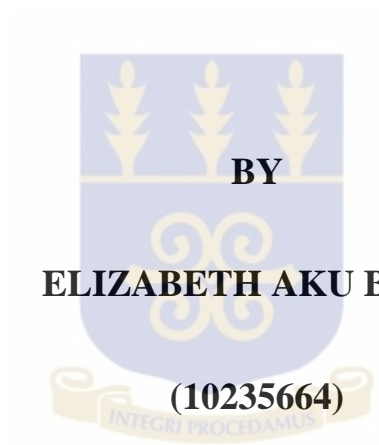


**SCHOOL OF PUBLIC HEALTH
COLLEGE OF HEALTH SCIENCES
UNIVERSITY OF GHANA**

**PARENT TRAINING AND PARENT-ADOLESCENT
COMMUNICATION ABOUT SEXUALITY IN ACCRA
METROPOLIS, GHANA**



**THIS THESIS IS SUBMITTED TO THE UNIVERSITY OF GHANA,
LEGON IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR
THE AWARD OF PhD PUBLIC HEALTH DEGREE.**

JULY, 2014

DECLARATION

I certify that this thesis has not been submitted for any degree and is not being submitted as part of candidature for any other degree.

I also certify that the thesis has been written by me and any help received in writing this thesis and all resources used, have been acknowledge.

.....
ELIZABETH AKU BAKU

(Candidate)

.....
DATE

.....
PROF. RICHARD M. ADANU

(Principal Supervisor)

.....
DATE

.....
DR. SALLY-ANN OHENE

(Supervisor)

.....
DATE

.....
DR. AMOS K. LAAR

(Supervisor)

.....
DATE

DEDICATION

This thesis is dedicated to God for bringing me so far

And

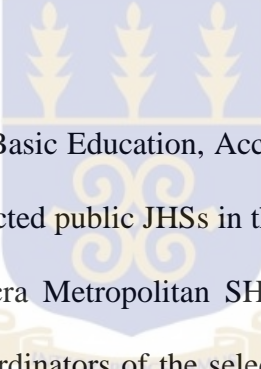
My parents, Mr. Andrews Baku and Mrs. Comfort Baku



ACKNOWLEDGEMENT

I am grateful to all those who in diverse ways helped me in the writing of this thesis.

My heart felt gratitude goes to my principal supervisor, Prof. R. M. Adanu, Dean, School of Public Health, College of Health Sciences, University of Ghana, for his immeasurable efforts to bring this thesis to completion. He was not only a supervisor but a motivator. I am also grateful to my other supervisors Dr. Sally-Ann Ohene, WHO, Ghana Office and Dr. Amos Laar, Department of PFRH, School of Public Health, University of Ghana for their guidance, comments and advice on the thesis. I am most grateful to Dr. Maltida Pappo, for her immense assistance and advice during the writing of this thesis.



I am grateful to Director of Basic Education, Accra Metropolis, Mr. Alfred Kofi Osei for permitting me to use selected public JHSs in the Metropolis to conduct the study. I am also grateful to the Accra Metropolitan SHEP Co-coordinator, Mrs. Jonas for linking me to the SHEP coordinators of the selected JHSs who assisted me with the research. I thank the head teachers/mistresses, SHEP coordinators and students of the following Junior High Schools: Ring Way Estate, Osu Mahean, St. Peters' Catholic, St Barnabas Anglican, Grey Memorial and Boundary Road, all of Osu Klotty sub-Metropolis. St. Mary Girls, Korle Gonno Methodist, Ministry of Health, Korle Gonno 4, Simpe 1 and Star of the Sea, all of Ablekuma South sub-Metropolis. I am indebted to all the parents who took part in the study and to Miss Rejoice Nutakor and Desiree Opoku my training facilitators.

I am thankful to the faculty and staff of the Department of PFRH, Prof. A. Ankomah, the Head of Department, Angela Asantewaa, Dr. Agnes Kotoh and Evils, for their collective and individual contribution towards the writing of this study.

I am appreciative of Dr. Abu Abudullai Manu, my colleagues Dede Ogum Alangae, Emefa Modey and Adelaide Ansah Ofei for their immense contribution towards the writing of the thesis. I am so grateful to the Acting Dean, School of Nursing and Midwifery, University of Health and Allied Science, Dr. Gameli Norgbe, for his constant support and encouragement and all my colleagues of School of Nursing and Midwifery, University of Health and Allied Sciences, Ho for their support and Mr. Yao Doegah-Agbenyegah for reading through the script.

Special thanks go to my immediate family especially, Vic, Mark, Aseye and Elorm for their prayers, support and encouragement during the hectic times of the study.

Lastly, I thank the Ghana Education Trust Fund (GETFUND) for paying for part of the research.

TABLE OF CONTENTS

Content	Page
DECLARATION	i
DEDICATION	ii
ACKNOWLEDGEMENT	iii
TABLE OF CONTENTS.....	v
LIST OF TABLES	xv
LIST OF FIGURES	xvi
LIST OF ABBREVIATIONS/ACRONYMS	xvii
ABSTRACT.....	xviii
CHAPTER ONE	1
INTRODUCTION	1
1.1. Background to the Study.....	1
1.2. Problem statement.....	3
1.3. Objectives	5
1.3.1. Main objective	5
1.3.2. Specific objectives	5
1.4. Hypotheses	6
1.5 Justification of the study	6
1.6. The Theoretical Framework of the Study	8
1.7. Operational Definitions.....	10
CHAPTER TWO	11
LITERATURE REVIEW	11
2.0. Introduction.....	11
2.1. Theoretical approach to the study	11
2.2. Context of adolescence	15

2.2.1 Sexual behaviour of adolescents	17
2.2.2. Teenage pregnancy and adolescent child bearing.....	19
2.2.3. Abortion	20
2.2.4. HIV infections.....	22
2.2.5. Contraceptive use.....	22
2.3. Orientation on sexuality for adolescents in Ghana	23
2.4. Parent-Adolescent Communication about Sexuality	26
2.5. Benefits of Parent-Adolescent Communication in Reducing High Risk Sexual Behaviour	28
2.6. Dimensions of parent-adolescent communication on sexuality.....	30
2.6.1. Content of communication.....	31
2.6.2. Frequency of communication	33
2.6.3. Communication comfort	35
2.6.4. Openness of communication.....	36
2.6.5. Communication ability.....	37
2.6.6. Timing of parent-adolescent communication about sexuality	37
2.7. Parents' knowledge and attitudes about sexual and reproductive health issues ...	41
2.7.1. Knowledge	41
2.7.2. Attitudes	42
2.8. Parents' experiences in discussing sexuality with adolescents.....	44
2.9. Socio-cultural factors that influence parent- adolescent communication about sexuality.....	45
2.9.1 Cultural factors.....	45
2.9.2. The Media	48
2.9.3 Religion.....	51
2.9.4. Peers	52
2.9.5. School Sex Education	53

2.9.6. Gender.....	55
2.10. Parent intervention programmes	57
2.10.1 Intervention studies to improve parent-adolescent communication about sexuality.....	58
2.11. Conclusion	61
CHAPTER THREE	63
METHODS	63
3.1. Study area.....	63
3.1.1. The Osu Klottey sub-Metropolis	65
3.1.2. Ablekuma South sub-Metropolis	66
3.1.3. Cultural and social structure	66
3.1.4. Political administration of the Accra Metropolis.....	67
3.1.5. Topography, climate and vegetation.....	67
3.1.6. Economic activities	68
3.2. Study design.....	69
3.3. Study population	69
3.3.1. Selection criteria of participants	69
3.3.1.1. Inclusion criteria	69
3.3.1.2. Exclusion criteria	70
3.4. Sample size calculation.....	70
3.5. Sampling	71
3.5.1. Selection of adolescents.....	71
3.5.2. Selection of parents.....	72
3.5.3. Sampling for qualitative data	72
3.6. Data collection techniques	73
3.6.1. Quantitative data	73

3.6.2. Qualitative data	73
3.6.3 Data collection tools	74
3.6.4. Data source.....	75
3.6.5.Types of data collected	76
3.6.5.1. Section A: Demographic information parents and adolescents	76
3.6.5.2. Section B: Parents’ ability and comfort communicating on sexuality with their adolescents.....	76
3.6.5.3 Section C: Parents’ knowledge about sexual topics	77
3.6.5.4. Parents frequency of communication about sexual topics with adolescents ..	77
3.6.5.5. Section E: Parental attitudes towards adolescent sexual issues	77
3.7. Pre-data collection activities	77
3.7.1. Permission for Access to Schools	77
3.7.2. Training of School Health Education Programme (SHEP) Coordinators	78
3.7.3. Training of other Research Assistants	79
3.7.4. Briefing of training facilitators	79
3.8. Pre-testing	80
3.9. Pre-intervention (baseline) survey	81
3.10. The Training Programme	83
3.10.1. Curriculum for training of parents	84
3.10.2. Training of parents	87
3.11. Ethical consideration.....	90
3.12. Data collection	90
3.12.1. Post intervention survey.....	90
3.12.2. Response rate	91
3.12.3. Focus Group Discussions.....	92
3.12.4. In-Depth Interview	93
3.12.5. Difficulties encountered in the field/data collection.....	94

3.13. Study variables.....	95
3.13.1. Independent Variables	95
3.13.2. Dependent variables.....	95
3.13.3. Parents’ perceived knowledge about sexual topics.....	95
3.13.4. Parents reported frequency of parent-adolescent discussion about sexual topics.....	98
3.13.5. Adolescents’ reported frequency of parent-child discussion about sexual topics.....	100
3.13.6. Parents’ rated ability to discuss sexual topics with adolescents	100
3.13.7. Parents’ reported comfort in discussing sexual topics with adolescents	101
3.13.8. Parents’ reported openness communication with adolescents	101
3.13.9. Attitudes of parents towards adolescent sexual issues.....	102
3.13.10. Age for sexuality discussions with adolescents	103
3.14. Data quality control measures.....	103
3.14.1. Data processing.....	103
3.14.2. The quantitative data.....	103
3.14.3. Data validation	104
3.14.4. Data sets	104
3.15. Data analysis	105
3.15.1. Quantitative data	105
3.15.2. Descriptive analysis	105
3.15.3. Inferential statistics	105
3.15.4. Agreement of discussing sexual topics with adolescents	105
3.15.5. Difference-in-Differences analysis	106
3.15.6. Logistic Regression analysis.....	108
3.15.7. Qualitative data	108

CHAPTER FOUR.....	110
RESULTS OF THE STUDY	110
4.1. Socio-Demographics Characteristics of Participants.....	111
4.1.1. The socio-demographic characteristics of parents.....	111
4.1.2. Socio-demographic data of adolescents.....	112
4.2. Parents’ perceived knowledge about adolescent’s sexual topics.....	114
4.2.1. Mothers’ perceived knowledge about sexual topics	116
4.2.2. Fathers’ perceived knowledge about adolescent sexual topics.....	118
4.2.3. Total parents’ perceived knowledge of adolescent sexual topics	119
4.2.4. Parental sources of knowledge of talking about sexual issues with adolescents	120
4.3. Attitudes of parents towards adolescent sexual issues.....	121
4.3.1 Parents attitudes towards allowing adolescents use of family planning services	121
4.3.2. Parents’ attitudes towards discussing of sexual topics with adolescents.....	122
4.3.3. Parents’ attitudes towards condom use by sexually active adolescents.....	123
4.4. Subjective norms affecting parents discussing sexual topics with	124
adolescents	124
4.4.1. Family sentiments about educating adolescents about sexuality.....	124
4.4.2: Influence of parental religious beliefs on sexuality education of adolescents.....	125
4.4.3. Encouraging adolescent sexuality education and religion	126
4.4.4. Influence of Culture on sexuality education of adolescents	127
4.4.5. Sex education and adolescents’ engagement in pre-marital sex	130
4.4.6. School sex education and parents’ sexuality education of adolescents	131
4.4.7. The influence of the media on the sexual lives of adolescents	134
4.4.8. Parents’ sentiments about peers as the source of sex education to adolescents	135

4.5. Perceived Behavioural Control factors that influence parent-adolescent discussion about sexual topics	137
4.5.1. Parents' self-rated ability and comfort discussing sexual topics with adolescents	137
4.5.2. Parents' openness in discussing sexual topics with adolescents.....	139
4.5.3. Training of parents to talk to children about sexuality	140
4.6. Parents' Intention towards Discussing Sexual Topics with Adolescents	142
4.6.1. Gender of child parents would like to talk more about sexual topics	142
4.6.2. Age for sexuality education	144
4.7. Manifestation of Behaviour: Actual Parent-Adolescent Communication on	145
Sexuality	145
4.7.1. Parent-Adolescent Sexuality Discussion	145
4.7.2. Reasons for parents discussing sexual topics with adolescents	146
4.7.3. Initiation of parent-adolescent discussion on sexuality	147
4.7.4. Content of parent-adolescent sexuality discussion	148
4.7.5. Frequency of parents' discussions about sexual topics with adolescents	149
4.7.6. Total parents' reported frequency of sexual discussion with adolescents	155
4.7.7. Differences in sexual communication due sex of adolescent	156
4.7.8 Mean number of topics parents discussed with adolescents	164
4.7.9 Effects of educating parents on sexuality when they were young	165
4.7.10. Parents' perceptions of educating them about sexuality at young age	166
4.7.11 Difficulties parents confronted in educating adolescents on sexual topics....	167
4.7.12. The effects of the three months sexual education training on parents	169
4.7.13 Effects of Training on parents (Testing the hypotheses of the study)	171
4.7.14 Parent- adolescent agreement on discussing sexual topics	173
4.7.15. The relationship of the study with the Theoretical framework.....	176

CHAPTER FIVE	178
DISCUSSION.....	178
5.0. Introduction.....	178
5.1. Parents’ perceived knowledge about adolescent sexual topics.....	178
5.1.1. Parents’ sources of knowledge of adolescent sexual topics.....	180
5.2. Attitudes of parents towards adolescent sexual issues.....	181
5.3. Subjective norms affecting parent-adolescent discussion about sexual topics...	182
5.3.1. Religious beliefs.....	182
5.3.2. Culture.....	183
5.3.3. School sex education.....	184
5.3.4. Influence of the media on the sexual lives of adolescents	185
5.4. Perceived behavioural control factors that influence parent-adolescent sexual communication	187
5.4.1. Parents’ self-rated ability and comfort to discuss sexual topics with adolescents	187
5.4.2. Importance of training parents to talk to adolescents about sexuality	188
5.5. Intention of parents to discuss sexual topics with adolescents	189
5.5.1. Gender influence on parental intention to discuss sexual topics with adolescents	189
5.5.2. Age for sexuality education	190
5.6. Manifestation of behaviour: actual parent-adolescent discussion about sexuality	191
5.6.1. Parent-adolescent sexual discussions.....	191
5.6.2. Initiation of parent-adolescent communication on sexuality	192
5.6.3. Content of parent-adolescent communication on sexuality.....	193
5.6.4. Parents reported frequency of parent-adolescent sexuality communication....	195
5.6.5. Differences in communication due to sex of parent	196
5.6.6. Differences in communication due to sex of adolescent	197

5.6.7. Education of parents on sexuality during adolescence	198
5.6.8. Difficulties confronting parents in discussing sexuality with adolescents	199
5.6.9. Effects of three month sexual health education programme on parents	201
5.6.10. Strengths of the study.....	202
5.6.11. Limitations of the study	203
5.6.12. Contribution to knowledge	203
CHAPTER SIX.....	204
CONCLUSIONS AND RECOMMENDATIONS.....	204
6.0 Introduction.....	204
6.1. Conclusion	204
6.2. Recommendations.....	205
6.2.1. Parents.....	206
6.2.2. The mass media.....	206
6.2.3. The Ministry of Education/Ghana Education Service	207
6.2.4. Other stakeholders	207
6.3. Implications for further study	208
Reference	209
APPENDICES	224
APPENDIX 1: PARENT QUESTIONNAIRE.....	224
APPENDIX 2: ADOLESCENT QUESTIONNAIRE	230
APPENDIX 3: In-depth interview guides for parents	233
APPENDIX 4: FGD GUIDES FOR PARENTS	235
APPENDIX 5: ETHICAL CLEARANCE FOR THE STUDY.....	238
APPENDIX 6: PARENT CONSENT FORM	239
APPENDIX 7: CHILD (Student) ASSENT FORM	242

