographic attributes tend to have similar ideas and practices concerning fertility limitation. Multiple studies in the last 20 years though, showed different results of association between religion and contraceptive use.

Whereas research conducted by Tawiah (1997) showed no significant effect of religion on the current use of contraceptives, research by Nketiah-Amponsah, Arthur and Abuosi (2012) shows a significance of religion in explaining contraception utilisation. Also, Akinyoade (2007), who compared two communities in Southern Ghana on their reproductive behaviour, found no clear pattern of religious influence on contraceptive use. According to Stephenson et al. (2007), although not significant, there are signs that in some regions in Africa some individuals with a certain religion are less likely to use contraceptives. Community approval often has a larger effect on adopting a modern contraceptive method, even more than approval of the husband.

Differences in religious affiliation might not have an effect on the actual contraceptive use, but differences in norms and doctrines might influence the likelihood of using contraceptives (Addai, 1999). For instance, in Traditional African religion, where ancestors are honoured and bearing children as descendants can appease the spirits, high fertility is seen as very important. In Islam, having children is considered to be among the richest blessings granted by the Islam (Addai, 1999). Whilst the Catholic church holds an official stand against the use of contraception, other Christian churches do not oppose contraceptive use so convincingly and have been found to be more adaptive to local customs and practices.

Although research suggests that religion has lost most of its influence on contraceptive use, religion is still clearly visible in everyday life. As one of the teachers of BOGISS explains:

> You know, religion teaches people a lot. Mostly on do's and don'ts for healthy life. Aha, so, whether you are talking about Christian religion, Islam religion or traditional religion. These three religions that are practised in Ghana, they have a way of teaching and influencing their followers on things they can do and things they cannot do.

This chapter discusses the differences and similarities of the two main religions in this region regarding FP. First the attitude towards FP from a Christian perspective will be discussed, followed by the Moslem perspective. After that the influence of these attitudes on contraceptive use will be described.

Attitudes towards FP from a Christian perspective

The title of this paragraph speaks of a Christian perspective. Although all statistical tests in this research are based on a binary division of religion (Christian and Moslem), in this chapter it is important to look into differences within these two religions as well. To start with Christianity, two main religious movements can be recognized, Catholics and other religious groupings (mostly Pentecostalism). In my conversations, participants with Catholic beliefs seemed to have a stronger opinion about the negative aspects of FP than the participants of other Christian denominations. This has been confirmed by other participants as well:

> Because for my faith as a Catholic, the faith will only describe it, the use of any artificial means that contradicts the plan of nature. So, they will preach abstinence and discipline of the body. So, if it is my church, they will never preach the use of contraceptives, not even in marriage……. And I know of other religions like the traditional religion. They frown on sex outside marriage. …….. I think other types [Christianity] they're liberal. I've not heard them talk condemn so much. Moslems, I

> think they also frown on sex outside marriage. They also frown on it. But in marriage, I don't know whether they accept it that much I've not heard.
>
> I mean even Christians, you know even within Christians. It's so diverse. The Catholics have their own opinion about Family Planning and they believe that it must only be through education. And no administration of any medications of any sort. The Protestants have a different opinion, are a bit flexible around that.

The resistance towards modern contraceptives is sometimes so strong that exceptions are not allowed, not even in the case of forced sex. As one of the teachers explains: *"From my faith, as I said, so that means if I'm a Catholic girl and you don't take any of these contraceptives, I trust in the protection of God."* This seems a hard statement, but probably has its roots in the doctrines of the Catholic church where multiplying is one of the purposes of life and the use of modern contraceptives is sometimes seen as equal to abortion.

> In the bible it says 'go multiple and fill the earth'. So, why do you stop people from multiplying and filling the earth? So, these are some of the reasons why the Catholic church doesn't support the use of the condom (colleague Director GES)

> Abstinence from drugs from sex everything. Not only in church but also in schools. Whatever you do is a manipulation of your body. The use of artificial methods, is the perception, will lead to infertility. Except for the condom it's an invasive method. All the other ones go into your system and can cause some defect in the body. It goes into your system. There are other ways to prevent pregnancy. It comes from the modern world. People meeting other cultures. There are a lot of people that went across. Even when they get raped, some even have pills with them. So, when you get raped, just take the pill and then it will protect you of getting pregnant. It will kill the fertility.

> That thing will kill at that moment. It's like an abortion. Kind of, it's similar as an abortion. Sometimes it takes a while for the sperm to travel through the body to the egg. So, it will kill the egg or the sperm (Monsignor, Catholic church, 71 years old)

Although Catholics do not seem to accept modern contraceptive methods, there are open to natural methods within the marriage. The health worker of the health directorate of the Catholic church advises three different types of natural methods to families. First, is LAM, where mothers of babies younger than six months exclusively breastfeed their child as long as they do not see their menses. The second method is the use of beads, where couples slide beads on the necklace to predict when the woman is fertile. With this method, a calendar is often used to keep track on the dates. The final method is the fertility awareness method, based on the Billings method. With this method, the woman depends on self-examination on changes in the cervical mucus (Betts, 1984). A peak of mucus secretion is said to mark the day of ovulation. In a systematic review, Peragallo Urrutia et al. (2018) concluded that for both calendar methods as mucus-only methods the current evidence of effectiveness is small and of low to moderate quality. Most methods have not undergone an effectiveness assessment at all. The health worker himself also admits that the methods are not always effective, since couples sometimes forget the beads and only women with a menstrual cycle of 29 to 32 days are qualified to use this method. It sometimes takes a while to find out the actual duration of this cycle.

Even professionals see a difference between religion when it comes to FP. One of the nurses indicates that especially member of Jehovah's Witnesses and Catholic churches do not go for FP as they believe it is against their faith. This nurse practises the Catholic faith herself, but she does see the benefits from FP in certain cases:

> For me, actually I think giving birth to the child and being able to take care of the child is better than you give birth to the child and you don't, can't afford for the child.