APPENDIX 8: LETTER TO ACCESS SCHOOLS FOR THE STUDY244

APPENDIX 9: INVITATION LETTER TO PARENTS TO PARTICIPATE IN THE
STUDY.....245

LIST OF TABLES

Table 4.1. Socio-demographic data of parents.....	112
Table 4.2: Socio-demographic data of adolescents.....	113
Table 4.3: Parents' perceived knowledge about adolescent sexual topics.....	115
Table 4.4: Mothers' perceived knowledge about adolescent sexual topics.....	117
Table 4.5. Fathers' perceived knowledge about adolescent sexual topics.....	119
Table 4.6. Age for parental sexual discussion with adolescents.....	144
Table 4.7. Parents' reported frequency of sexual discussion with adolescents.....	150
Table 4.8: Mothers' reported frequency of sexual discussion with adolescents.....	153
Table 4.9: Fathers' reported frequency of sexual discussion with adolescents.....	154
Table 4.10: Total parents' frequency of discussing sexual topics with adolescents.	156
Table 4.11: Adolescents' reported mother-adolescent sexual communication.....	157
Table 4.12: Adolescents' reported father-adolescent sexual discussions.....	158
Table 4.13: Adolescents' reported mother-daughter sexual communications.....	160
Table 4.14: Adolescents' reported mother-son discussion about sexual topics.....	162
Table 4.15. Adolescents' reported father-son discussion about sexual topics.....	163
Table 4.16: Adolescents' reported father-daughter discussion about sexual topics..	164
Table 4.17: Difficulties parents faced talking to adolescents about sexual topics.....	167
Table 4.18. Effects of 3 months adolescent sexual education on parents.....	170
Table 4.19: Effects of the training on parents (testing of the hypotheses).....	172
Table 4.20: Mother-Child Agreement on Discussion About Sexual Topics.....	174
Table 4.21: Father-Child Agreement on Discussion About Sexual Topics.....	175
Table 4.22: Effects of knowledge, attitude comfort and ability on frequency of parent-adolescent Sexual discussions.....	177

LIST OF FIGURES

Figure 1.1. Adapted theoretical model on parent-adolescent communication about sexuality	8
Figure 3.1: The Sub-Metropolises and Junior High Schools used for the study.	65
Figure 3.2: Flow of participation of parents through the study.	92
Figure 4.1. Total parents' knowledge about adolescent sexual topics.....	120
Figure 4.2. Parents' reported attitudes towards adolescents' use of family planning services.....	122
Figure 4.3: Parents attitudes towards discussing sexual topics with adolescents	123
Figure 4.4: Parents attitudes towards sexually active adolescents' condom use	123
Figure 4.5: Family's sentiments about educating adolescents on sexuality	124
Figure 4.6. Parental religious beliefs on educating adolescents on sexuality	125
Figure 4.7: Culture and parents discussing sexual topics with adolescents.....	127
Figure 4.8: Parental sex education and adolescents' involvement in sex	130
Figure 4.9: Parents' self-rated ability to discuss sexual issues with adolescents.....	137
Figure 4.10: Parents' reported comfort in discussing sexual topics with adolescents	138
Figure 4.11: Parents' reported openness discussing sexual topics with adolescents.	139
Figure 4.12: Parents ever discussed sex-related topics with adolescents	146
Figure 4.13: Parents initiation of sexual discussions with adolescents	147

LIST OF ABBREVIATIONS/ACRONYMS

FGD	Focus group discussion
GDHS	Ghana Demographic and Health Survey
GSS	Ghana Statistical Service
HIV	Human immune-deficiency virus
JHS	Junior High School
SHEP	School Health Education Programme
SIECUS	Sexuality Information and Education Council for United States
STI	Sexually Transmitted infection
TV	Television
UNAIDS	United States on AIDS
UNICEF	United Nations Children Funds
US	United States
USA	United States of America
WHO	World Health Organization

ABSTRACT

Background: Talking about sexual issues with children is a difficult task for most parents. This is because most parents are not trained to talk to their children about sexual issues. Many parents also lack the knowledge and skills to talk to their children about sexual issues. Evidence shows that intervention studies that trained parents on how to communicate with their children about sexuality have shown positive results. Training parents to talk to their adolescents about sexual issues will reduce sexual risk behaviours among adolescents and young people.

Objective: To assess the effects of training parents on parent-adolescent communication about sexuality in the Accra Metropolis, Ghana.

Methods: An intervention study which consisted of 138 parent-adolescent pairs from 12 public Junior High Schools in two sub-metropolises in the Accra Metropolis answered baseline survey on parent-adolescent communication on sexual topics and were put into intervention and control groups (intervention group, 73 parent-adolescent pairs in 6 schools; control group, 72 parent-adolescent pairs in 6 schools). Parents and adolescents completed a follow up survey of questionnaires on parent-adolescent discussion about sexual topics three months after the programme.

Results: The proportion of parents with very good knowledge increased more in the intervention group (37.0% to 60.0%) than the control group (27.7% to 34.7%). After the training, the parents in the intervention group (30.1% to 82.9%) had better attitudes towards adolescents' use of reproductive health services than the control group. The proportion of parents in the intervention group who ever discussed sexual topics with their sons increased (60.3% to 88.6%) after the training. Most parents in both in the intervention (54.4%) and control (51.4%) groups would like to start

talking to their children about sexual issues when the child is between 10 and 12 years old after the intervention. Mothers discussed more sexual topics with adolescents on all the categories of sexual topics than fathers. Sexual discussions focused mostly on sexual risk protection and risky sexual topics.

Conclusion: The training increased the parents' knowledge about sexuality, their ability and frequency of discussing sexual topics with their children. The training also improved the parents' attitudes towards adolescent sexual issues.

Key words: Adolescents, parents, sexuality, intervention and communication.

CHAPTER ONE

INTRODUCTION

This chapter gives the background to the study, the problem statement, the objectives, hypotheses, significance, theoretical framework and definition of terms of the study.

1.1. Background to the Study

Sexuality is part of human life and development. It develops during childhood and picks up through adolescence. During adolescence young people strengthen their gender identities and begin clarifying their sexual orientations and identities as they experience more adult like erotic feelings and experiment further with sexual development. Brotto, Woo, and Ryder (2007), United States found out that more than one-half of 17 year olds have had sexual intercourse and by the end of adolescence, the majority of them have had sexual intercourse. In Ghana by the age 15 years, 8% of girls and 5% of boys have had sexual intercourse. By the age of 18 years, 44% of girls and 26% of boys have had sexual intercourse (Ghana Statistical Service, GDHS, 2008).

Baku (2009) has observed that adolescent sexual and reproductive health issues are a challenge to parents, teachers, healthcare providers and adolescents themselves. Furthermore, sex education has been a controversial issue regarding how best to educate adolescents about sex in order to prevent unplanned pregnancies and sexually transmitted infections (STIs). According to Arnett (2003) adolescence is a period of healthy life including sexual life but many adolescents are less informed about their sexual and reproductive health by their parents. In the view of Ward

and Friedman (2006) sex education should be the responsibility of parents, schools, communities or the media. A study of parents the United States regarding sex education of adolescents found that 95% agreed that the responsibility for sex education should be shared by the school and the home (Weaver, Byers, Sears, Cohen, & Randall, 2001). The researchers pointed out that school and community values may differ and that the best sexual education starts at home. The study further noted that adolescents may experience opposition or even hostility and bad approach from adults in their attempt to obtain the reproductive information they need. Lack of information on sexual and reproductive health for adolescents may lead to increased risk of STIs, HIV, unintended pregnancy and other health complications (Kirkman, Rosebtahal, & Feldman, 2002).

Sedge et al. (2007) acknowledged that inadequate knowledge about sexual and reproductive health can be attributed to a number of social and cultural factors. The researchers noted that while the value of sexuality education is acknowledged, the intervention is opposed in many African societies including Ghana, particularly due to the argument that early exposure to knowledge about sexuality and reproductive health could do more harm to adolescents than assisting them to overcome problems they encountered in growing up. Traditionally, discussion about sex education and sexuality was stifled in proverbs and indirect language. As a result parents and children hardly ever discussed sex and its related problems.

Ankomah (2001) established that sex education lessons were mainly provided during initiation rites and ceremonies to girls to obtain sexual information mainly on how to 'sleep' with the husband, menstrual taboos, how to recognize pregnancy and maintain personal hygiene by recognized older women who serve as custodians of

instructions on motherhood. A study by Schaalma, Abraham, Gillmore, and Kok (2004) showed that sexuality education is generally school-based programmes which are taught by the teachers. These researchers have shown that sex education has been found to be useful to adolescents and has helped to delay sexual activity among adolescents.

A study has showed that adolescents are mostly influenced by their teachers and the media on their sexual and reproductive health issues, but rarely by their parents (Baku, 2009). The researcher reported that many adolescents also rely on friends for information that may be inaccurate. Lefkowitz, Boone, Kit-fong Au, and Sigman (2003), point out that, adolescents need the facts and correct information on their sexual and reproductive health. Their study affirmed that parents, as the primary educators, could be the key people in decreasing adolescents' sexual-risk taking by parent-adolescent communication about sex.

A recent a study on decision on contraceptive use among adolescents in second cycle schools in the Greater Accra Region of Ghana, showed that there was lack of frank communication between parents and their adolescent children (Baku, 2009). The researcher recommended that parents be empowered with the necessary skills to talk to children about sexual and reproductive health issues.

1.2. Problem statement

Talking about sex is a taboo in most African societies to the extent that sex is never discussed in the home, let alone with children (Baku, 2009; Sedge et al., 2007). Additionally, some parents find the task of discussing sex with adolescent children very difficult. They often feel ill-equipped to undertake this task.

Poor knowledge on sex education has contributed to the increased unintended adolescent pregnancies, abortions and sexually transmitted infections including HIV/AIDS. In the Western Region, of Ghana, 14, 139 teenage girls aged between 14 and 19 years became pregnant in 2008, while 2,280 attempted abortion and ended up at various health facilities with complications (Aklorbortu, 2008). A study by the Noguchi Memorial Institute for Medical Research (NMIMR) in May, 2009, found that 12.2% of Ghanaian adolescents get pregnant or become mothers before 19 years. The researchers further found that adolescent pregnancy occurring among girls between 10 to 19 years was more predominant in Accra than other places and that 15.6% of adolescents in Accra become pregnant or become mothers before their 19th year (Ahorlu & Pfeiffer, 2009).

Lack of knowledge of some parents and what to say to their children made it difficult for parents to discuss sex issues with the children (Kiapi-Iwa & Hart, 2004). According to Somers and Gleason (2004), simply knowing what to discuss with the adolescents may not be sufficient but parental openness, skill and level of comfort facilitate the effect of parent-adolescent communication on sexuality and many parents lack these qualities.

Kane (2007) stated that parents, health workers and teachers are often unwilling or unable to provide accurate, age-appropriate sexual and reproductive health information to the adolescents. This is often due to their own discomfort about the subject or with the belief that providing the information will encourage sexual activity. From the religion point of view, the leaders are worried that sex education is likely to encourage sexual experimentation by sexually inactive adolescents so they do not encourage sex education (Ankomah, 2001). Yet, a study in Cote d'

Ivoire showed that parent-adolescent communication on sexuality had decreased sex among adolescents who had not yet experienced sex by 21% compared to their counterparts who did not discuss sexual issues with their parents (Babalola, Tambashe, & Vondrasek, 2005).

Evidence shows that intervention studies that trained parents on how to communicate with their children about sexuality have shown positive results (Dilorio et al., 2007; Dilorio et al., 2006; Phetla et al., 2008; Schuster, Corona, Elliott, Kanosue, & Eastman, 2008). The few studies conducted on parent-adolescent sexual communication in Ghana used cross-sectional designs. Presently, very little is known about intervention studies that had examined parent-adolescent sexual communication in Ghana. There is therefore the need to carry out this intervention study to train and provide the necessary skills to parents to enable them communicate with their adolescents comfortably about sexual and reproductive health issues.

1.3. Objectives

1.3.1. Main objective

To assess the effects of training parents on parent-adolescent communication about sexuality in the Accra Metropolis of Ghana

1.3.2. Specific objectives

The specific objectives of the study are to:

- Assess parents' knowledge and attitudes about adolescent sexual and reproductive health issues.

- Assess the socio-cultural factors influencing communication between parents and their children on sexual and reproductive health topics.
- Explore the experiences of parents in discussing sexual and reproductive health topics with their adolescent children.
- Assess whether training parents in adolescent sexual and reproductive health topics improves communication with adolescents in this area.

1.4. Hypotheses

Hypothesis 1: Parents who participate in the training programme will improve in their sexual and reproductive health knowledge.

Hypothesis 2: Parents in the intervention group will develop better attitudes towards adolescent sexual and reproductive health issues

Hypothesis 3: After participating in the training programme parents will have a greater ability and comfort when talking with their adolescents about sex-related topics.

Hypothesis 4: Parents in the intervention group will communicate more frequently about sexual topics with their children.

1.5 Justification of the study

Most parents lack the knowledge, the skills and confidence to discuss sexual and reproductive issues with their adolescents. Studies have shown that discussing sexual and reproductive topics with children early and frequently prevents and delays early involvement in sex (Levine, 2011; Murphy 2011). There is also evidence that intervention studies which train parents on how to communicate with their

adolescents have positive influence on the sexual lives of the adolescents (Dilorio et al. 2006; Dilorio et al. 2007; Bell et al. 2008).

There is no available documented evidence of a programme for training parents to provide them with skills to discuss adolescent sexual and reproductive health issues in Ghana. Therefore, this study will generate first-hand evidence on the influence of parent training about sexual and reproductive health topics and parent-adolescent sexual communication. This will also serve as baseline information for future intervention studies on parent-adolescent communication about sexual topics. The study will inform development partners and stakeholder and guide them towards fund allocation for adolescent sexual and reproductive health programmes. It will add to scientific knowledge on adolescent sexuality.

Additionally, this study will provide the necessary skills to empower parents to communicate with their adolescents about sexual and reproductive health topics comfortably. This will in turn equip adolescents with more knowledge about sexuality to prevent unplanned pregnancies, unsafe abortions and contracting sexually transmitted infections including HIV/AIDS.

Furthermore, the findings of this study will assist policy makers in the formulation of appropriate guidelines and policies to empower parents and adolescents to communicate freely about sexual and reproductive topics. Programme planners will have information on parent-adolescent communication about sexuality. This will help them to develop and plan intervention for parents and adolescents towards parent-adolescent sexual communication.

1.6. The Theoretical Framework of the Study

The theoretical approach that guided this study is based on the Theory of Planned Behaviour which was developed by Ajzen and Fishbein (1985). The theory focuses on a person's intention to behave in a certain way.

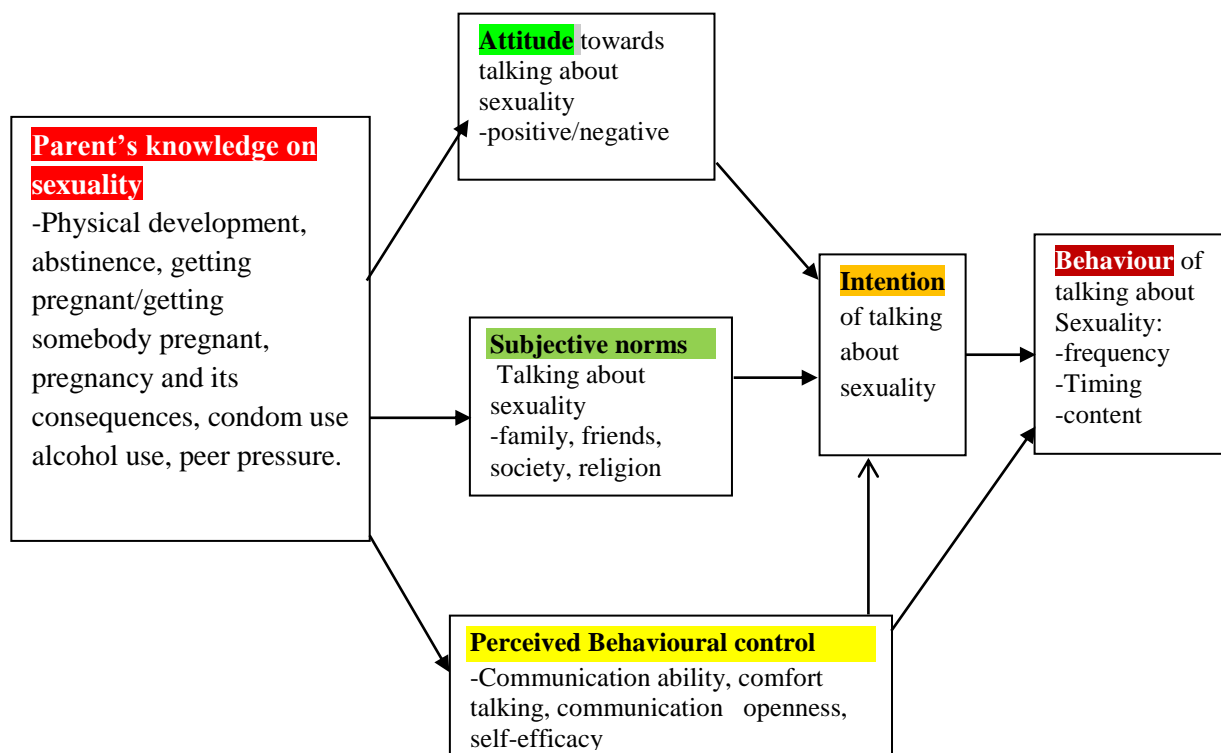


Figure 1. 1. Adapted theoretical model on parent-adolescent communication about sexuality

Source: (Ajzen, 2006)

The theory explains that the main determinant of behaviour is intent and that the stronger the intention to perform certain behaviour, the more likely it will be performed. The intention is the motivational force towards the performance of a particular behaviour.

Linking the theory to parent-adolescent communication on sexuality, a parent who holds strong beliefs that positive value outcomes of talking to adolescents about sexuality will be positive, he/she will have positive attitude towards talking about it. Example, if a mother is convinced that educating her daughter about condom use will protect her from pregnancy and STIs, she will do so. On the other hand, a parent who holds a strong conviction that talking about condom is not necessary for the adolescent will have a negative attitude towards talking to the adolescent about it. In a similar way, a parent will talk about sex and condom use to her adolescent if she thinks that certain referents such as family and friends will approve of it and support her to do so. On the contrary, a parent who thinks that her family, friends or the church will not approve of her talking to the adolescent about sex and condom use will not do so.

A parent who has strong control beliefs about the existence of factors that facilitate behaviour such as communication ability, comfort at talking, communication openness, and condom instruction to talk to the adolescent about sex and condom use will do so. A parent will also have control beliefs to talk to adolescents if he/she is trained to be self-efficient. Conversely, a parent who has strong control beliefs about the existence of factors that hinder talking to the adolescent such as lack of knowledge and training about sex will have no control beliefs towards talking to the adolescent about sexuality. For behaviour intention the parent is ready to talk about sexuality such as condom and its use with the adolescent. The behaviour is performed when the parent actually talks to the adolescent about condoms, which is manifested in e.g. frequency, content and timing of education.

1.7. Operational Definitions

Knowledge: The information, understanding, and skills that you gain through education or experience (Dictionary definition).

Attitude: Attitude towards behaviour is the degree to which performance of the behaviour is positively or negatively valued.

Subjective norms: A subjective norm is the perceived social pressure to engage or not to engage in behaviour such as family, friends etc.

Perceived behavioural control: Perceived behavioural control refers to people's perception of their ability to perform a given behaviour (i.e. the ease and difficulty of performing the behaviour of interest).

Behaviour intention: Behaviour intention is an indication of a person's readiness to perform a given behaviour, and it is considered as the antecedent of behaviour.

Behaviour: Behaviour is the manifest, observable response in a given situation with respect to a given target.

Sexuality: Sexuality is a central aspect of being human throughout life encompasses sex, gender identities and roles, sexual orientation, eroticism, pleasure, intimacy and reproduction (WHO definition).

Sexuality in the context of the study: sexuality means education of the adolescent about sexual issues.

Sexual topics: are the same as adolescent sexual and reproductive health issues.

CHAPTER TWO

LITERATURE REVIEW

2.0. Introduction

This chapter reviewed materials on the theoretical framework of the study, adolescent sexuality, parent-adolescent communication about sexuality, dimensions of communication on sexuality, knowledge and attitudes of parents about adolescent sexual and reproductive health issues, experiences of parents in discussing sexual and reproductive health topics with adolescents, socio-cultural factors influencing communication between parents and adolescents, interventions to improve communication between parents and adolescents and factors that enhance open communication between parents and adolescents on sexuality.

2.1. Theoretical approach to the study

The theoretical approach that will guide this study will be based on the Theory of Planned Behaviour (TPB), which was developed by Ajzen and Fishbein (1985) as an improvement on the Theory of Reasoned Action (TRA). The theory focuses on a person's intention (intention is an indication of a person's readiness to perform a given behaviour, and it is considered to be the immediate antecedent of behaviour) to behave in a certain way. The theory explains that the main determinant of behaviour is intent and that the stronger the intention to perform certain behaviour, the more likely will that behaviour be performed. The intention is the motivational force towards the performance of a particular behaviour.

The authors of the Theory of Reasoned Action (TRA) and the Theory of Planned Behaviour (TPB) think that behaviour intention is influenced by the person's attitude (attitude towards a behaviour is the degree to which the performance of the behaviour is positively or negatively valued) toward performing the behaviour, as well as subjective norms (subjective norm is the beliefs about whether key people approve or disapprove of the behaviour; motivation to behave in a way that gains their approval e.g. family, friends, church, society) (Ajzen, 2002). TRA proposes that behaviour (behaviour is the manifest, observable response in a given situation with respect to a given target) is under volitional control; therefore people can be expected to do what they intend. The theory, therefore, affects behaviours that are consciously thought out before their performance. The Theory of Planned Behaviour extended the Theory of Reasoned Action by adding the construct perceived behavioural control which has to do with people's belief that they can control a particular behaviour. The authors argued that people might try to perform behaviour if they have a high degree of control over it.

Linking the theory to the training of parents to discuss sexual and reproductive health issues with their adolescent children, Schuster et al. (2008) said that training parents in skills such as communication give parents the intentions to talk about sex. If parents feel that there are no environmental barriers to prevent them from communicating with their adolescents about sexuality then they are willing to perform the behaviour. According to Hutchinson, Jemmot, Jemmot, Braveman, and Fong (2003), the Theory of Planned Behaviour is to promote parental attitudes consistent with addressing sexual abstinence with children by increasing parents' self-efficiency to act. Again, Hutchinson et al. (2003) indicated that parents, who

intend to communicate with their adolescents, do so because they have favourable attitudes towards talking with their children about sexual matters. Furthermore, the authors said that parents who intend to communicate with their adolescents do so because they believe that significant referents would approve of them doing so and believed that they have the ability to communicate effectively with their adolescents.

O'Donnell et al. (2007), said that the Theory of Planned Behaviour intervention tries to support parental feelings consistent with addressing sexual abstinence with children and raise parents' self-efficacy to act. For example, parents might not have positive feelings about starting a discussion with children because they do not know if they will be capable to answer all of the questions or because they feel uneasy in talking about certain topics. According to O'Donnell and his colleagues even if parents know what they want to say to their children translating the knowledge into face-to-face effective dialogue is often the greatest challenge. Villarruel, Cherry, Cabriales, Ronis, and Zhou (2008), believed that inclusion of specific contents such as religion, family approval and church approval of condom use in parental interventions would facilitate parent-adolescent communication. Furthermore, building parents' skills in communication to promote self-efficacy on communication are efficient approaches to support and encourage the quality and the quantity of parent-adolescent communication.

Dittus, Miller, Kotchick, and Forehand (2004), in their study indicated that efforts based on Theory of Planned Behaviour seek to influence an adolescent's intentions and behaviour by attempting to change or add to the beliefs that comprise the adolescent's attitudes and norms. In so doing The "Parents Matter" Programme intervention tries to modify adolescent attitudes and norms by providing parents with

tools to communicate their own attitudes and expectations regarding sexual behaviour in the hope that their children will incorporate those expectations into their own attitudes and intentions. Again, the programme seeks to promote more positive attitudes and expectations among parents towards discussing sexuality with their children by providing useful communication strategies and increasing their confidence in their ability to engage their children in effective discussions about sexual issues.

Schueller et al. (2006), determined how youth-centred reproductive and HIV/AIDS programmes addressed the needs of youth at different life stages and in different areas in Kenya. The authors recognized that families and communities must be part of HIV and other prevention strategies. The authors therefore recommended that the programmes incorporate efforts aimed at increasing the knowledge and efficiency of parents to communicate effectively with adolescents about sexual issues.

Losada et al. (2008), investigated the outcomes of acculturation on attitudinal familiasm (love for one's family) in 452 Hispanic and 227 white non-Hispanics Mexicans, Central and Cuban Americans. There were similar attitudes towards the family in dictating that familiasm is the main feature in the Hispanic culture. Nevertheless, according to Losada et al. (2008) even though the theory maintains that behavioural normative and control beliefs are the major determinants of intentions, other factors may act to influence these beliefs such as parent and adolescent's gender, cultural influence and religion. According to Losada and his colleagues (2008) a way to encourage parents to speak with their adolescents about sexual matters may be to structure the importance of discussion within the context of familiasm and in the context of Latino culture. Similarly, for instance, religious

practices and beliefs such as church attendance and importance of religion may influence beliefs about the effects of parental communication such as whether to promote condom use or abstinence. The researchers believe that when parents are empowered with the skill to talk with their adolescents, parents would be willing to talk with their children if they believed that the outcome would be positive and encouraged by their families, friends and society, in general. Parents would also talk with their adolescents, if they are provided with the necessary skills to be self-efficient to talk comfortably with their adolescents about their sexual health.

2.2. Context of adolescence

There are about 1.2 billion adolescents in the world, making up of 20% the world's population. Eighty five percent (85%) of adolescents live in developing countries. The World Health Organization defined adolescents as young people aged between 10 to 19 years (WHO, 2002). Adolescence is a rapid developmental stage of moving from childhood to adulthood. It is also the time of physical, emotional and psychosocial changes, when differences between boys and girls are presented. During this time adolescents want to be independent of their parents and adults and to make their own decisions. Even though, adolescents want to be independent, it is thought that when left on their own, they could not make good decisions, so they need the guidance of parents and family at this time (Allison, 2000).

Additionally, WHO (1998) indicated that adolescence is a stage when young people acquire new competencies and are faced with lots of new situations and challenges that generate not only prospects for growth, but also risk to their health and wellbeing. Adolescents are no more children but are also not adults. The major

change is the development of an integrated and internalized sense of identity. Here, the adolescent withdraws from family and develops stronger relationships with peers. The relationships may be in groups of same sex, to mixed sex or the opposite sex. Adolescence is also a time to explore new interests and influences which can mould their thinking, ideas and actions. Many of the behavioural patterns acquired during adolescence normally last a life span (WHO, 2004). At this stage the young persons may attempt to imitate their role model such as characters on TV or in movies. Pressures from the environment, such as peer pressure and media exposure, may lead the adolescent to risk-taking behaviours such as sexual risk (WHO, 1998).

Connell, McKevitt, and Low (2001), observed that adolescence is a time for sexual exploration and experiment with sexual fantasies and realities of sexuality as part of one's identity. Most adolescents have almost insatiable curiosity about the mysteries of sexuality. Adolescents face the challenge of learning to manage sexual feeling such as sexual arousal and attraction, developing new forms of intimacy, learning to regulate sexual impulses and behaviour to avoid undesirable consequences. Although curiosity and experimentation with sexual fantasies are normal sexual behaviours (both coital and non-coital) they nevertheless, put adolescents at risk for acquiring sexually transmitted infections and unwanted pregnancies (Feldmann & Middleman, 2002). Considering the challenges that adolescents go through, support and understanding from family members and people around them during this phase of development, become vital in enabling them to live healthy and fulfilling lives during their adult years.

2.2.1 Sexual behaviour of adolescents

Adolescents now experience puberty at an earlier age than previous generations and are indulging in sexual activities at earlier ages (Roque & Gubhaju, 2001). While the age at marriage has increased, the age of attaining puberty has decreased drastically. The big gap between the attainment of puberty and the age of marriage has made the adolescents vulnerable to indulging in early sexual activities (Roque & Gubhaju, 2001). This leads to high rates of sexual activity and high risk behaviours, leading to consequences such as unintended pregnancies, sexually transmitted infections and their negative outcomes (Bearinger, Sieving, Ferguson, & Sharma, 2007; Hutchinson, 2004). Mensche, Grant, and Blanc (2006), assert that the adverse consequences of early child bearing particularly for young unmarried women and the risk of contracting sexually transmitted infections have led to renewed interest in how to improve communication between parents and their children on their sexuality.

The United States of America (USA) has been rated as having the highest teenage pregnancy and teenage birth rates in the Western developed world, with the teenage birth rate being about twice as high as rates in Britain and Canada (Singh & Darroch, 2002). Alford (2005), found that in the United States, 47% of high school students reported that they have had sexual intercourse. The high teenage pregnancy and teenage birth rates in the USA may be due to the fact that many of these sexually active young people could not have taken any measures to protect themselves from sexually transmitted infections and unintended pregnancy. The adolescents do not have enough information on sexuality; therefore it is necessary to provide them with

more knowledge in the area of sexually transmitted infections such as HIV/AIDS and how to prevent unintended pregnancies.

A study in Philadelphia, USA among adolescents between 14 and 17 years showed that 57% of them had had sexual intercourse (65% of males and 50% of females). The percentage of the sexually active adolescents increased with age (36% for 14 year olds versus 74% for 17 year olds). The study also showed that 58% of the sexually active adolescents did not use condoms at first sexual intercourse (68% males and 47% females). Thirteen percent (13%) of the female adolescents were pregnant at the time of the study and 8% of the males reported impregnating someone (Jaccard, Dodge, & Dittus, 2002). A survey conducted for 1000 10th and 11th grade students from diverse racial and ethnic backgrounds in Boston high schools in the USA, showed that 63% of the students had had sexual intercourse (72% of boys and 47% of girls). The findings further showed that only 35% of the sexually active students used condoms consistently during sexual intercourse (Weiss, 2007).

A study conducted by Sallar (2001) with 1,415 adolescent males and females aged between 10 to 19 in the Ketu South, Upper Denkyira and Offinso districts in Ghana, observed that the mean age of first sexual intercourse for both the males and females was 16 years. By 15 years, 47% of the males and 38% of the females had ever had sex. Glover et al. (2003), studied three towns in Ghana (Tamale, Sunyani and Takoradi) to explore the sexual experiences of 704 never-married young people aged between 12 to 24 years. The participants in the study comprised of young people who were in an in-school programme, in-apprenticeship programmes or in neither school nor apprentice programme (unaffiliated). The results of the study showed that

more than half (52%) of the young people had ever had sex (48% of males and 56% of females). The proportion of sexually experienced youth increased with age. Seven percent of the 12 to 14 year-olds had ever had sex compared to 29% of the 15 to 17-year olds, 64% of 18 to 20-year-olds and 82 % 21 to 24-year-olds. The results also indicated that the apprenticed and unaffiliated youth (65% and 59%) respectively were 2.5 to 3.2 times more likely than those in school (38%) to be sexually experienced. In- schools, adolescents were less sexually experienced because most of them might have higher hopes for education and would not want sex to disrupt their education.