> It's very bad. So, I think it's true that we won't preach on the Family Planning. For some will get pregnant, they have to seek and abort. Why don't do the Family Planning to be able to prevent the pregnancy?

So, within Christianity, there are differences in attitude towards FP. The general attitude is negative, but this seems to be the most rigid in the Catholic faith. Other Christian religions seem to become more flexible, like the Pentecostal church in Sumbrungu, where according to one of the participants of the FGD indicates that sometimes health workers are brought to her church to talk about FP. Changes in attitudes are visible, but Christianity is still given as reason for not going into FP as indicated by the next quote: *"Family planning is something that is detestable in my religion and anyone who is engaging in it is a sinner…"* (male Christian student, 18 years old Christian boy).

Attitudes towards FP from a Moslem perspective

Just like Christianity, the Islam cannot be generalised either. As indicated by one of the Moslem scholars participating in this study, the Islam consists of different mainstreams. In Ghana, these are the Tijäniyyah, the Ahmadiyya and the Ahl-I Sunna. According to the three participating Moslem scholars, these three denominations differ in the way they interpret the Koran and in what extent they want to follow the exact words, or in other words, willing to adapt the doctrines to modern times. This also applies to the acceptance of FP and the usage of modern contraceptives.

That interpretation of the Koran plays an important role becomes clear by the next quote:

> Sometimes there're some issues, like there're not written in the Koran. But scholars, we have scholars in the religion, they interpret the Koran very well for us to understand. With their understanding, their wisdom., they put certain rules and regulations in order to keep the religion stable. Not to bring any other practise in the

> religion in order to distract things. So, that's why sometimes this Family Planning issues and other, some of our scholars, they don't agree with it (male Moslem student, 20 years old).

This quote and the fact that the opinions during the Moslem boys FGD were very divergent among the participants which resulted in an extremely heated discussion, suggest that it depends on the attitude towards FP of the scholar from someone's mosque which message about FP and contraceptive use is been carried out.

During the interviews with scholars from different mosques, it became clear that they indeed think slightly different about FP, but also that they have certain prejudices about other Islamic groups. For example, one of the scholars indicated that in contradiction to his faith (Tijäniyyah), the Ahl-I Sunna strictly follow the words of the holy prophet Mohammed and will not allow the use of contraceptives. While the words of the Ahl-I Sunna scholar sounded less rigid:

> We are typed as the Ahl-I Sunna, meaning the followers of the Sunna of the traditional Prophet. So, in that sense we're the orthodox. Because we strictly adhering to the teachings and style of the Prophet in his lifetime till he passed away……with contraceptive use, the stand of our sect is that it's not prohibited. Unless, it is meant to put a permanent stop to childbearing. Or its usage has side effects that is detrimental to the health of the one applying it. If those two are eliminated we don't have a problem. Because child spacing or spacing is accepted in Islam.

Although all three scholars had their own opinion about FP and contraceptives, a common perspective could be identified. Islamically, FP is not allowed, but since the religion also indicates that you have to be able to cater for your family, it is allowed to space the children you give birth to. Preferably with a natural method, but as one of the scholars indicates, modern contraceptives are easier for people to use and therefore become more and

more popular. All scholars seem to agree that in this modern world, usage of contraceptives becomes more and more inevitable.

So, just like with Christianity, attitude towards FP within the Islamic religion cannot be generalised. Some religious movements are more tolerant than others and also individual opinions seem to increasingly play a role in the decision making in relation to FP. Nevertheless, also the Islamic faith is given as a reason for not taking contraceptives as indicated by the next quotes: *"I won't like to use Family Planning because it is illegal in my religion. So, that's all* (male Moslem student, 19 years old); *Because our life is not for us, it's for almighty Allah. So, at any time almighty Allah can take you away. So, there you need to give birth. If only you are healthy and well educated. You need to have the possible number of children before you start giving them gap* (male Moslem student, 19 years old*); So, Family Planning is an agreement too between your husband and you……. If that is what the husband wants [having more children]. Then you just have to do it, because you don't also want to go against the religion* (female Moslem student, 17 years old).

Influences of religion on contraceptive use

As the previous paragraph suggests, religion is embedded in everyday life including issues concerning FP. But has religion really got an influence on contraceptive use or is this influence getting weaker and weaker? On this question, the Monsieur of the Catholic church answered:

> It is not religion in such, it's human life in the same ways as it loses its strength and its vitality. Because we are losing, we are becoming more and more materialistic and very secularist and therefore the Cristian or religious values are being watered down. So, that much is true. But ah, the church keeps, has to keep on moving, it's dynamic. So, sometimes you go it's like a graph. You go a bit low, then high, then a new person comes and something happens. I think this is the reason of human life.

One of the Moslem scholars sees the same trend in the Islam:

> Ghana is not an Islamic country. Had it been an Islamic country, it's [FP] totally banned outright. But because we are in a society, there's a saying that when you go to Rome, do what Roman do…. Some rules don't apply as far as the environment is concerned… we don't have a Moslem country. Definitely, you'll have to change certain things.

Multiple participants indicate that times are changing. People have more access to FP methods but also to more sources of information. This can, according to the catholic health worker, influence people positively or negatively. People are more exposed to temptations than in the past and direct control over people declines as the secretary of 'the light of Islam' explains: *"Because you only control or you only know your child when he or she is with you. But when she goes out, or when he goes out, you don't know what goes on."* For him, this makes it very important to teach the youth how to use contraceptives even when they are not into sex yet.

It seems like people become less strict in their religious doctrines even within the catholic religion as the next quote indicates:

> We have three levels of authority. Level 1 is God, level 2 is truth, level 3 is conscience. Okay? So, when you study these three levels of authority, from the word of God, you will see that the word of God itself agrees that there are certain things about life. You leave it to the conscious of the individual, to decide whether I want to do it or not. The Catholics, they preach against the use of contraceptives. But in the modern days, what they do is that what they advise you. They tell you that use your conscience. They'll ask you to use your conscience. They don't tell you not to use any longer but they will say use your conscious.

Despite of this seemingly milder influence of religion, still 26,5% of the students indicated that they strongly agreed with the statement “Family Planning is not allowed according my religion. 22.4% agreed, 19% neither agreed nor disagreed, 22.4% disagreed and only 9.5% strongly disagreed.

Conclusion

In both Christian and Moslem religion, there are individual differences found in attitude towards sex education and contraceptive use. Both religions are against the use of artificial contraceptives, but religious leaders observe a declining control on their followers. Still, as what can be concluded from comments made by participants during interviews, FGDs and the questionnaire, religion definitely plays a role in conversations and decision-making concerning FP.

CHAPTER 8 Discussion

The main objective of this study was to get more insight into the influence of the educational sector, healthcare sector and religion on the attitude towards contraceptive use and the belief that usage of some methods can lead to infertility in the Bolgatanga region, Ghana.

Attitude towards FP

In correspondence with previous research in this region by Krugu (2016), there is a negative attitude towards Family Planning and in particular towards modern contraceptives. This attitude seems to arise from cultural norms and misconceptions and seems to be stronger among the youth. A possible explanation for this is the conflicting messages of providing information about FP on the one hand and urging total abstinence on the other, which can make the youth guilty, uncertain or undecisive about contraceptive use (Oindo, 2002).

The results of this research fit perfectly in the theories of planned behaviour and reasoned action as described by Albarracín et al. (2001). As expected, the attitude towards FP is directly associated with intention to use contraceptives. Results further suggest that there is also a direct positive correlation between knowledge on FP and intention to use contraceptives and that fears are negatively correlated with attitude. The study of Sirirat, Pumpalbool and Phupong (2015) and of Santoso and Surya (2017) also showed a significant correlation between knowledge and intention to use contraceptives in studies in Asia.

Although, in this current study no direct correlation between fear of side effects and intention was found, research by Gueye et al. (2015) showed a negative correlation between women's individual belief in myths and modern contraceptive use. Multiple studies suggest that not only the attitude towards contraceptive use is important, but the attitude towards pregnancy as well. The attitude towards contraceptives can be positive, but actual usage can be low because the counterweight of an even more positive attitude towards pregnancy. This

latter corresponds with the results of this current study since multiple participants mentioned the cultural importance of childbearing and the fear of not being able to meet this cultural standard. This cultural norm of reproduction plays an important role in the formation of attitude towards FP and can therefore also been seen as cause for fears for side effects of modern contraceptives.

Fear of side effects ranges from mild symptoms to infertility. These are linked to different contraceptive methods. Oral pills seem to be attributed to mild symptoms like nausea and gaining weight and injectables and implants are regularly seen as the cause of serious health consequences and even infertility. This seem to have something to do with the absence of the menses with the latter two. Research on side-effects experienced by women in this region and actual numbers of women who get pregnant after using modern contraceptives could help to reduce the existing fears, since most of such existing research has been conducted in Western countries.

Knowledge

Participants of this present study mostly had knowledge on the benefits of contraceptives, but fear of side effects and infertility seem to keep them from using modern contraceptives in the present or in the future. More emphasis should be placed on the provision of information on possible side effects from certain methods especially on the long-term methods. One of the findings in relation to knowledge on FP is that most participants only know the brand names of contraceptives and not the actual scientific names. This made it hard to determine the actual knowledge on FP methods and could therefore be seen as one of the limitations of this study. Future research should make use of names of brands known in that specific region.

Another finding is the lack of knowledge on what protection specific methods offer. There seem to be misconceptions about certain contraceptive methods, like that the pill or

injectables also protect against AIDS and other STIs. More research should be conducted on knowledge on correct usage of the different contraceptive methods and on the protection it offers.

Education

This present study showed a dominant presence of abstinence-only messages for adolescents. There is a widespread view that education about FP and usage of contraceptives will lead to promiscuity and thereby cause teenage pregnancies. Though, poor parenting, poverty and peer influence are found to be the major causes for teenage pregnancy (Gyan, 2013). Still, this present study shows that school is the primary source of FP information. To discard this negative view on sex education it is advisable that, within this region, determinants for sexual initiation and teenage pregnancy are being looked at. In addition, it is important to take the school curricula into reconsiderations since age differences in one class can be very large. Sex education adapted to a specific grade could therefore become age-inappropriate and ineffective.

Sexual risk behaviour of adolescents is influenced by developmental factors (Pedlow and Carey, 2004). This makes it important that intervention (in this case sex education) is age-appropriate. Targeting younger adolescents is important because it provides prevention before onset of sexual activity, can directly influence peer norms and promote healthy sexual practices before sexual risk taking has already been established and is difficult to change. For sex education to be effective it must be tailormade to the needs of younger versus older adolescents and sexually naïve and sexually experienced teens. Out of class sexual education to groups split into age-categories could be a suitable solution and should be studied more in detail.

Healthcare and developmental organisations

Healthcare and developmental professionals face different challenges. Firstly, the negative attitude towards FP within the communities during their work. For example, nurses are being cancelled or not even invited for school programmes on sexual related issues. This attitude differs from school to school. Since sex education is compulsory within Ghanaian education, the government should see to it that the educational sector keeps to its obligations. It is unacceptable that regional directors of GES, headmasters and individual teachers in the region prevent schools from the intended and compulsory sex education. Extensive research per region on the numbers of not complying to these obligations and the reasons behind this could be used to convince the government that action is required and to develop stricter policies.