2.2.2. Teenage pregnancy and adolescent child bearing

Teenage pregnancy is a public health concern all over the world even though the rate is higher in some regions than others. An estimated 14 million adolescents between the ages of 15 and 19 years gave birth each year worldwide, totaling a little over 10% of all births. In developing countries 12.8 million births took place each year to adolescents. In sub-Saharan African countries the level of adolescent child bearing is higher than 50% of women giving birth before 20 years (WHO, 2007a). For example in Zambia among the local women population attending the University Hospital in Lusaka, the incidence of adolescent pregnancy was 22.5%. Adolescents between of the ages of 18 and 19 years had been found to have been pregnant up to 5 times (WHO, 2007a).

The adolescent childbearing rate has increased in Ghana over the years and varies from region to region. Between 1998 and 2003 the adolescent childbearing rate was highest in the Central Region (Ghana Statistical Service & MII, 1994 and 2004). In 1993, 33.3% of female adolescents between the ages of 15 and 19 years in the

Central Region had started childbearing as against 21.6% for the whole country. Again, in 2003, the Central Region had the highest percentage of adolescents (24.1%) having started childbearing compared to the national average of 13.8%. The GSS, GHS, and ICF Macro (2009) observed an increase in adolescent childbearing between the 15 to 19 year group from 70/1000 births in 1998 to 125/ 1000 births in 2008. According to the GDHS, 2008, this increase in adolescent childbearing is a worrying sign for the country. It shows huge unmet needs for family planning and reproductive health for adolescents in the country, including the need for sexual health education/information.

2.2.3. Abortion

Abortion is usually a result of non-use of contraceptives by adolescents. In developed countries where statistics on abortion are reliable, about 30% to 60% of adolescent pregnancies are estimated to end up in induced abortions (WHO, 2003b). In developing countries, it is very difficult to get accurate statistics on abortion among adolescents, due to poor data collection. An estimated number of abortions among adolescents in developing countries ranged from 2.2 million to 4 million yearly (Olukoya, 2001). Most of these abortions are considered unsafe. In many developing countries, hospital records of women treated for complications of abortion suggest that between 38% and 68% are below 20 years of age.

In Nigeria, adolescents account for up to 74% of all induced abortions. These comprise nearly 60% of all gynaecological hospital admissions (Olukoya, 2001). The risk of adolescents aged 15 to 19 years dying from pregnancy-related causes, is twice as high as for women in the twenties (UNICEF, 2001a). An evaluation of

abortions in Sub-Saharan Africa found that 20% of maternal deaths in East and Central Africa were due to complications of abortion many of the patients being young and unmarried women (Rogo, 2004). Even though many adolescents are aware of abortion and its complications, strong social disapproval is a greater concern for young girls than the risk of death and illnesses from unsafe abortions (WHO, 2003b).

Sheen (2008), reported that in Ghana, about 30% of unplanned teenage pregnancies are terminated, and mostly through unsafe methods. The study also reported that one in seven abortions occur among adolescents. The leading factors attributed to abortions among adolescents are lack of knowledge of the body and its functions, and socio-cultural situations that make women to risk their lives with unsafe abortions. The study suggested that adolescents need family planning information and services to prevent unwanted pregnancies, so that they do not risk their lives through unsafe abortions.

A recent report by the Adolescent Health and Development Programme (2011) in Ghana indicated that cases of abortions among adolescents are on the increase. The report cited alarming figures on three consecutive years among adolescents aged 15 to 19 years as follows: 5,525 (2009); 6,679 (2010); 7,800 (2011) and among adolescents aged 10 to 14 years, as 214, 331 and 582 in the same years (Bokpe, 2012). The fact that health facilities are now reporting on abortion cases may account for the increases in the number of abortion cases. The report also noted that abortion cases were on the increase, particularly in the urban areas and among the rich and educated because young people do not want pregnancy to disrupt their educational progress.

2.2.4. HIV infections

HIV/AIDS is still a threat to young people, especially adolescents. In 2005 in Kenya, 75% of all new HIV infections occurred among the youth aged 15 to 24 years (National AIDS and STI Control Programme & Ministry of Health, 2005). This is an increase from the findings of Kenya Demographics Health Survey in 2003, which reported that 50% of new HIV infections occurred among the youth (Central Bureau of Statistics & Ministry of Health, 2004). Data from the National AIDS Control Programme in Ghana suggest that a higher proportion of AIDS infection is among adolescents of ages of 15 to 19 years (Ghana AIDS Commission, 2004). It can be surmised from the report that considering the asymptomatic phase of HIV infection of 5 and 12 years or more for HIV it may be that many of the reported HIV/AIDS cases in the age group of 20 to 39 years are likely to be infections acquired during the adolescent period.

2.2.5. Contraceptive use

Modern contraceptive use among adolescents has not been encouraging even though high percentage of adolescents knew about most contraceptives and where to access them. The GSS et al. (2009) showed that the knowledge of contraceptive methods among sexually active adolescents aged 15 to 19 years was 99.6% for males and 99.9% for females, but those who have ever used modern methods of contraceptives were 62% for males and 51.4% for females. The male condom was the commonest method used by both male and female sexually active adolescents. Condom use was 62% and 43.8% for males and female adolescents respectively.

Abdul-Rahman, Marrone, and Johansson (2011), examined the change in contraceptive use among sexually active female adolescents aged between 15 and 19 years using data from the Ghana Demographic and Health Surveys of 2003 to 2008. It was observed that there was a significant increase in the current use of contraceptive methods from 23.7% in 2003 to 35.1% in 2008. Even though there is a significant increase in contraceptive use among female adolescents, it is not all that encouraging. Sexually active adolescents, especially females, need to know the importance of using contraceptives to prevent pregnancy and sexually transmitted infections, since it is the female adolescents who mostly suffer the consequences of unprotected sex.

2.3. Orientation on sexuality for adolescents in Ghana

Some knowledge about sexuality is very important in the life of the adolescent, to learn about one's body and how society expects one to behave. The society as a unit has a system for preparing and training the youth for every aspect of future life, including sexual life. In many societies, this knowledge is transmitted through sex education. Sexuality is looked at as a multi-dimensional concept which comprises of ethical, psychological, biological and cultural aspects. The Sex Information and Education Council of United States (SIECUS) (2005), refers to sexuality as the totality of being a person. According to SIECUS, sexuality mirrors human character, the way in which people react. Sexuality education is thus termed as a lifetime process of obtaining information and developing values about one's own identity, relationships and intimacy. It includes learning about sexual development, reproductive health, interpersonal relationships, affection, body image and gender roles.

Sex education aims at decreasing the risk of possible negative outcomes from sexual behaviour, such as unwanted or unplanned pregnancies and sexually transmitted infections, including HIV. It also aims at contributing to young people's experiences of sexuality by improving the quality of their relationships and their capability to make informed decisions during their lifetime (SIECUS, 2005). Sex education may happen informally, such as when someone receives information from a conversation with a parent, friend, religious leader, or through the media. It may also be delivered through sex self-help books and manuals, magazines, advice columnists, or through sex education websites. However, formal sex education occurs when schools or organized institutions such as churches offer sex education as part of their curricula and in their sensitization programmes.

Sex education remains a controversial issue in several countries, with regard to the age at which children should start receiving such education, the amount of detail that should be revealed, and the topics that dealt with human sexual behaviour such as safe sex practices, and premarital sex. Other controversial issues relate to whether education on child sexuality is valuable or detrimental the use of birth control such as condom and hormonal contraception and the impact of such use on teenage pregnancy and the transmission of STIs.

According to Ankomah (2001), in Ghana, the elders are usually the recognized instructors who give such training. In many Ghanaian societies, initiation or puberty rites afford opportunities for providing adolescents with guidelines and instructions on sexuality. In Ghana this is how sex education is given traditionally. Ankomah (2001), further noted that sexual transition from infancy to adulthood was not only a physiological event such as menarche, but also social. In the Ghanaian sense,

adolescence, as a cultural concept did not exist and puberty in girls is a sign of approaching womanhood, and special puberty rites for girls are performed after menarche. The social significance of initiation rites and ceremonies is to guide a girl to womanhood without making reference to the period called 'adolescence'.

Obeng (2006), ascertained that in Ghana as a whole, girls' initiation ceremonies are culturally more widespread than boys'. Additionally, girls' entry into womanhood, especially among the Krobos, Ashantis and Ewes (Kpando District) is marked with complex ceremonies, involving highly structured preparation and rituals. After a girl's initiation, she is beautifully dressed and adorned and then sets out with her age-mates to thank all the people in her village or town. During the initiation period, lessons on many sexuality issues including motherhood are taught by older women who are assigned to such instructions. Sexual instruction that are given included how to engage in sexual intercourse with their future husbands, menstrual taboos, how to recognize pregnancy and personal hygiene, especially during menstrual periods. The major purpose for the rites was to prevent promiscuity and pre-marital sex among adolescents. Obeng (2006), revealed that young people who went through these rites successfully were portrayed as well-brought-up and were praised by parents and elders in their communities.

Unlike in parts of East Africa, where there are many initiation periods and ceremonies performed for groups of persons, in Ghana, initiation ceremonies are mainly individual affairs, although few girls may begin their rites on the same day in the community. The ceremonies are often performed on individual basis for instance *Bragoro* for Ashanti girls, except when the initiates are close relations or friends, then they could be celebrated together (Ankomah, 2001). However, among the

Krobos, the initiation rites are generally performed in groups. Puberty rites are still performed in some rural areas, but they have lost a great deal of the pageantry that was attached to them (Essah, 2003). For example, among the Krobos, puberty rites are now performed for very young girls and as a result the ceremony has lost its importance as a transition of a girl to womanhood and is now considered a mere ceremony for young girls. Essah (2003) affirmed that generally, Ghanaian boys have no initiation rites or public ceremonies.

2.4. Parent-Adolescent Communication about Sexuality

Ideally, parents must be the main sex educators of adolescents, since traditionally the child's socialization is done by them. There are many reasons why parents are expected to play a key function in the sex education of their children: parents play a primary role of preparing adolescents for adulthood and sex is an important part of adult life; sexual behavior entails questions of values and morality that are justly the realm of the family, and it is believed that parent-adolescent communication is likely to facilitate the transmission of parents' values. Family communication about sexuality may probably increase adolescents' knowledge about sexuality and as a result, aid responsible sexual decision-making.

In a study in the United States involving 513 adolescents aged between 12 to 17 years, parents were the primary educators. The study found that one-third (31%) of the adolescents mentioned parents as the most vital people when it comes to their decisions about sex choices (Albert, 2009). Parent-child closeness and parents' communication with adolescents have been associated with reduced pregnancy, sexual abstinence, delay in sexual activity, fewer sexual partners and increased

contraceptive use (Mitchell, 2009). Feldman and Rosenthal (2000) acknowledged that many young people reported that they would like their parents to discuss broad topics on sexuality with them in order to increase the usual biological and risk oriented discussions.

Feldman and Rosenthal (2000) recruited 298 high-school students to complete questionnaires on the frequency and importance of 'mother and father' communication on 20 different sex-related topics. Mothers were found to be more regular communicators about sexual topics than fathers. Adolescent girls reported that their mothers communicated more about sexual topics than did adolescent boys. Mothers were reported to have more sex communication with adolescents than fathers because fathers thought that it was the responsibility of mothers to educate their children on their sexuality. Although this particular study is more than a decade old, much is not expected to have changed, in the interim. Fathers need to take up the responsibility of educating their children on their sexuality. According to Flay, Graumlich, Sagawa, Burns, and Holiday (2004) constructive discussion between parents and adolescents has been proved as a way of promoting a strong family relationship and discouraging risky adolescent sexual behaviour.

In spite of the important role that parents have to communicate sexuality related information to their children, according to Averett (2005), many parents and adolescents do not have the skills for effective communication, which creates conflict, strain and leads to avoidance of communication. In spite of these difficulties, it is important for parents to discuss sexual matters with their children (Flay et al., 2004). Parents need to discuss sexual issues with adolescents, no matter the situation in which they find themselves. Encouraging discussion with adolescents

creates trust between the adolescent and the parent, leading to the adolescent being able to discuss his/her problems with the parent.

Arumi (2005), noted that parents are worried about the sexual problems confronting adolescents and identify that adolescents need to know how to deal with sexual relationships, set boundaries and understand the outcomes of sexual risk-taking behaviours. Parents have the responsibility to teach adolescents how to deal with sexual problems confronting them by educating them on what to do to overcome sexual risk-taking behaviours.

2.5. Benefits of Parent-Adolescent Communication in Reducing High Risk

Sexual Behaviour

Communication on sexuality in many African cultures is considered as a taboo. Communication on sexuality is only allowed during ceremonial rites or by authorized persons such as paternal aunts and uncles (Mullen, 2001; Muyinda, Kengeya, & Pool, 2001). Ndyabangi and Kipp (2001), observed that in many countries, these traditional ways of communicating sexual matters between age groups have broken down due to lifestyle changes. Nobelius et al. (2010), confirmed that female adolescents were traditionally educated by aunts concerning how to behave sexually in marriage, but aunts are no longer playing that role. Parents therefore have the responsibility of providing this information to their children.

A study in Uganda showed that parents do support the idea of providing sexuality information to their adolescent children (Nakkazi, 2001). In a qualitative study, Luwaga (2004) explored the perception of parents and their adolescent children aged between 12 to 15 years on sexuality communication in the context of HIV/AIDS in

rural Uganda. The results of the study showed that parents agreed that they had discussions with their adolescent children about sexuality and HIV/AIDS, which was initiated on the onset of puberty or when a child was thought to be getting sexually active. The involvement of parents in such communication was limited to giving warning and instilling fear into their adolescents about the risks of pre-marital sex. However, no clear instruction was given on what adolescents were expected to do. The findings of this particular study could not be generalized to the whole of Uganda, since it was done in only one sub-district in Uganda.

Many studies have shown that, parents who do talk to their adolescents about sexual matters impact positively on the adolescents' sexual activity and use of contraception (Edelman, 2003; Meschke, Bartholomae, & Zentall, 2002; National Parent Teachers Association, 2003). Other studies have shown that parent-adolescent communication about sex have been associated with fewer sex partners, delayed initiation of sexual intercourse, safe sexual behaviour and an increase in contraceptive use (National Parent Teachers Association, 2003; The National Campaign to prevent teen pregnancy, 2003).

Lefkowitz et al. (2003), studied mother-daughter communication about sexual issues and found that it has a strong control on adolescents' sexual understanding and behaviour. Hutchinson et al. (2003), assessed 219 sexually active females aged between 12 to 19 years, and recorded high levels of mother-daughter sexual risk communication with fewer incidents of unprotected sex and less sexual intercourse. The study also related mother-daughter communication with females' attitudes towards pregnancy. Jaccard, Dodge, and Dittus (2003) also in a cross-sectional study of 350 inner-city African American females between the ages of 14 and 17

years, associated greater levels of maternal-adolescent discussions about the negative consequences of pregnancy, perceived maternal disapproval of pregnancy, and relationship satisfaction with the daughter's negative attitudes about pregnancy.

Izugbara (2008), conducted in-depth interviews in eight rural communities in Imo and Abia States of south-eastern, Nigeria. The study was to explore how and why parents in rural Nigeria discuss sexuality related matters with their children. Seventy three parents who had children between the ages of 10 and 21 years and had been found to communicate with their children about sexual issues were recruited. The findings of the study showed that parents said that it was advantageous to talk to adolescents about sexuality. According to the author, parent-child communication could encourage adolescents to stay chaste and delay sexual activity. It could also protect adolescents from deception and protect them from influence of western media, peers and other sources of sexuality education that are believed to be unreliable. Parent-child communication also protects adolescents from infections such as HIV, waywardness and unplanned pregnancies.

2.6. Dimensions of parent-adolescent communication on sexuality

The elements of parent-adolescent communication consisted of content of communication, frequency of communication, communication comfort, openness of communication, communication ability and timing of communication about sexual topics.

2.6.1. Content of communication

Most parents engage in limited discussions with their children about sexuality but topics selected for discussion between parents and their adolescent children differ. According to Kirkman et al. (2002) and Lefkowitz et al. (2003), when parents talk to their adolescents, they focus on subjects such as physical development and sexual safety leaving out psychological, relationship-based topics or those that may be thought of as personal. Kline et al. (2005) reported that in South Africa, parents talked about sex/intercourse, HIV/AIDS and STIs, pregnancy, how babies are born, sexuality and gender issues and their standards for sexual behaviour during conversations on sexuality with their adolescents. Parents normally warn their adolescent children against indulging in premarital sex. Nevertheless, the content of what parents discuss with their adolescents on sexuality varies depending on the sex of the children. Since parents tend to be more concerned with the welfare of their daughters, discussions focused mainly on abstinent from sex and negative outcomes of sexual experiences for girls, but not the same for boys. Parents in the US often tackle the topics on condom use, protection and the results of STIs during sexual communication with their children (Pluhar & Kuriloff, 2004).

Epstein and Ward (2008), conducted a study in the USA with 286 male undergraduate students, to look at the volume and content of sex- related discussions received from parents. They found that 27% of parents advised their male adolescents not to indulge in premarital sex and 29% reported that parents persuaded them to use condom always to protect themselves during sex. A study of 668 inner-middle school students and their mothers showed that the most frequent sexual topics discussed between mothers and their children were the effects of having sex,

pregnancy, and contraction of HIV. The three topics least talked about were losing of respect of one's partner, issues of popularity as a result of engaging in sex and feeling of guilt about engaging in sex (Guilamo-Ramos, Dittus, Jaccard, & Goldberg, 2006).

A telephone survey with 1069 parents of adolescents in the USA revealed that 50% of parents talked about the effects of pregnancy and 41% spoke about the risk of infection with STIs with their children (Eisenberg, Sieving, Bearinger, Swain, & Resnick, 2006). Wamoyi, Fenwick, Urassa, Zaba, and Stones (2010), examined families in Tanzania which discussed sexual and reproductive health issues with their adolescents and observed that what they talked about basically were abstinence, unplanned pregnancy and HIV/AIDS. The topics least talked about were contraception and condom use. The parents do not talk about contraception and condom use because they may think that talking about these issues will urge the adolescents to indulge in sexual activities.

In Nigeria, a normally addressed content in parent-child discussion on sexuality was the dangers of sex (Izugbara, 2008). Parents in the study reported that they regularly talk to their children about the meaning of puberty, concentrating mainly on the fact that pubertal changes mean they can father children or get pregnant if they have sex. The parents also stressed on the need to abstain from sex, remain chaste or avoid sexual intercourse with their children during home teachings on sex. Parents further discussed with their children issues such as premarital sex as a sign of waywardness and how it could ruin their lives and future and even lead to their death by getting pregnant or infected with STIs, making them young parents or forcing them to drop out of school.

Izugbara (2008), reported that many (about 70%) of participating parents confirmed that they deliberately misinform their daughters about the realities of sex in order to discourage their interest in sexual matters. For instance, one woman revealed that she tells her daughters that if they ever allowed a man to see or touch such parts of the body as the breast, buttocks and stomach or if they ever saw a man's penis, they would become pregnant. Likewise, a male parent told his sons that if they ever had premarital sex, they would waste all their "seeds" and therefore not be able to have children when they got married. Parents also told frightening stories of people who had died of AIDS, messed up their future, stopped school, become mad, who were ostracized, poor and hopeless owing to premarital sex. Izugbara (2008) stated that parents do not mention condom use and contraception during discussions on sexuality with their children because they felt it would encourage adolescents to become sexually wayward and promiscuous. According to the researcher, the main reason why parents did not discuss condom and contraceptives with their children was the belief that they were less effective than chastity and abstinence, in preventing infections and unintended pregnancies among young people.

2.6.2. Frequency of communication

Frequent parent-child discussion about sexual matters is related to greater relationship between parents and children (Harper, Callegari, & Raine, 2004). Consequently, parents who engage in frequent dialogues about sexual matters with their adolescents may be able to reduce their children's sexual risk-taking behaviour (McKay et al., 2004). In an intervention study, Lefkowitz, Boone, and Kit-fong Au (2002) examined the effects of training mothers on the frequency of discussion about sexuality, AIDS and birth control with their children. The findings of the study

confirmed that adolescents in the intervention group reported more frequent discussions with their mothers after training than the control group. In another study, among sexually active urban African-American and Latino adolescent girls aged between 12 to 19 years, in the USA, Hutchinson et al. (2003) looked at the role of mother-daughter communication in reducing STI and HIV risk behaviour in an intervention group of 682 girls and a control group of 219 girls. The findings of the study showed that higher-level mother-daughter sexual risk discussion was related to significant reduction in the number of episodes of intercourse, and number of days of unprotected intercourse.

In another study to assess the efficacy of a parent-based sexual risk prevention programme for African American pre-adolescents in Atlanta Georgia, Athens Georgia, and Little Rock, Arkansas in the USA, 1,115 African American parent-adolescent pairs aged between 9 to 12 years were recruited. The parents were put into enhanced communication intervention (five hour 2 1/2-hour session), single-sessions communication intervention (one 2 1/2-hour session), and general health intervention (control, one 2 1/2-hour session) groups. The results showed mean differences for the enhanced intervention with a higher mean change from baseline score for all outcome measures than the control and single intervention groups. However, the difference of mean change from baseline between the enhanced and single-session intervention was smaller than between the enhanced and control interventions (Forehand, Armistead, Long, Wyckoff, & Kotchick, 2007).

Bell et al. (2008), conducted a randomized control trial in KwaDedangndale in South Africa by using the Collaborative HIV Adolescent Mental Health Programme, South Africa (CHAMPSA). The intervention targeted HIV risk behaviours by

strengthening family relationship processes. At the end of the intervention, parents in the intervention group reported increased regular talking about sensitive issues like HIV, AIDS and sexuality with their children.

2.6.3. Communication comfort

A parent will discuss sexual issues with the child if he or she feels comfortable in doing so. El- Shaieb and Wurtele (2009), noted that parents anticipated feeling uncomfortable in discussing abortion, masturbation and homosexuality and were less likely to talk to their children about these topics, compared to other sexuality topics. The study found that several factors were associated with parents comfort level in sexuality communication. For example parents with higher education and satisfying occupations were more likely to engage in conversation with their children on sexuality topics than parents with skilled or unskilled jobs. Forehand et al. (2007), observed in their study that after intervention, parents taking part in the enhanced intervention, compared to the control, showed higher levels of parent-pre-adolescent sexual communication with comfort and receptiveness to sex-related questions. In a randomized control trial in South Africa, parents in the intervention group had increased comfort in talking about sensitive issues such as HIV/AIDS and sexuality with their children (Bell et al., 2008).

Lefkowitz et al. (2003), said that adolescents in the intervention group reported that they talked to their mothers more than those in the delayed control group. This might be due to the fact that the parents in the intervention group had been taught how to communicate with their adolescents so felt more comfortable talking with the adolescents. The findings of Dilorio et al. (2006) in the study titled 'Keeping it

R.E.A.L' demonstrated that the comfort level of talking among mother participants who were in the intervention group increased over time. A larger number of mothers also in the Social Cognitive Theory (SCT) and Life Skill Programme (LSK) groups talked about sexual topics and said that they had intentions to talk about the topics in future and felt more comfortable in doing so.

2.6.4. Openness of communication

Open communication between parents and their children can lead to parent-adolescent understanding and agreement on a lot of issues. Williams (2003), argued that open communication is essential for the development of social and coping skills in adolescents and closely knit families tend to have open communication styles. Open and receptive communication styles by parents are associated with less sexual risk-taking by adolescents and, less open communication is associated with more and more serious delinquency in adolescents (Dilorio, Pluhar, & Belcher, 2003). Open disclosure to parents is linked with adolescent view of openness of family communication. In addition adolescent-mother pairs who perceived their discussion as open and free of problems have been found to be more of the same opinion on the source of decision-making than adolescent-mother pairs who see their communication as less open and trouble-free (White & Matawie, 2004).

Schuster et al. (2008), noted in their study that after the training programme, the parents in the intervention group reported considerably higher scores on a scale measuring openness of communication about sexual issues, compared to their scores at baseline. A study by Edelman (2003) involving 1000 young people aged 12 to 19 years and 1008 adults aged 20 years and older, showed that an estimated 88% of the adolescents indicated that it would be easier to postpone sexual activity if they were

able to have more open and frank talks with their parents about sexual matters. This shows that adolescents would appreciate more if their parents talked with them about sexuality than getting the same information other sources.

2.6.5. Communication ability

The ability of parents to talk to adolescents about sexual topics could prevent risky behaviours. Schuster et al. (2008), found that in a baseline survey parents rated their ability to talk about sexual topics with their adolescents as 'fair' and 'good'. Nevertheless, parents in the intervention group showed an increase from the baseline comparative to that of the control group throughout the study ($p=0.001$ at each follow up). Parents in the intervention group showed an increase in communication ability because they were trained. Guilamo-Ramos (2010) examined the maternal use of self-disclosure on adolescent intentions to have sexual intercourse. The findings proved that maternal self-disclosure was linked to increased acknowledgment of maternal responsibility and skill, which in turn were linked to decrease in adolescents' intentions to engage in risky behaviour. Schuster et al. (2008), observed that parents and adolescents in the intervention group showed huge skills of communication ability than the control group.

2.6.6. Timing of parent-adolescent communication about sexuality

When to talk to children about sexuality has been a controversial issue. While some people suggest an age appropriate time others talk about situations which prompt such discussions. Few studies have observed the timing of parents and their children's discussions on sex-related topics and young people's sexual behaviour. More than a decade ago, Miller, Levin, Whitaker and Xu (1998) measured the link between the timing of mother and adolescent condom use discussion. These

discussions were before the start of sexual intercourse, during the year of initiation of sexual intercourse or never discussed sex, and adolescents' condom use and the follow up sexual intercourse practices. The study recruited and interviewed 372 sexually active adolescents in New York, Alabama and Puerto Rico who were between the ages of 13 to 17 years with their mothers. The findings of the study showed that mother-adolescent discussions about condom use took place before the initiation of first sexual intercourse.

In a longitudinal study, Beckett, Elliot, Martino, and Corona (2010) assessed the timing of parent-adolescent discussion about sexual topics relative to child-reported sexual behaviour. About 141 parents with their adolescents aged 13 and 17 years were enrolled. It was realized that more than one third of parents had discussed 14 out of the 24 sex related topics with adolescents before they started exploring sex. Moreover, more than half of the adolescent boys had not discussed 16 out of the 23 sex-related topics with their parents by the time genital touching (developmental milestone) occurred. The findings of the study showed that more than 40% of the adolescents have had sexual intercourse before any discussion by parents about sexually transmitted infection symptoms, condom use, choosing birth control and partner condom refusal. This could lead to unplanned pregnancy, contraction of sexually transmitted infections and illegal abortions among the adolescents.

Wamoyi et al. (2010), observed that parents in Tanzania prefer to communicate with their adolescent daughters in secondary school rather than primary school partly because of the high costs of taking care of a child in the secondary school. Parents would not want to lose their girls when they have to drop out of school as a result of pregnancy. Parents also talked to their daughters when they saw and heard

something negative that they would not like to happen to their children, such as death from HIV or pregnancy of unmarried adolescents. Parents also took advantage of naturally occurring events like hearing of a daughter's best friend having a date or watching a television programme together to talk about sex-related topics (Lefkowitz & Stoppa, 2006; Wilson, Dalberth, & Koo, 2010).

Wilson et al. (2010), indicated that parents in three cities in the United States believed that their children should be educated about sex during the primary school years (between the age of 10 to 12 years). This is because they think that children are already exposed to a lot of sex issues and are likely to know more than their parents think. The education of children in this age group might be possible because the level of education of the parents in the study was higher than the average in the United States; 42% of the parents had at least a college degree. Kakavoulis (2001), indicated that Greek parents felt that sex education to their children should start at an early age. Some 64% of the parents thought that sex education should start during the primary school years. Walker (2001) affirmed that parents would like their children to be educated on sexual topics as early as 10 years or younger but Eisenberg et al. (2006) pointed out that parents might wait to talk to their adolescents about sexuality until they believe that the children are in romantic relationships.

Izugbara (2008), revealed that in Nigeria, most of family sexuality discussions were not on time. They were often discussed after children had reached puberty or had already begun to engage in sex. According to the participants of this study, the main reason why parents delayed education on sex until puberty was that until puberty children were thought to be sexually innocent. Parents also feared that talking about sexual issues with children earlier than puberty may encourage sexual imaginations

among them. Again, parents in the study had the view that puberty is the period in which the interest of young people in sex bloomed. One parent affirmed that talking to children about sex before puberty ‘may make them think that sex is one very important thing. They may even want to experience with it, and this could be dangerous’.

Furthermore, parents in Izugbara’s study talked to their children about sex following certain cues about their children’s likely sexual behaviour such as their sudden or increased attention to their looks, being seen in the company of boys or men (in case of girls) or girls (in case of boys) and coming back home late. Other warning signs were being found with love letters or explicitly erotic materials like pornographic films, books and magazines. Additionally, parents also initiate talking about sex with their children as a result of receiving reports from neighbours, teachers and other gatekeepers regarding their children’s involvement or suspected involvement in sexual activity.

Parents in a focus group discussions mentioned that they started talking to their children early about topics like the anatomy of boys and girls and reproduction when the children were very young. The discussion gradually developed to include a broader range of topics and this made it easier for them to discuss sexuality with their children (Wilson et al., 2010). Other parents admitted that they used available resources that helped them to talk to their children about sex. These resources included books, classes for parents, classes for children, TV programmes, other parents as resource persons and materials from children’s sex education classes in school (Wilson et al., 2010).

2.7. Parents' knowledge and attitudes about sexual and reproductive health issues

Parents' knowledge and attitude towards sexual issues would promote or discourage them from talking to their children about such issues.

2.7.1. Knowledge

Parents' knowledge about adolescent sexual and reproductive health would enable them to communicate effectively with their children on such issues. According to Ubaidur, Ghafur, Bhuiya and Taluker (2006) there was lack of knowledge among parents on basic understanding of adolescent reproductive and sexual health matters in Bangladesh. Some parents also had reservations about educating their children on these matters. They recommended that making parents more aware of reproductive and sexual health matters and developing their communication skills to talk to their children along with in-school education for adolescents should be given a high priority. In a related study, Ubaidur, Bhuiya, and Rahman (2003) revealed that 65% of parents expressed their lack of knowledge about adolescent reproductive health issues and wanted to know more about the subject. Wamoyi et al. (2010), showed that parents were limited as to what they could discuss with their children about sexual and reproductive health issues because of lack of the appropriate knowledge and cultural norms that prevented interaction between the opposite sexes.

In a study involving community networks in adolescent reproductive health in Senegal, the community strongly endorsed improving youth reproductive health but expressed mixed feeling about adolescent sexuality. Religious leaders believed that parents should discuss reproductive health issues openly with their children but

parents lack the knowledge to do so with confidence (Diop, 2001). A number of studies have suggested that Latino parents find it difficult in talking about the technical aspect of sexuality, including contraceptives and birth control because they require specialized knowledge (Raffaelli & Green, 2003; Raffaelli & Ontai, 2008). This may be due to the fact that many Latino parents lack the knowledge to discuss such topics or may think that talking about contraception with adolescents may encourage adolescent sexual activity.