Another obstacle which professionals encounter and the government can intervene is the access to contraceptives. Especially on the financial and geographical access to contraceptives. Still, too often, clinics run out of supply, which results in giving women another brand or method which increases the chance that women will stop using contraceptives permanently. The government could organise a fair distribution of contraceptives in the country to establish supply consistency. A lot of women do not have access to contraceptives due to the big distance they live from a health or fertility clinic. Clinics are also hindered from working as outreaching as they would want, since there is a lack of motorcycles and fuel for the nurses. Budgeting policies should be designed to either build more clinics or make it possible for healthcare professionals to make home visits.

If there is good access to contraceptives in a community, it is not always that inviting. There is a lack of private areas in the clinic or healthcare personnel make their negative attitude notice to their patients, especially to adolescents. Adolescent friendly corners seem to bring about some positive changes, but are not yet widespread.

A lot of progress has been made in this region in relation to FP and the uptake of modern contraceptives. Using peer educators, creating adolescent friendly corners, training health professionals and empowerment of adult women show positive results. More research on these strategies could give some more detailed information on the influence it has on actual usage of contraceptives in this region and whether they are effective.

Religion

Although in this research religion is not found to be significantly associated with intention to use contraceptives, it certainly has its' influence on the decision-making process on sexual behaviour and contraceptive practice and choice (Oindo, 2002). Religious norms can be obstructive when it comes to FP. Although Christians seem to have a higher intention to use FP methods in comparison to Moslems, both religions are in principle against sex outside marriage and against preventing childbearing. Therefore, with promoting FP one must be careful not to emphasize the prevention of unwanted pregnancies, but rather the timing and spacing of children. This study reveals that you cannot generalise the attitude of people with the same religion and one must be careful with attributing certain perspectives to religion.

Conclusion

In sum, it can be concluded that in the Bolgatanga municipality, there is a negative attitude towards contraceptive use and that fears of getting infertile by the use of modern contraceptives is still present and widespread. Norms, attitudes, fears and knowledge al seem to be intercorrelated and should therefore all be incorporated in programs and policies for increasing the intention to use contraceptives. Given the multiple levels of influences on contraceptive use and the belief that moderns contraceptives can lead to infertility, isolated strategies and programs will not discard these strong beliefs.

First of all, more research is recommended on actual cases of infertility in the region, correct usage of contraceptives, sexual initiation, and the effectiveness of peer educators,

adolescent friendly corners and empowerment of women on contraceptive use. Secondly, to change the present negative attitude and increase the intention to use modern contraceptives, education is the main strategy. The education on FP should be adapted to the targeting audience and should be age-appropriate. Targeting gate-keepers first seems to be effective, but has to be researched in further detail. The school situation in Bolgatanga does not seem to be able to provide age-appropriate information in the form of classroom sex education. A different approach is necessary to teach the youth about FP.

Last but not least, an important role is reserved for the Ghanaian government. It is their responsibility to provide equal access to contraceptives for all women in Ghana. This means providing for an adequate stock of contraceptives and relating medical instruments in all districts. Enough patient friendly healthcare facilities where everyone feels welcome regardless of age, religion or status and can talk about sex related issues in private is important. Training healthcare professionals is essential in this. To discard misconceptions about modern contraceptives and increase the intake, a comprehensive approach is acquired which includes the home, the school, the healthcare sector, the community and religious groups.

References

Abubakari, S., Enuameh, Y. A., Mahama, E., Nettey, O. E. A., Adjei, G., Nuamah, G. F., Anane, E. A., Adda, R., Dzabeng, F., Amenga-Etego, S., Zandoh, C., Asante, K. P., & Owusu-Agyei, S. (2015). Adolescents' willingness and intensions to use contraceptives in rural Ghana. *Open Journal of Social Sciences, 3,* 239-249. doi: 10.4236/jss.2015.311029

Achana, F. S., Bawah, A. A., Jackson, E. F., Welaga. P., Awine, T., Asuo-Mante, E., Oduro, A., Awoonor-Williams, J. K., & Philips, J. F. (2015). Spatial and socio-demographic determinants of contraceptive use in the Upper East region of Ghana. *Reproductive Health, 12:29.* doi: 10.1186/s12978-015-0017-8

Adam, S., Adom, D., & Bediako, A. B. (2016). The major factors that influence basis school dropout in Rural Ghana: The case of Asunafo South District in the Brong Ahafo Region of Ghana. *Journal of Education and Practice, 7*(28). Retrieved from: https://files.eric.ed.gov/fulltext/EJ1118546.pdf

Addai, I. (1999). Does religion matter in contraceptive use among Ghanaian women? *Review of Religious Research, 40*(3), 259-277. doi: 10.2307/3512371

Akinyoade, A. (2007). *Dynamics of reproductive behaviour in rural coastal communities of Southern Ghana.* Retrieved from: https://repub.eur.nl/pub/32623/90-423-0328-X_DOK[1].pdf

Albarracín, D., Johnson, B. T., Fishbein, M., & Muellerleile, P. A. (2001). Theories of reasoned action and planned behavior as models of condom-use: A Meta-analysis. *Psychological Bulletin, 127*(1), 142-161. doi: 10.1037/0033-2909.127.1.142

Ayindoho, A., & Kropp Dakubu, M. E. (2008). Ghana: Indigenous languages, English, and an emerging national identity. In: A. Simpson (Ed.), *Language and national identity in Africa.* Oxford: Oxford University Press

Askew, I., Maggwa, N., & Obare, F. (2017). Fertility transitions in Ghana and Kenya: Trends, determinants, and implications for policy and programs. *Fertility Transition in Sub-Saharan Africa, 43*(51), 289-307. doi: 10.1111/padr.12010

Awusabo-Asare, K., Biddlecom, A., Kumi-Kyereme, A., & Patterson, K. (2006). *Adolescent sexual and reproductive health in Ghana: Results from the 2004 national survey of adolescents.* Retrieved from: https://www.guttmacher.org/sites/default/files/pdfs/pubs/2006/06/08/or22.pdf

Betts, K. (1984). The Billing method of family planning: An assessment. *Studies in Family Planning, 15*(6), 253-266. Retrieved from: https://www.researchgate.net/profile/Katharine_Betts/publication/16679974_The_Billings_Method_of_Family_Planning_An_Assessment/links/5a00f6bf0f7e9b62a1578096/The-Billings-Method-of-Family-Planning-An-Assessment.pdf?origin=publication_detail

Bratton. A. R. (2010). An anthropological study of factors affecting the construction of sexuality in Ghana: Teenage pregnancy, school education and virgins' clubs. Wales, United Kingdom: The Edwin Mellen Press

Cantalupo, N. C., Vollendorf Martin, L., Pak, K., & Shin, S. (2006). Domestic violence in Ghana: The open secret. *Georgetown Journal of Gender and the Law, 7*(2), 531-597. Retrieved from: http://scholarship.law.georgetown.edu/cgi/viewcontent.cgi?article=1432&context=facpub

Cantlay, A. (2015). Managing teenage pregnancy. *InnovAiT, 8*(9), 524-530. doi:10.1177/1755738015597458

Darteh, E. K. M., & Doku, D. T. (2016). Knowledge and usage of emergency contraceptives among university students in Ghana. *Journal of Community Health, 41,* 15-21.

doi: 10.1007/s10900-015-0057-6

Eggers, S. M., Aarø, L. E., Bos, A. E. R., Mathews, C., Kaaya, S. F., Onya, H., & De Vries, H. (2016). Sociocognitive predictors of condom use and intentions among adolescents in three Suc-Saharan sites. *Archives of Sexual Behavior, 45*(2), 353-365. doi: 10.1007/s10508-015-0525-1

Emina, J. B., Chirwa, T., & Kandala, N. B. (2014). Trend in the use of modern contraception in sub-Saharan Africa: Does women's education matter? *Contraception, 90*(2), 154-161. doi: 10.1016/j.contraception.2014.02.001

EP-Nuffic (2015). *Education system Ghana: The Ghanaian education system described and compared with the Dutch system.* Retrieved from: https://www.epnuffic.nl/en/publications/find-a-publication/education-system-ghana.pdf

Espada, J. P., Morales, A., Guillén-Riquelme, A., Ballester, R., & Orgilés, M. (2016). Predicting condom use in adolescents: A test of three socio-cognitive models using a structural equation modelling approach. *BMC Public Health, 16*(1). doi: 10.1186/s12889-016-2702-0

Ghana Statistical Service (2013). *2010 population & housing census.* Retrieved from http://www.statsghana.gov.gh/docfiles/2010phc/National_Analytical_Report.pdf

Ghana Statistical Service (GSS) (2014). *2010 Population and housing census: District analytical report: Bolgatanga Municipality.* Accra: GSS. Retrieved from http://www.statsghana.gov.gh/docfiles/2010_District_Report/Upper%20East/Bolga.pdf

Ghana Statistical Service (GSS), Ghana Health Service (GHS), and ICF International (2015). *Ghana Demographic and Health Survey 2014.* Rockville, Maryland, USA: GSS, GHS,

and ICF International. Retrieved from: https://dhsprogram.com/pubs/pdf/FR307/FR307.pdf

Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research.* London: Weidenfeld and Nicholson

Gonçalves, H., Souza, A. D., Tavares, P. A., Cruz, S. H., & Béhague, D. P. (2011). Contraceptive medicalisation, fear of infertility and teenage pregnancy in Brazil. *Culture, Health & Sexuality, 13*(2), 201-2015. doi: 10.1080/13691058..2010.521576

Guan, M., Coles, V. B., Samp, J. A., McDermott Sales, J., Diclemente, R. J., & Monahan, J. L. (2016). Incorporating communication into the theory of planned behavior to predict condom use among African American women. *Journal of Health Communication, 21*(9), 1046-1054. doi: 10.1080/10810730.2016.1204383

Gyan, M. (2013). The effects of teenage pregnancy on the educational attainment of girls at Chorkor, a suburb in Accra. *Journal of Educational and Social Research*, *3*(3). doi: 10.5901/jesr.2013.v4n3p53

Hubacher, D., & Trussell, J. (2015). A definition of modern contraceptive methods. *Contraception, 92*(5), 420-421. doi: 10.1016/j.contraception.2015.08.008

Jones, K. M. (2015). Contraceptive supply and fertility outcomes: Evidence from Ghana. *Economic Development and Cultural Chang. 64*(1), 31-69. doi: 10.1086/682981

Krugu, J. K. (2016). Beyond love: Promoting sexual and reproductive health and rights of adolescents in Ghana. Maastricht University.

Krugu, J. K., Mevissen, F. E. F., Münkel, M., & Ruiter, R. A. C. (2016). Beyond love: A experience qualitative analysis of factors associated with teenage pregnancy among girls with pregnancy experience in Bolgatanga, Ghana. *Culture, Health and Sexuality*. doi: 10.1080/13691058.2016.1216167

Kwankye, S. O., & Cofie, E. (2015). Ghana's population policy implementation: Past, present and future. *African Population Studies, 29*(2), 1734-1748. doi: 10.11564/29-2-738

Lauro, D. (2011). Abortion and contraceptive use in sub-Saharan Africa: How women plan their families. *African Journal of Reproductive Health, 15,* 13-23. Retrieved from: http://www.ajol.info/index.php/ajrh/article/viewFile/67852/55946

L'Engle, K. L., Brown, J. D., & Kenneavy, K. (2006). The mass media are an important context for adolescents' sexual behaviour. *Journal of Adolescent Health, 38*(3), 186-193. doi: 10.1016/j.jadohealth.2005.03.020

Lewin, K. M. (2009). Access to education in sub-Saharan Africa: Patterns, problems and possibilities. *Comparative Education, 45*(2), 151-174. doi: 10.1080/03050060902920518

Mahy, M., & Gupta, N. (2002). *Trends and differentials in adolescent reproductive behavior in sub-Saharan Africa.* DHS Analytical Studies No. 3. Calverton, Maryland: ORC Macro. Retrieved from: https://dhsprogram.com/pubs/pdf/AS3/AS3.pdf

Mintah-Afari, E. (2008). *Social studies: senior high schools.* Kumasi: Approachers (GH) Ltd.