Even though parents want their children to be educated about sexuality and adolescents want to learn these facts from parents, there appears to be a disconnection in parent-child communication on the subject. For instance, where parents think that they are providing more sexuality education than what is perceived by adolescents, parents lack knowledge of when and how to initiate sexuality discussion with their children (Somers & Surmann, 2005).

In a focus group discussion, parents in the United States cited their inability to handle questions that their children might pose. This was because they lacked the knowledge to answer technical questions about topics such as sexually transmitted infections. Moreover, they were uncertain about how to respond to questions related to values about sex (Wilson et al., 2010).

2.7.2. Attitudes

Parents' attitudes towards adolescent sexuality can promote or discourage healthy sexual lives among adolescents. Mohammadi, Alikhani, Farahani, and Bahonar (2007), conducted a study to explore parents' perceptions and attitudes towards adolescent reproductive health needs and experiences. A total of 539 parents (251

fathers and 281 mothers) of adolescent boys aged between 15 to 18 years in Teheran, Iran were involved in the study, using self-administered questionnaires. The results showed that parents have conservative attitudes towards their adolescent boys' premarital relationships with the opposite sex, giving reproductive health information and reproductive health services. However, parents whose sons were students had a significantly lower score on attitudes towards providing information to their male adolescents compared to those whose sons were not students.

Parents need to be informed in a realistic way about current situations in adolescent relationships with the opposite sex. Adolescents should be informed about the consequences of unsafe sex such as HIV/AIDS. Parents in this study still doubted the fact that their adolescent boys were sexually active because of their religious beliefs. It is high time for parents to be educated that since their children are exposed to the media such as the internet, the children acquire all sorts of information which they put into practice, and which may not be known to the parents.

Mturi (2003), conducted FGDs in Lesotho to examine the knowledge, attitudes and opinions of parents on various aspects of adolescent sexual and reproductive health. The FGDs showed that participants had mixed feelings about allowing adolescents to have sexual relationships before marriage. Some parents felt that adolescents should be allowed to have sexual relations, particularly, the older adolescents but some disagreed with such relationships. Allowing adolescents to have sexual relationships was more prevalent among urban parents, but rural parents advocated for abstinence until marriage. There were also mixed feelings about accessing reproductive health services by adolescents. Some parents, especially fathers argued that unmarried adolescents were not supposed to plan a family; therefore, it was not right to provide

them with reproductive health services. Parents need to be educated that reproductive health services for adolescents are not for only family planning but there are others services such as counselling, which can help adolescents adopt healthier sexual lifestyles.

2.8. Parents' experiences in discussing sexuality with adolescents

Some parents feel discomfort in addressing sexuality issues with their children. Somers and Gleason (2001), pointed to the fact that parents reported that they felt inadequately prepared to discuss sexuality in general, and think that adolescents are not sexually active, so they have no need for information. It has been found that, simply knowing what to discuss may be insufficient but parental openness, skill and comfort level mediate the impact of parent-adolescent communication on sexual behaviour (DiClemente et al., 2001).

Jerman and Norman (2010) used a representative statewide sample of households with 907 adolescents aged between 8 and 18 years from different states in the United States to examine the content and the extent of sexual communication between parents and their adolescents, and the influence of selected primary demographics such as age, gender, education and psychological factors (self-reported comfort, knowledge and sexual communication difficulties) on the number of topics discussed. It was realized that two-thirds of the parents reported that they experienced some type of communication difficulties, such as developmental concerns and embarrassment. The results indicated that self-reported comfort level, knowledge and sexual communication difficulties strongly determine the number of topics discussed. The study concluded that sexual communication between parents

and adolescents can be universally challenging and parents of all genders, of all ages and of all socio-economic status should be educated and supported to communicate with their adolescents.

According to Yesus and Fantahum (2010), fathers in North West Ethiopia did not discuss sex and menses issues with their children because it created discomfort, as it was culturally not acceptable. However, they stated that it was easier to discuss such issues with their sons but not with daughters. Parents in the United States were concerned with their inability to talk to their children about sex. They stated that they found it difficult to start conversation with their children (Wilson et al., 2010). Generally, there is the need to support parents to communicate with adolescents without difficulty.

2.9. Socio-cultural factors that influence parent- adolescent communication about sexuality

There are many socio-cultural factors that affect parents' communication with their children about sexuality. These included cultural factors, the media, religion, peers, school sex education, individual factors and gender.

2.9.1 Cultural factors

Culture influences the development and behaviour of the adolescent. A person's identity is entrenched in culture and passed on from generation to generation (O'Connell, 2001). Cultural beliefs specify how a person acts. Cultural knowledge affects a person's behaviour and attitudes in the society (Raskin, 2008). One constraining cultural dialogue by parents concerns the belief that adolescence is a time of separation from one's parents in order to create a sense of self and establish

one's place in society (Goldberg, 2000). Parents who held such a belief may stress their teens into doing what they (the parents) see as in the teens' best interest. Therefore, such parents assume too active a role in their teen's decisions as if it is their last chance to influence their teenagers. O'Sullivan and Meyer-Bahlburg (2001), cited an example of tension that manifested as a result of adolescent separation in a study of 72 mothers and their daughters. The daughters in the study typically avoided conversation and withheld information on sexual matters. The explanation for this difficulty was their daughters' wanted to be independence.

Goldberg (2000), established that when parents do not give their adolescents the chance to develop their own lives, then the adolescent might turn to others to help them develop. Davis (2000), also noted that adolescents turn away from their parents because they think that they are supposed to make their own decisions and plan for themselves. Furthermore, adolescents may turn away from their parents because they do not feel that their parents will support what they want and therefore may judge them negatively. Generally, the separation discussion may lead both parents and adolescents to interpret relationship as being at odds with the adolescent' growing up to be his/her own.

Additionally, Halpern-Felsher, Kropp, Boyer, Tschann, and Jonathan (2004) reported that just as parents are reluctant about talking with their adolescents about sex, so are adolescents reluctant about discussing sex with their parents. It is significant to recognize such reluctance for both parents and adolescents as lack of effective communication. The researchers identified that, adolescents at times feel that their parents do not treat them as equals and that parents lack sufficient knowledge about current adolescent lifestyles and peer pressure. Other studies have

also shown that adolescents complained that their parents are not open, helpful, truthful and sympathetic, nor do parents adequately value their (adolescents) privacy (Clawson, 2003; Walker, 2001). Jaccard et al. (2002), noted that, adolescents also express concern about sexual conversations being embarrassing to them as well as to their parents.

Mbugua (2007), noted that in Kenya one main barrier to effective sex-education between mothers and their daughters was the traditional taboos. This prevents parents from discussing sexuality with their children. She also observed that majority of the mothers (90%) had no sex-education either from their parents therefore, could not educate their own daughters on sexual issues. Similarly, Wilson et al. (2010) in focus group discussions with parents in the United States found that the parents complained that their parents did not educate them about sex therefore it had made it difficult for them to know how to talk to their own children about sex.

Njue, Voeten, and Ahlberg (2011), found that the disappearance of traditional sex education during initiation rites in African societies has made many young people not knowing where to obtain information on such issues. There were knowledge gaps among adolescents in the area of sexuality, HIV/AIDS and reproductive health. This was attributed to a lack of inter-generational communication on sexuality with adolescents. Guilamo-Ramos (2010), established that gender and cultural differences had resulted in mothers' disclosing more to their daughters than to their sons. In the Latino society, mothers were more concerned with their daughters than their sons because they believe that daughters need to be protected against male sexual exploitation. The society offers men more freedom to engage in sexual activity at a younger age than women.

Gender roles and sexual socialization play a vital part in Latino youth risk and prevention behaviours. At a young age, a Latino learns that ‘good’ women are not supposed to know about sex (Cianelli, Ferrer, & McElmurry, 2008; Deardorff, Tscham, & Flores, 2008). This concept is consistent with ‘marianismo’, the idea that women are expected to follow the example of the Virgin Mary, and remain a virgin until marriage and be submissive and humble in relationships. Meanwhile, the concept of machismo confers penetrative sex and procreation on manhood (Deardorff et al., 2008; Raffaelli & Ontai, 2008). Men are socialized to think that they are not capable of controlling their sexual desires thus, compromising their ability to stop sex while aroused, to put on condom (Martin & Luke, 2010). This is typical of a male-dominated society where men are thought not to be able to control their sexual desires while women are supposed to suppress their sexual desires and give in to the sexual demands of men. There is evidence that this power and freedom in the larger Latino culture favours males as the dominant players in sexual encounters (Deardorff et al., 2008).

2.9.2. The Media

Although sexual content in the media can affect any group, adolescents may be more at risk. The media is an important and powerful agent of sexual socialization for adolescents, which provides them with information that parents may not like or feel reluctant to give them. The media influence adolescents’ identity development and coping skills and serve as a source which identifies them with youth culture (Reamer & Siegel, 2009). Adolescents obtain sexual messages and ideas about sex from television, movies, the internet, music videos, magazine, billboards and video games (Carpenter, 2003). These images and points help formulate assumptions that young

people make about friendships, sexual behaviours and sex roles. Sexual content in the form of advertisements is aimed at adolescents through television (Carpenter, 2003).

A study by Carpenter (2003) found that 83% of the episodes of the top 20 shows aimed at adolescent viewers contained some sexual events. The researchers observed that on the average, American adolescents watch almost 14,000 events on sex each year, but only 165 of these shows address abstinence, self-control, birth control or the risk of pregnancy or STIs (American Academy of Paediatrics Committee on Public Health Education, 2000). The Committee also found that during the prime time 'family hour', (i.e. 8.00 pm to 9.00 pm), an average of eight sexual episodes are aired. The National Campaign to prevent teen pregnancy (2003), stated that 61% of the 501 adolescents studied indicated that the media provided them with advice and information about sex. Adolescents have learnt sexual norms as well as romantic and sexual characters from television (L Monique Ward & Friedman, 2006). Reamer and Siegel (2009), observed that adolescents learn how to attract sexual partners, dating tips and information about contraception and birth control from television.

Collin, Elliot, and Berry (2004), found that watching sexual contents on television predicts and makes adolescents start sex early. The researchers established that adolescents who watch most sexual contents had a two-fold increased risk of initiating intercourse or advancing in non-coital activity. In a similar study, Brown, L'Engle, Pardun, and Guo (2006) in a two-year longitudinal study, assessed whether exposure to sexual content in four branches of the mass media (television, movies, music and magazine) used by adolescents predicts sexual behaviour in middle

adolescence. Over 1000 black and white adolescents in North Carolina were recruited for the study. They were interviewed when they were between the ages of 12 to 14 years and again after 2 years. The findings of the study showed that white adolescents with higher sexual media diet (SMD) scores reported having had sexual intercourse earlier than those with lower SMD scores. At 16 years of age 55% of white adolescents in the highest SMD quintile had initiated intercourse compared to 6% of black adolescents in the lowest quintile. However, black adolescents with the lowest SMD scores were less likely than their white peers to have had intercourse. By 16 years of age, 66% to 70% of black adolescents in the middle and highest SMD quintiles reported starting intercourse compared with only 28% of black adolescents in the lowest quintile. The findings of this study clearly showed that initiation of sexual intercourse on exposure of sexual content of the media did not depend on ethnicity. All adolescents are at risk of initiating sexual intercourse whenever exposed to sexual content in the media. However, the lower the exposure, the lower the rate of initiating sexual intercourse and the higher the exposure the higher the initiation of sexual intercourse among adolescents.

Parents in a focus group discussion in three cities in the United States held responsible the media for the risky sexual behaviour of children. They expressed their frustration about children's easy access to pornography on the internet and cable TV, the negative role models on television, the open sexual content of music and video games and the sexual connotations of advertising (Wilson et al., 2010).

This is how one mother expressed her concerns about the media:

‘Every time you turn around, everything, everywhere you go it’s around you. They’re selling sex. Every song you hear on the radio, *everything is sex.*’

Parents were also worried about the risk posed to their children by new technologies such as text messaging, the internet and social networking sites such as Facebook. Many of the parents were concerned about the likelihood of children using the internet to be exposed to open sexual content or to be reached by sexual exploiters of children. For an example, parents expressed concern about sexually provocative photographs or comments that they had seen on their children or their friends Myspace pages, and felt that these new technologies made it difficult for parents to monitor what was going on in their children's lives (Wilson et al., 2010). These concerns of parents in the USA are just as real to Ghanaian parents. In the urban Ghanaian context adolescents have easy access to some of these new technologies via various internet cafes dotted all over our cities and towns.

2.9.3 Religion

Religion can influence the attitudes and beliefs of parents in terms of whether or not they talk to their children about sexual issue. Regnerus (2005) studied religion and patterns of parent-child communication about sex and contraception and realized that the different religious affiliations present various pictures. Parents who affiliate with traditional Black Churches clearly appeared to talk the most and with most ease about all sex-related topics, whereas Jewish and unaffiliated parents exhibited lower levels of communication about sexual morality. Mormon parents appeared more likely to shun conversations about birth control than most other religious types. In the same study Regnerus (2005), reported that when it comes to the importance of religious faith to the parents, the more important religion was to the parents the more frequently they talk to the adolescents about sexuality.

Swain, Ackerman, and Ackerman (2006), in a study explored the relationship between parents and adolescents demographic characteristics, and parent-adolescent sexual communication, involving 1000 parents of 13 to 17 year olds using the structural equation model. The results of the study showed that religious parents reported more discussions with their adolescents about the negative consequences of sex than their liberal and non-religious counterparts. On the other hand, non-religious parents reported more discussion about where to obtain birth control than religious parents.

2.9.4. Peers

Even though adolescents seek information on sexuality from their peers, parents' communication with adolescents on sexuality will have a positive influence than peer influence. Miller (2002) conducted a study among 907 high school students in two public high schools each in Montgomery, and Alabama and one public high school each in Bronx, New York, San Juan and Puerto Rico. The students were between the ages of 14 and 16 years and had lived with their mothers for at least 10 years and in the 9th, 10th and 11th grades. The study examined how peer norms about sex and parent-adolescent discussion about initiating sex, relates to sexual behaviour and how peer norms about condoms and parent-adolescent communication about condoms relates to condom use. The results of the study showed that the relationship between perceived peer norms and sexual behaviour was stronger among adolescents who had not discussed sex with a parent than among adolescents who had. There is also a relationship between peer norms and parental discussion about condom use. The results showed that a lack of communication between

adolescents and their parents may make adolescents turn to peers and as a result peers may then influence their behaviour.

The Media Project (2005), in the USA identified that adolescents desire to speak to their parents about sexual matters but feel more comfortable in talking to their friends. The Palo Alto Medical Foundation (2001) also in the USA suggested that if the teen has experienced frustration or is uncomfortable in talking with their parents, then he/she would look for a friend to talk to on sexual matters.

2.9.5. School Sex Education

School-based sex education can be a very important and practical way of improving adolescents' knowledge, attitudes and behaviour about sexuality. There is a general agreement that formal education should include sex education. Asmal (2001), observed that teachers play a formative role in the development of children's identity and sexuality. Bleakly, Hennessy, and Fishbein (2006), conducted a study on public opinion about sex education in schools in the USA. A cross-sectional survey was conducted with 1096 adults between the ages of 18 and 83 years. The outcome measures were in support of three (3) types of sex education in school: abstinence-only, comprehensive sex education and condom instruction. The results showed that 82% of the respondents supported the programme that teaches students about both abstinence and other methods of preventing pregnancy, and STIs. Another 68.5% supported teaching about proper use of condoms. Abstinence-only education received the least levels of support of 36%. Many studies also found that 80% of parents in the USA, across political and religious lines, want comprehensive sex education taught to their children (Ito, Gilice, Owen, Foust, & Leon., 2006).