Muñoz-Silva, A., Sánchez-García, M., Nunes, C., & Martins, A. (2007). Gender differences in condom use prediction with theory of reasoned action and planned behaviour: The role of self-efficacy and control. *Aids Care, 19*(9). 1177-1181. doi: 10.1080/09540120701402772

Ngũgĩ Wa Thiong'o (1972). *Homecoming: Essays on African and Caribbean literature, culture and politics.* London: Heinemann

Nketiah-Amponsah, E., Arthur, E., & Abuosi, (2012). Correlates of contraceptive use among Ghanaian women of reproductive age (15-49 years). *African Journal of Reproductive Health, 16*(3), 154-169. Retrieved from: https://www.ajol.info/index.php/ajrh/article/view/81324

Nyarko, K., Adentwi, K. I., Asumeng, M., & Ahulu, L. D. (2014). Parental attitude towards sex education at the lower primary in Ghana. *International Journal of Elementary Education, 3,* 21-29. doi: 10.11648/j.ijeedu.20140302.11

Oindo, M. L. (2002). Contraception and sexuality among the youth in Kisimu, Kenya. *African Health Sciences, 2*(1), 33-40. doi: 10.4314/ahs.v2i1.6805

Paul, M., Nässström, S. B., Klingberg-Allvin, M., Kiggundu, C., & Larsson, E. C. (2016). Healthcare providers balancing norms and practice: Challenges and opportunities in providing contraceptive counselling to young people in Uganda- a qualitive study. *Global Health Action, 9*(1). doi: 10.3402.v9.30283

Peragallo Urrutia, R., Polis, C. B., Jensen, E. T., Greene, M. E., Kennedy, E., & Stanford, J. B. (2018). Effectiveness of fertility awareness-based methods for pregnancy prevention. *Obstetrics & Gynecology, 132*(3), 591-604. doi: 10.1097/AOG.0000000000002784

Peters, V., & Wester, F. (2007). How qualitative data analysis software may support the qualitative analysis process. *Quality & Quantity, 41*(5), 635-659. doi: 10.1007/s11135-006-9016-8

Pedlow, C. T., & Carey, M. P. (2004). Developmentally appropriate sexual risk reduction intervention for adolescents: Rationale, review of interventions, and recommendations for research and practice. *Annals of Behavioral Medicine, 27*(3), 172-184. doi: 10.1207/s15324796abm2703_5

Peyman, N., & Oakley, D. (2009). Effective contraceptive use: An exploration of theory-based influences. *Health Education Research, 24*(4), 575-585. doi: 10.1093/her/cyn058

Reid, A. E., & Aiken, L. S. (2011). Integration of five health behaviour models: Common strengths and unique contributions to understanding condom use. *Psychology & Health, 26*(11), 1499-1520. doi: 10.1080/08870446.2011.572259

Salm, S. J., & Falola, T. (2002). *Culture and customs of Ghana.* London: Greenwood Press

Santoso, B. I., & Surya, R. (2017). Knowledge, attitude, and practice of contraception among pregnant women in Ende district, East Nusa Tenggara, Indonesia. *Jaypee Journals, 9*(2), 110-118. doi: 10.5005/jp-journals-10006-1470

Shabaya, J., & Konadu-Agyemang, K. (2004). Unequal access, unequal participation: Some spatial and socio-economic dimensions of the gender gap in education in Africa with special reference to Ghana, Zimbabwe and Kenya. *Compare, 34*(4). doi: 10.1080/0305792042000294805

Sirirat, C., Pumpalbool, T., & Phupong, V. (2015). Knowledge attitude and intention of preventing unwanted pregnancy among female undergraduate students in Bangkok, Thailand. *Journal of Health Research, 29*(2), 193-199. doi: 10.14445/jhr.2015.68

Stephenson, R., Baschieri, A., Clements, S., Hennink, M., & Madise, N. (2007). Contextual influences on modern contraceptive use in Sub-Saharan Africa. *American Journal of Public Health, 97*(7), 1233-1240. doi: 10.2105/AJPH.2005.071522

Tawiah, E. O. (1997). Factors affecting contraceptive use in Ghana. *Journal of Biosocial Science, 29*(2), 141-149. doi: 10.1017/S0021932097001417

Tiruneh, F. N., Chuang, K., Ntenda, P. A. M., & Chuang, Y. (2016). Factors associated with contraceptive use and intention to use contraceptives among married women in Ethiopia. *Women & Health, 56*(1), 1-22. doi: 10.1080/03630242.2015.1074640

Van der Wijden, C., & Manion, C. (2015). Lactational amenorrhoea method for family planning. *Cochrane Database of Systematic Reviews.* doi: 10.1002/14651858.CD001329.pub2

Appendix 1

Interview protocol

Contraceptive Use and Infertility: A Dilemma in Bolgatanga (Upper East Region) Ghana

Purpose: There are still firm beliefs that some types of contraceptives, besides condoms, will cause infertility (Krugu, 2016; Bratton, 2010). These beliefs are contributing to a lower use of contraceptives and with that contributing to a higher risk of teenage pregnancies. Krugu (2016) made recommendations for further research to specify perpetuating factors in such beliefs and how they can be discarded. Before you can discard a belief, it's very important to find out where those beliefs are coming from and in which context.

Bring to interview

- Voice recorder
- Informed consent form
- Information letter
- Biscuits and water (focus groups)
- pens

Introduction

Good morning/afternoon/ evening. First of all, thank you for your willingness to participate in this research. My name is Daniëlle Verroen and this research is part of my Masters Programme African Studies at Leiden University. You will remain anonymous, which means that your name will not be mentioned. Only the information you give me will be used to write my thesis. This interview will take about one hour/ This focus group will take about an hour and a half to two hours with a short break in which we will talk about the topic contraceptives. There are no correct or wrong answers. I'm only interested in how you think about certain issues, so please feel free to say anything you want. To ensure that you are well informed, I will now talk you through the information letter and informed consent form.

Informed consent

Please read this form carefully (or let the translator explain it to you in your own language). If you have any question, please feel free to ask me. If you agree with this information, I want to ask you to sign this form for me.

Voice recording

The last thing I want to discuss with you is the use of a voice recorder. The reason I want to use it is to make sure I can keep my full attention on our conversation and to be able to listen later if I didn't miss an important part. Only me and my supervisors at the university are allowed to listen to the recordings.

After this section the interview will start and if agreed the voice recorder will be turned on. All questions are adjusted to the level of English and/or educational level of the person/group. Probing and prompting will be used if necessary.

Questions Organisation/Institutions (Ghana Education Services, Ghana Health Services, NGO's, etc.)

Demographic questions

- Note on gender
- What is your age?
- What is the name of your ethnic group?
- What is your religious affiliation?
- Note on organisation
- What is your function in this organisation/institution?
- How long have you worked for this organisation/institution?

Contraceptives in general

- In which way does your organisation/institution work on contraceptive use?
- What is the target group from your organisation?
- What are the most common birth control methods used in this region?
- What is the general attitude towards family planning in this region?
- Are there individual characteristics which contribute to these attitudes? (gender, religion, ethnic group, age, educational level)
- What are the main factors for people to use contraceptives?
- What are the main factors for people to not use contraceptives?
- Are there misconceptions about birth control methods within the communities? (examples)
- What does your organisation/institution do to discard these misconceptions?
- Do you think that people are completely free to choose whether they do on family planning or not?
- Where do people get their information about contraceptives from? (different generations)
- What are the main challenges in this work?

Now I will ask more personal questions. At any moment, you have the right to refuse answering the question. In that case I will proceed to the next question.

Personal opinion contraceptive use

- What is your personal opinion about family planning?
- Which birth control methods can you enumerate?
- Do you use or ever used contraceptives yourself (wife)?
- Would you advise contraceptive use to certain persons? (method, target group)
- Do you think there are side effects when using contraceptives? (examples method + side effect)
- Do you think that contraceptives can lead to infertility? (which methods)
- Have you ever heard that other people think that I can lead to infertility?
- Do you think contraceptives should be taught at school?

Final question: We have been talking about family planning, the attitude towards it and possible side effects. Do you have anything to add which we haven't discussed?

Questions Community

Demographic questions

- Note on gender
- What is your age?
- What is the name of your ethnic group?
- What is your religious affiliation?
- What is your educational level?

Personal opinion contraceptive use

- What is your personal opinion about family planning?
- Which birth control methods can you enumerate?
- Do you use or ever used contraceptives yourself (wife)?
- What was the reason/ could be a reason to start using contraceptives?
- What are possible reasons not to use contraceptives?
- Are you free to choose whether you use contraceptives or not?
- Where did you learned about contraceptives?
- Would you advise the use of contraceptives to certain persons? (method, target group)

- Do you think there are side effects when using contraceptives? (examples method + side effect)
- Do you think that contraceptives can lead to infertility? (which methods)
- Have you ever heard that some people think that it can lead to infertility?
- Are there individual characteristics which contribute to these attitudes? (gender, religion, ethnic group, age, educational level)
- Do you think contraceptives should be taught in school?

Final question: We have been talking about family planning, the attitude towards is and possible side effects. Do you have anything to add which we haven't discussed?

Questions Focus Group >>>> same as questions community

Appendix 2

Contraceptive Use and Infertility: A Dilemma in Bolgatanga (Upper East Region) Ghana

Senior High School Students Questionnaire

School:

Date:

Questionnaire Code:

Instructions

Completing this questionnaire will not only help me to write my thesis but can give important insights to improve the knowledge and use of contraceptives in your community.

Do not write your name on this questionnaire, so your answers will be secret (anonymous). Nobody will know who filled in this questionnaire. Your teachers, family, neighbours and schoolmates will not see your answers.

This is not a test, so there are no right or wrong answers. **PLEASE BE HONEST IN YOUR ANSWERS.** Only honest answers are helpful and give information about this topic. Do NOT give answers that you think I want from you. I need to know what you and other young people really think, know and believe when it comes to contraceptives.

Answering this questionnaire is completely voluntary. If filling in the questionnaire makes you feel uncomfortable, you can stop at any time without giving any reason.

Only fill in the questionnaire if you are 18 years or older and you give me your consent for your participation by signing the list.

If you have any questions, please raise your hand and ask me.

Thank you very much!