According to Sexuality Information and Education Council of United States (SIECUS), 93% of adults surveyed in the USA, support sexuality education in High School and 84% support it in Junior High School (SIECUS, 2005). Again, 88% of parents of Junior High School students and 80% of parents of Senior High School students believed that sex education in schools makes parent-adolescent communication about sex easier (Schalet, 2004). Furthermore, 92% of adolescents indicated that they wish to talk to their parents about sex and also want comprehensive in-school sex education (Locker, 2001). According to Mitchell (2010) it is essential for schools to involve parents in sex education of their children. Schools need to involve parents in sex education programmes so that parents will be abreast of what their children are learning in order to complement what the school is teaching.

Fentahun, Assefa, Alemseged, and Ambaw (2012), studied parents' perception, and students and teachers' attitude towards school sex education, in Merawi Town, Northwest Ethiopia. The study recruited 386 students, 94 teachers and 10 parents. Both quantitative and qualitative methods were used to collect data from participants. The findings of the study showed that 364(96.8%) of students and 93(98.9%) of teachers had a positive attitude towards the importance of school sex education. The parents admitted that the importance of school sex education is an 'unquestionable idea'. The participants in the students' part of the study 328(84.7%) and 79(84%) teachers wanted sex education in school to be started at an age not more than 15 years. However, in the qualitative study, parents thought that school sex education should be introduced between ages of 7 and 12 years.

Iyaniwura (2005), assessed the attitude of teachers to school-based adolescent reproductive health intervention in Saganu, Ogun State in Southwest Nigeria, using seven public secondary schools in a study. A total of 225 teachers (105 family life educators and 120 non-family life educators) were recruited. The results indicated that 87% of the teachers approved of teaching sex education to adolescent in school, 56.6% approved of contraceptive use by adolescents and 52.9% approved of condom use. The teachers showed an interest in being involved in promoting the sexual health of their students but they preferred to counsel about abstinence. The family life educators had a more positive attitude towards condom use than other teachers.

2.9.6. Gender

The gender of both the parent and the adolescent has been found to promote sexual communication, with mothers being more likely to talk with their children about sexual topics than fathers. Also, mothers are more likely to talk with daughters than with sons while fathers are also more likely to talk with sons than daughters (Dilorio et al., 2003; Swain et al., 2006). One study showed that mothers were less likely to discuss sexual matters with sons because they felt that they would not be taken seriously and such discussion could break the confidence between mother and sons. Additionally, mothers felt that they did not have sufficient knowledge about male reproduction system to discuss it openly with their sons (Bobbee, 2009).

According to Swain et al. (2006), the gender mix of parents and children was the strongest demographic indicator that influences parent-child sexual communication in their study. Mothers reported communicating with their children about the negative consequences of sex and where to obtain contraceptives than fathers did, with the most discussion occurring between mothers and daughters. A mother who

talks to her daughter only about the negative consequences of sex is not helpful. The parents have to know that sex is a small part of sexuality, a developmental stage and relationships about which adolescents have to go through. Sexuality is not only about sex but has positive sides such as physical development and relationship, about which adolescents need to acquire information in order to lead a fruitful sexual life in the future.

Wilson et al. (2010), conducted a study in the United States using data from a nationwide survey with 829 fathers and 1, 113 mothers of children aged between 10 to 14 years. The parents were put into four gender groups (fathers of sons, fathers of daughters, mothers of sons and mothers of daughters) to find out gender differences in factors associated with parent-child communication about sexual topics. The results showed that with both sons and daughters, fathers communicated less about sexual topics than mothers did. Compared with parents of sons, parents of daughters (both mothers and fathers) talked more about sexual topics, were more concerned about potential harmful consequences of sexual activity and more disapproving of their children having sex at an early age. The study recommended interventions to be designed to support parent-child communication about sexual topics and emphasized the importance of parents in talking to sons as well as to daughters. On the basis of the findings, it is possible that fathers of both sons and daughters may not have adequate information about sexual topics and the sons are at a disadvantage in terms of receiving adequate information from either parent.

Namisi et al. (2009), conducted a survey in South Africa (Cape Town and Mankweng) and in Tanzania (Dar es Salaam) in 2004 to identify with whom in-school adolescents preferred to communicate about sexuality and HIV/AIDS. Eighty

randomly selected schools and 14,944 adolescents with the mean ages of 13.38 years for Cape Town, 13.94 years for Mankweng and 12.94 years for Dar es Salaam respectively, were engaged and surveyed. The results showed that 47% of the adolescents preferred to communicate on sexuality with their mothers and 14.7% with their fathers. Mothers were preferred as communication partners by majority of female adolescents at all the three sites. In Cape Town, 30.7% of the male adolescents preferred their mothers and 21.1% preferred their fathers. In contrast the male adolescents at the other two sites preferred communicating with fathers (47.1% and 27.2% in Dar es Salaam and Mankweng) respectively.

2.10. Parent intervention programmes

Parents' intervention programmes were developed as a result of public concern about adolescent sexual behaviour, pregnancy, and sexually transmitted infections including HIV. The programme was developed based upon several reasons such as parents should be and are the main sexual communicators of their children. The programme was also developed on the ground that increasing effective parent-child discussions about sexuality would reduce risk taking by adolescents (Kirby & Miller, 2002). Kirby and Miller (2002), identified eight (8) different approaches that have been used by people to increase parent-child communication on sexuality. These approaches are: classes with parents and adolescents together, parent-only sex education classes, school orientation programmes for parents, school home assignments in sex education, college sexuality education classes for adults, home-based programmes for parents and adolescents, community-based programmes and media campaigns. Many of the programmes had one or more short-term objectives which involve both parents and adolescents.

Some of the parental objectives were:

- i. Increase parents' knowledge by providing more realistic data on sexual behaviours of young people.
- ii. Increase their belief that communication about sexuality will not increase the chances of their adolescents engaging in sex.
- iii. Improve parents' skills in talking about sexuality by discussing ways to initiate conversations by taking advantage of opportunities.

The results showed that the communication programmes that were based on the approaches had a major effect on adolescents, in terms of decreases in the number of sexual partners, increase in condom use and delay in initiation of first sex. Generally, it has showed that the more parents communicate with their children about sexual topics (Aspy, Vesely, Oman, Rodine, & MaLeory, 2007; Karofsky, Zeng, & Kosorok, 2001) the less likely it is that their children will engage in early sexual intercourse as compared to adolescents whose parents do not talk to them about sexuality.

2.10.1. Intervention studies to improve parent-adolescent communication about sexuality

Many intervention programmes have been used to improve parent-adolescent communication on sexual topics. 'Talking Parents, Healthy Teens' is a worksite-based programme for parents designed to promote adolescent sexual health by Schuster et al (2008). The study was a randomized control trial which used parents

of 13 worksites in southern California with 569 parents of adolescents aged between 11 to 16 years took part in the study after completing a baseline survey. The intervention parents went through an eight weekly one hour training sessions. The results showed differences between intervention and control groups to be significant for the number of new sexual topics, increased in condom discussion with parents, reported greater ability to discuss sex, and more openness in communication between parent and adolescents in the intervention group.

Dilorio et al. (2006), conducted an intervention study 'Keeping it R.E.A.L' (Responsible, Empowered, Aware, Living) for 582 mothers and their adolescent daughters aged between 11 to 14 years, to test the efficacy of two interventions in delaying initiation of sexual intercourse for young females who are not sexually active. This was also to encourage the use of condoms among sexually active young females in Atlanta, Georgia. The researchers used two intervention groups and a control group and based the study on the Social Cognitive Theory (SCT) and a Life Skill Programme (LSK). Assessments were conducted at baseline and at 4, 12, and 24 months after the intervention. The primary analysis showed no difference among groups in abstinence rates for adolescents. However, adolescents in the LSK group showed an increase in the condom use rate, and those in the SCT and control group scored higher on HIV knowledge than those in the LSK group. Mothers demonstrated considerable increases over time in comfort when talking about sex and self-efficacy

In the same way, Dilorio et al (2007) conducted an intervention study using 277 fathers and their adolescent sons aged between 11 to 14 years called 'The REAL Men Programme' in Atlanta, Georgia, to promote delay in sexual intercourse,

condom use among sexually active adolescents and sex communication between fathers and their sons. There was pre-assessment before the intervention and post assessment at 3, 6, and 12 months. The results showed considerably higher rates of sexual intercourse and condom use. The intent to delay initiation of sexual intercourse was also observed among adolescent boys whose fathers took part in the intervention. The fathers in the intervention group reported considerably more talking about sexuality and greater intention to discuss sexuality than the control group fathers.

Phetla et al. (2008), conducted a study in Sekhukhuneland, a rural community in the Limpopo Province, in South Africa, which included 387 intervention women and 363 controls. In addition, information was collected from 443 young people aged between 14 to 35 years, resident in the households of loan recipients and 427 young people from matched households. The programme combined micro finance with education in addressing HIV and gender awareness called IMAGE (Intervention with Microfinance for AIDS and Gender Equity). The women were taken through ten (10) structured sessions aimed at creating awareness and discussion on issues related to gender, inequalities, intimate partner violence, sexual health and the function of culture in influencing behavioural norms. There was assessment at baseline and at 24 months after intervention. The intervention group reported more communication with children more often than the control group (80.3% versus 49.4%) at follow up.

2.11. Conclusion

This literature review has highlighted sexual behaviour among adolescents worldwide and locally. It also looked at the sexual orientation of adolescents in Ghana, the positive impacts of parent-adolescent communication on sexuality. The review also identified many intervention studies, mostly from the developed countries and few from Southern Africa that were conducted by researchers to improve parent-adolescent communication on sexuality. The review further threw light on parents' experiences in communicating with their adolescents on sexuality, as well as socio-cultural factors that influence parent-adolescent discussions on sexuality.

Given the negative consequences of sexual activity at an early age, there is a need to provide sex education to adolescents. Teenage pregnancy, and illegal abortions are very common among adolescents but contraceptive use is low due to lack of sex education (Bokpe, 2012). Sex education among Ghanaian adolescents is varied because of limitations in curricula, training of teachers and resources. Sex education among adolescents tends to be school-based with little or no involvement of parents. The focus of sex education in schools in Ghana is mostly on physical development of the child. Despite this intervention, teenage pregnancy is still rising. Evidence from the literature highlights the important role that parents must necessarily play in sex education. It is clear that parents need to be trained to be able to communicate with their children comfortably on their sexuality.

Even though several intervention studies aimed at improving parent-adolescent communication on sexuality have been conducted in developed countries and

Southern Africa, and to my knowledge, none has been conducted in Ghana. This is the gap which the present study can help fill in the context of the Accra Metropolis, Ghana. It is anticipated that through this study parents who were hitherto unable to talk to children on sexuality, will be equipped with the ability and confidence to do so.

CHAPTER THREE

METHODS

3.1. Study area

Ghana is located on the west coast of Africa, about 750 kilometers north of the equator on the Gulf of Guinea, between latitudes 4 and 11.5 degrees North of the equator, and between longitudes 3⁰ west and 1⁰ east of the Greenwich Meridian. The country is divided into 10 administrative regions. The Greater Accra region is located in the south-central part of the country and shares common boundaries with the Central Region to the west, the Volta Region to the east, the Eastern Region to the north and the Gulf of Guinea to the south. It is the smallest of the 10 administrative regions in terms of land area. It has a coastline of approximately 225 kilometres, stretching from Kokrobite in the west to Ada in the east. The Greenwich Meridian (longitude 0⁰) passes through the industrial city of Tema in the Greater Accra, Region. The region is divided into 16 administrative districts of which Accra Metropolis is one.

The study area was in the Accra Metropolis. The Accra Metropolis is bordered to the north by the Great Hall of the University of Ghana, to the east by the Nautical College, to the west by intersection of the Lafa Stream and Mallam Junction. The Gulf of Guinea forms the southern border. The Accra Metropolis is the most urbanized city and the capital of Ghana. This urbanization has been due to the concentration of industries, manufacturing, commerce, business, educational, political and administration roles. This attracts migrants both from the country and neighbouring countries. Like many cities in Sub-Saharan Africa, Accra is experiencing a rapid growth. This rate of urbanization makes it one of the fastest

growing cities in West Africa (United Nation Centre for Human Settlements, 2001). According to the most recent census figures, (GSS, 2010), the Accra Metropolis is growing at 4% per annum. Currently, it is estimated that about 4.1 million people live in the city with about one million people coming to the city on daily basis to do business.

Accra is endowed with many tourist attractions. The advent of tourism has both positive and negative effects on the population, especially adolescents who are influenced by foreign culture and lifestyles. In recent years, sex tourism has become a major international 'industry' into which adolescents and minors are recruited. This has had adverse health outcomes such as the spread of STIs and HIV/AIDS. Accra Metropolis was selected because of reported increase in cases of teenage pregnancies and abortions among adolescents in the city. The Accra Metropolis has 11 sub-metropolises, and the study was conducted in two of these sub-metropolises- Osu Klottey and Ablekuma South. The two sub-metropolises were selected because they were geographically apart to prevent any contamination of the study.

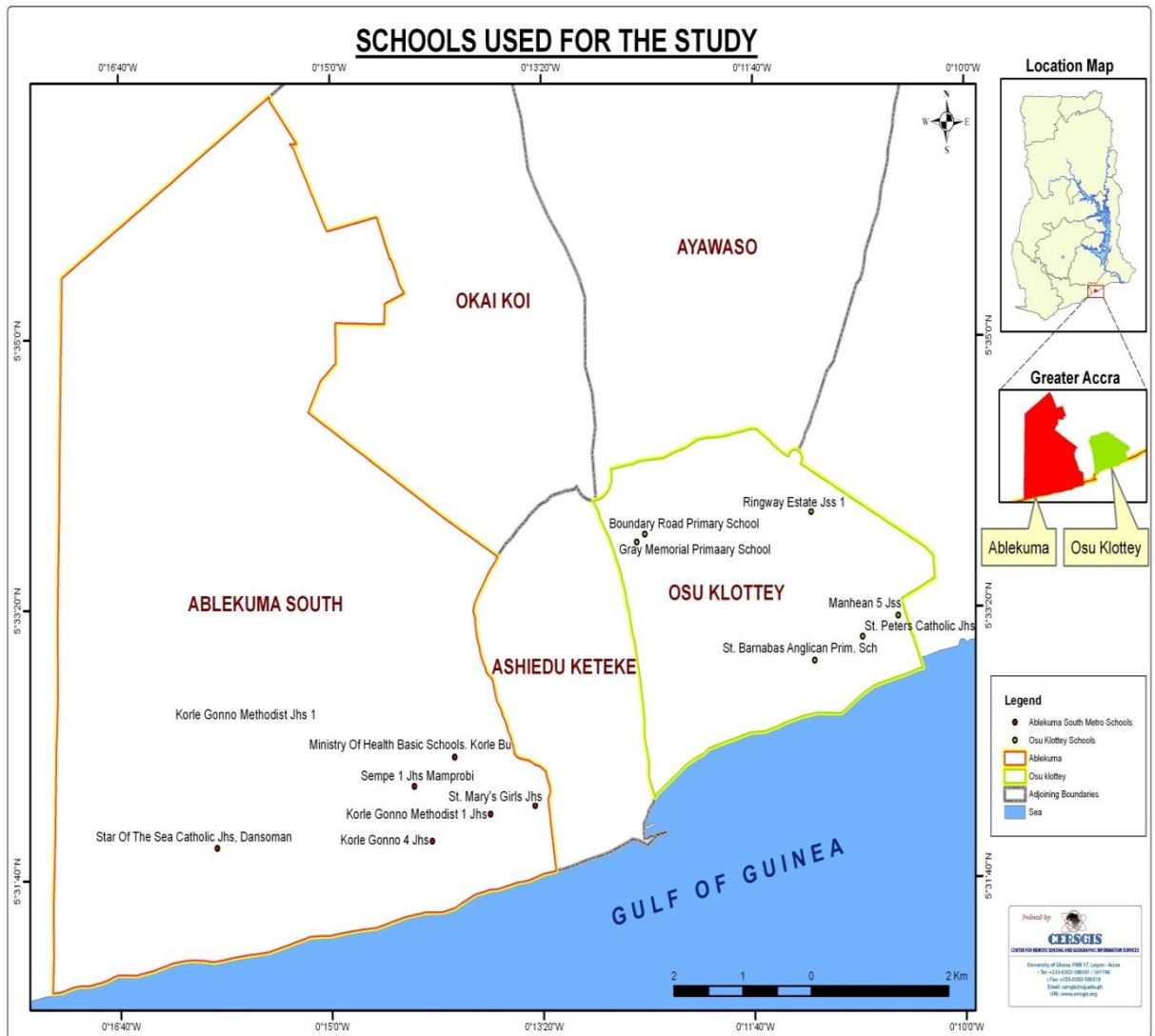


Figure 3.1: The Sub-Metropolises and Junior High Schools used for the study.