Madame Daniëlle

1. **What is the name of your school? _____**
2. **How old are you? _____**
3. **What is your sex? I'm a ….**

   A. Girl B. Boy
4. **What is your religion?**

   A. Traditional worship B. Islam C. Christianity D. Other/no religion
5. **What is your ethnicity?**

   A. Gurunsi/Frafra B. Talensi C. Nabdam D. Other, please specify _____
6. **Are you married?**

   A. Yes B. No
7. **Are your parents still alive?**

   A. Yes B. Yes, only my mother C. Yes, only my father D. No
8. **Where do you live the biggest part of the year?**

   A. Hostel B. Modern house C. Compound D. Other
9. **With who do you live? (multiple answers possible)**

   A. Parent(s) B. other family members C. Friends D. Husband/wife

   E. Other, please specify _____
10. **Are you sexually active?**

    A. Yes B. No
11. **What is your opinion about family planning (contraceptives)?**

    A. Very bad, you should never do it

    B. Bad, but in some situations, it is the only option

    C. I don't know

    D. Good, some people should use it

    E. Very good, everybody should have the choose if they want to use it or not
12. **Please indicate if you know the following family planning methods**

Male condom	A. No, never heard of it	B. Yes, I know	C. Maybe, not sure
Female condom	A. No, never heard of it	B. Yes, I know	C. Maybe, not sure
Foaming tablet	A. No, never heard of it	B. Yes, I know	C. Maybe, not sure
Oral contraceptive pill	A. No, never heard of it	B. Yes, I know	C. Maybe, not sure
Injectable	A. No, never heard of it	B. Yes, I know	C. Maybe, not sure
Implants	A. No, never heard of it	B. Yes, I know	C. Maybe, not sure
Intra Uterine Device (IUD)	A. No, never heard of it	B. Yes, I know	C. Maybe, not sure
Intra Uterine System (IUS)	A. No, never heard of it	B. Yes, I know	C. Maybe, not sure
Male sterilization	A. No, never heard of it	B. Yes, I know	C. Maybe, not sure
Female sterilization	A. No, never heard of it	B. Yes, I know	C. Maybe, not sure
Rhythm or calendar method	A. No, never heard of it	B. Yes, I know	C. Maybe, not sure
Emergency contraception	A. No, never heard of it	B. Yes, I know	C. Maybe, not sure

13. From who did you hear about family planning (contraceptives) for the first time?

A. My mother B. My father C. another family member D. a friend E. Teacher at school

F. Healthcare worker G. Radio/TV I. Internet J. Someone else, please specify

_____

14. How old were you when you heard about family planning (contraceptives) for the first time?

_____

15. Do you get or got in the past information about contraceptives in the following ways

From my mother	A. Never	B. a couple of times	C. One time	D. Often
From my father	A. Never	B. a couple of times	C. One time	D. Often
From my siblings	A. Never	B. a couple of times	C. One time	D. Often
From one of my grandparents	A. Never	B. a couple of times	C. One time	D. Often
From uncles or aunties	A. Never	B. a couple of times	C. One time	D. Often
From teachers	A. Never	B. a couple of times	C. One time	D. Often
From classmates	A. Never	B. a couple of times	C. One time	D. Often
From the chief	A. Never	B. a couple of times	C. One time	D. Often
From my religious leader (pastor, imam, etcetera)	A. Never	B. a couple of times	C. One time	D. Often
From the internet	A. Never	B. a couple of times	C. One time	D. Often
From television	A. Never	B. a couple of times	C. One time	D. Often
From radio	A. Never	B. a couple of times	C. One time	D. Often

16. Are you or is your girlfriend/wife using contraceptives at the moment?

A. Yes, please specify type of contraceptive_____ B. No

17. Have you or has your girlfriend/wife ever used contraceptives in the past?

A. Yes, please specify type of contraceptive _____ B. No

The next questions are statements about the use of contraceptives. Please indicate honestly to which extent you agree with the statements or not.

18. Family planning is not allowed according to my religion

A. Strongly agree B. Agree C. Neither agree nor disagree D. Disagree

E. Strongly disagree

19. My family would support me if I choose to start family planning

A. Strongly agree B. Agree C. Neither agree nor disagree D. Disagree

E. Strongly disagree

20. Some contraceptives have dangerous side effects

A. Strongly agree B. Agree C. Neither agree nor disagree D. Disagree

E. Strongly disagree

21. The risk of side effects will keep me from using contraceptives now or in the future

A. Strongly agree B. Agree C. Neither agree nor disagree D. Disagree

E. Strongly disagree

22. Some contraceptives can lead to infertility

A. Strongly agree B. Agree C. Neither agree nor disagree D. Disagree

E. Strongly disagree

23. Teachers at school are talking openly about contraceptives

A. Strongly agree B. Agree C. Neither agree nor disagree D. Disagree

E. Strongly disagree

24. I cannot talk to my parents or other caregivers about contraceptives

A. Strongly agree B. Agree C. Neither agree nor disagree D. Disagree

E. Strongly disagree

25. I know where I can go to for more information about contraceptives if I want to

A. Strongly agree B. Agree C. Neither agree nor disagree D. Disagree

E. Strongly disagree

26. I would use or let my girlfriend/wife use the following contraceptives

Male condom	A. No, never	B. Yes, I would	C. Maybe, not sure
Female condom	A. No, never	B. Yes, I would	C. Maybe, not sure
Foaming tablet	A. No, never	B. Yes, I would	C. Maybe, not sure
Oral contraceptive pill	A. No, never	B. Yes, I would	C. Maybe, not sure
Injectable	A. No, never	B. Yes, I would	C. Maybe, not sure
Implants	A. No, never	B. Yes, I would	C. Maybe, not sure
Intra Uterine Device (IUD)	A. No, never	B. Yes, I would	C. Maybe, not sure
Intra Uterine System (IUS)	A. No, never	B. Yes, I would	C. Maybe, not sure
Male sterilization	A. No, never	B. Yes, I would	C. Maybe, not sure
Female sterilization	A. No, never	B. Yes, I would	C. Maybe, not sure
Rhythm or calendar method	A. No, never	B. Yes, I would	C. Maybe, not sure
Emergency contraception	A. No, never	B. Yes, I would	C. Maybe, not sure

27. Please state why a person should NOT use family planning methods

_____

_____

_____

_____

_____

_____

28. Please state why it's good for people to use family planning

_____

_____

_____

_____

_____

_____

If you have a comment about contraceptives which hasn't been discussed yet you can write it down here

_____

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