3.1.1. The Osu Klottey sub-Metropolis

The Osu Klottey Sub-metropolis is one of the Ga communities in Accra. The metropolis is made up of Osu and Adabraka and has a population of about 124,000. The sub metropolis is bounded on the north by the Odo Bridge and the Ring Way East and Central highways. The south is bounded by the Atlantic Ocean and the Graphic road, and the east is bounded by La South sub- metropolis and Ring Way East respectively. The west is bounded by the Kwame Nkrumah Circle and the Okai Koi South sub-metropolis.

The people of Osu are mainly fishermen and fishmongers. The Christianborg Castle is located in Osu on the coast of the Gulf of Guinea and Atlantis Ocean. The Christianborg Castle serves as the seat of government. It was built by the Danish in the 1660s. The Independence Square can also be found in the Osu Klottey sub-metropolis. There are hospitals like the Ridge Regional Hospital, Accra Psychiatry Hospital and the Trust Hospital in the sub-metropolis. There are 19 public JHS and many churches in the community.

3.1.2. Ablekuma South sub-Metropolis

Ablekuma South is a newly-created sub-metropolis. It shares boundaries with Korle Bu Teaching Hospital traffic light in the east, the Gulf of Guinea in the south, Opeteokoi community in the north and the Ave Maria Preparatory School in the west. The sub-metropolis has a population of about 250,000 with the indigenes being Gas who live mainly at the coast together with a few other tribes like the Akans and Ewes. The main economic activity in this area is fishing by the men and fish mongering by the womenfolk. The population is mostly Christian, with few traditionalists. There are important health facilities like the Korle Bu Teaching Hospital, Korle Bu Polyclinic and Dansoman Polyclinic situated in the sub-metropolis. There are 37 public JHS and many private schools found in this community.

3.1.3. Cultural and social structure

The Accra Metropolis has diverse ethnic groups. The indigenes are the Gas and they occupy the coastal communities. They are patrilineal and patrilocal. The main

festival of the Gas is the Homowo. The festival is an occasion for coming home from other parts of the country where they live in order to eat the communal meal called 'Kpokpoi' a maize meal prepared specially for the festival. The festival is also a time for welcoming new members of the family and remembering the dead. Family disputes are settled during these festivals. Christianity is the dominant religion in the metropolis, with a small proportion practicing traditional religion. There is also a significant number of Muslims in the metropolis.

3.1.4. Political administration of the Accra Metropolis

The Accra Metropolis Administration is under the control of a Chief Executive (mayor) who represents the central government but derives his authority from the Metropolitan Assembly which is headed by a presiding member. The presiding member is elected among the members themselves. Two-thirds of the assembly is elected through local election, while the remaining one-third is appointed by the government. The assembly has a wide range of social, economic and legislative functions over its respective local authority area. The assembly is overseen by the Regional Coordinating Council (RCC) which coordinates and monitors the activities of the assembly. The Metropolitan Assembly is responsible for the general administration of the Metropolis such as the making of by-laws, sanitation and the collection of tolls, rates and fines and the maintenance of law and order in the city.

3.1.5. Topography, climate and vegetation

The Accra Metropolis is almost flat and featureless. The city descends gradually into the Gulf of Guinea from a height of 150 metres. The east of the city has marked ridges and valleys while in the west the low plains contain broader valleys, and

round, low hills with few rocky headlands. The land is covered with grass and scrub. The coastland is lined up with patches of coconut palms. Accra, like the other part of the region is situated in the savanna zone and has a tropical savanna climate. The average annual rainfall is about 730mm, which falls primarily during Ghana's two rainy seasons of May to July, and mid-August to October. There is very little variation in the temperature throughout the year with mean temperature between 24.7 °C in August and 28 °C in March and an annual average of 26.8°C. Accra is close to the equator and the daylight hours are almost equal during the year. The relative humidity is high, varying from 65% in the afternoon to 95% at night.

3.1.6. Economic activities

Majority of the workers in the Accra Metropolis are in the informal sector. In the informal sector, people are involved in trading (wholesale trade and retail trade), manufacturing of processed foods, textiles, clothing, lumber, plywood and chemical, hotel, restaurant, transportation, communication and real estate service. While those in the formal sector work in the ministries such as health, education, banking and other government departments.

The indigenous people along the coast are mostly fishermen and the women are into fish mongering. The catch from the fishing is mostly consumed locally and about 10% is exported. Farming in the Accra Metropolis is mostly in the growing of vegetables such as okro, garden eggs, tomatoes, carrots, cabbages, cauliflower and lettuce. There is poultry production mainly by families to supplement their protein needs. The metropolis also thrives in the production of domestic animals, mostly sheep and goats which are reared by individuals in their homes.

3.2. Study design

This is pre and post intervention with control study which involved parents and their adolescent children aged between 12 and 17 years. The study trained parents to be able to talk to their adolescents about sexual issues. The study later assessed the impact of training parents to talk to their adolescents about sexuality.

3.3. Study population

The target population for the study was adolescents aged between 12 to 17 years in selected public JHS in two sub-metropolises of Osu Klottey and Ablekuma South and their parents. The adolescents and parents lived in the two selected sub-metropolises.

3.3.1. Selection criteria of participants

The participants were students in public JHS within Osu Klottey and Ablekuma South sub-metropolises between the ages of 12 to 17 years and linked to a parent living in the sub-metropolises.

3.3.1.1. Inclusion criteria

A Parent was eligible if he/she had an adolescent between the ages of 12 to 17 years who was in a public JHS in the Osu Klottey or Ablekuma South Sub-Metropolises. The adolescent had to be living with the parent in the sub-metropolis at the time of the study where he/she went to school. Parents and the adolescents were expected to complete a baseline survey before the start of the training programme. Parents and adolescents would complete a follow-up survey after training of parents following a three months lag period. A parent in the intervention group was not expected to miss more than two training sessions out of four sessions during the course of the training.

3.3.1.2. Exclusion criteria

A child was excluded from the study if the parent refused to take part and vice versa. Parents and adolescents living outside the two selected sub-metropolises were excluded from the study. Parents who did take part in the baseline study were excluded and if a parent missed more than two training sessions out of four sessions he/she was excluded from the study.

3.4. Sample size calculation

The sample size was calculated on the assumption that 42% of parents communicated with adolescent about sexuality. A sample size of 69 parents gives 80% power to detect an effect size of 60% at 5% level of significant.

$$n = \frac{(z_{\alpha/2} + z_{\beta})^2 [\pi_0(1 - \pi_0) + \pi_1(1 - \pi_1)]}{(\pi_0 - \pi_1)^2}$$

Where:

n= sample size in each group

π_0 = 42% is assumed proportion at baseline (Kline et al, 2005, South Africa)

π_1 =67% assumed proportion after intervention increased by 60%

Expected difference = 25%

Power (1- β) = 80%

Z = 1.96

α = 0.05

Sample size = 69 parent-adolescent pairs in each group
= 138 parent-adolescent pairs for the two groups

10% non-response rate = 7

10% loss to follow up = 7

i.e. 83 in each sub-metropolis X 2 = 166 parent-adolescent pairs.

3.5. Sampling

A multi-stage random process was used. The first stage involved the random selection of two sub-metropolises (Osu Klottey and Ablekuma South) in 11 sub-metropolises in the Accra Metropolis after writing the names of all the sub-metropolises on pieces of paper and two were picked. After that all the public Junior High Schools (JHS) in each sub-metropolis were listed and six JHS were selected randomly in each sub-Metropolis, 6 out of 19 in the Osu Klottey schools and 6 out of 37 in Ablekuma South. The schools were then grouped into intervention and non-intervention groups. Osu Klottey was chosen as the intervention sub-metropolis and Ablekuma South as the non-intervention sub-metropolis.

3.5.1. Selection of adolescents

All the students were picked from 12 public JHS in the Osu Klottey and Ablekuma South sub-Metropolises and linked to their parents. Students were selected because it was easier to link the adolescent to a parent in a community than going into the community to select a parent. JHS students were selected because most of them were in their early adolescence and middle adolescence stages and might not have been sexually active as compared to the late adolescents (18 to 19 year groups). These stages would make it easier for parents to talk to the adolescents about sexuality which could have influence on their sexual lives.

First, the adolescents were selected by writing 'yes and no' on pieces of paper and the students were asked to pick 'yes' to participate in the study and 'no' not to participate. Ten 'yes' were written on pieces of paper and the rest 'no' depending on the number of students in the class. Ten students each were selected in forms 1, 2,

and 3. In all 30 students were selected from each school making a total number of 360 students from the 12 schools (i.e. 180 students for the intervention group and 180 for the control group).

3.5.2. Selection of parents

All the students who picked 'yes' were given invitation letters and consent forms to send to their parents to participate in the study. The letter explained the purpose of the study and roles the parents from each sub-metropolis would play. The letters were to be returned to the head teachers of their children's school by ticking 'yes' and writing his/her telephone number in the space provided in the letter if a parent wanted to take part in the study or by ticking 'no' if a parent did not want to take part (one parent and one adolescent from each household were to participate in the study). In all 360 letters were sent to parents of the two sub-metropolises for the intervention (Osu Klottey=180) and control (Ablekuma South=180) groups. One hundred and eight (108) parents from the intervention group and 103 from the non-intervention group returned their letters by ticking 'yes' indicating that they were willing to take part in the study. A consent and assent were sought from each parent for his/her participation and participation of his/her adolescent.

3.5.3. Sampling for qualitative data

Sampling for both in-depth interview and focus group discussion was convenience. Parents who were willing to take part in the interview and focus group discussion were recruited for the study. A focus group consisted of about eight parents. For the focus group discussions, there was one 'all fathers' group, two all 'mothers groups' and one 'mixed group' (both fathers and mothers). One mixed focus group

discussion was conducted because it was difficult to get fathers for the second all fathers' group. In all ten in-depth interviews and four focus group discussions were conducted and recorded.

3.6. Data collection techniques

Both qualitative and quantitative methods were used to collect data for the study.

3.6.1. Quantitative data

The quantitative data was used to assess the impact of the training of parents to enable them to discuss sexual topics with their adolescents. Questionnaires were used to collect information from parents about parents' knowledge about sexual topics and the frequency of communication with adolescents on sexual topics, parents' attitudes about sexual issues, ability, comfort and openness in discussing 25 sexual topics with adolescents pre-intervention and post intervention. Similarly, information was collected from adolescents on the frequency of parent-adolescent communication on 25 sexual topics pre-intervention and post intervention.

3.6.2. Qualitative data

The qualitative data was collected to obtain in-depth information in order to support the quantitative data. In-depth interviews were conducted with parents on their experiences regarding discussing sexual and reproductive health issues with their adolescents. Similarly, focus group discussions were conducted with parents on the socio-cultural factors that influence parent-adolescent communication about sexual topics.

3.6.3 Data collection tools

For the quantitative data, structured questionnaires were used to solicit information for this study. Questionnaires are often used to gather a broad spectrum of information from participants such as beliefs, attitudes, knowledge or intentions of the subject. Nevertheless, in questionnaires respondents often have a limited choice of answers. They may not reveal or express their real views or attitudes if they do not match the ‘false choice’ (Walsh & Wiggins, 2003). Different questionnaires were used to gather information from parents and adolescents. The questionnaire for parents comprised both close and few open-ended questions. Open-ended questions gave parents the freedom to answer the questions in their own words, rather than limiting them to fixed answers.

The questionnaires for parents collected information on a) socio-demographic data of parents, b) parents’ ability and comfort in discussing sexual topics with adolescents, c) parents’ knowledge about 25 sexual topics, d) parents’ frequency of communication about 25 sexual topics with adolescents and e) parents’ attitudes towards adolescent sexual issues. In the same way questionnaires were also used to acquire information on a) socio-demographic data of adolescents, b) parents’ frequency of communication about 25 sexual issues with adolescents. Furthermore, the same questionnaires were used to assess the impact of the training programme on parents.

In addition, a focus group discussions and an in-depth interview guides were used to obtain qualitative information for the study. According to Bowling (2009) focus group discussion makes use of group dynamics to stimulate discussion, gain insight and generate ideas in order to pursue a topic in greater depth. It can be used to

provide a safe discussion in which to explore sensitive issues which might be perceived as embarrassing or difficult to discuss during personal interviews. It is a useful technique in exploring cultural values and beliefs about health and disease. Yet, focus group discussion can produce results that are peculiar to the particular mix of people and their group dynamics for instance one vocal participant can affect the whole group (Walsh & Wiggins, 2003).

Walsh and Wiggins (2003) stated that in-depth interviews have an advantage of the possibility to avoid too much pre-judgment, if the questions asked are not predetermined and the researcher can obtain the interviewee's real views and beliefs about an issue. However, the validity of the data is always suspected as it is never possible to be 100% sure that interviewees are not deliberately lying or that they can recall the truth correctly.

The interview guide consisted of themes/topics on parents' experiences in discussing sexual topics with their adolescents and the focus group guide was on socio-cultural factors that influence parents in discussing sexual and reproductive health topics with adolescents. The focus group discussions were used to explore and provide valuable understanding into the socio-cultural factors that influence parent-adolescent communication about sexuality.

3.6.4. Data source

The data for the study was acquired from parents and their adolescents. Questionnaires were used to collect information from both parents and adolescents. Out of the 25 questions on parents' knowledge and frequency of discussing sexual

topics, 15 of the questions were modified from a previous study conducted in USA (Schuster, 2008). The rest of the questions were designed by the researcher herself.

3.6.5. Types of data collected

The questionnaire for the data collection was grouped in different sections. a) demographic information, b) parents' ability, comfort and openness discussing sexuality with their adolescents c) parents' knowledge about 25 on sexual topics d) parents' frequency of discussing 25 sexual topics with adolescents e) parental attitudes towards adolescents' sexual issues.

3.6.5.1. Section A: Demographic information parents and adolescents

The demographic information from parents and adolescents included, sex, age, religion, ethnicity, level of education (parents), class (adolescents), marital status, monthly income level of parents, and living arrangement for adolescents.

3.6.5.2. Section B: Parents' ability and comfort communicating on sexuality with their adolescents

Here, parents were to indicate whether they had discussed sexual topics with their adolescents and under what circumstances they communicated with the adolescents. Parents were asked to rate their ability to discuss sexual topics with their adolescents. Again, the parents were to state if they felt comfortable talking to their children on sexual issues. Furthermore, if parents were open when discussing sexual topics with their adolescents.

3.6.5.3 Section C: Parents' knowledge about sexual topics

In this section, parents were asked about their knowledge on 25 sexual topics and to rank their knowledge on 4-likert scale, ranging from 1=no knowledge to 4= very good knowledge.

3.6.5.4. Parents frequency of communication about sexual topics with adolescents

Parents were further asked to indicate the extent to which they communicated on 25 sexual topics with their adolescents on a 4-Likert scale ranging from 1=never discussed to 4= discussed often. The adolescents were also asked to rank the same sexual topics on a 4-point Likert scale on their parents' discussion about sexual topics with them from 1= never discussed to 4= discussed often.

3.6.5.5. Section E: Parental attitudes towards adolescent sexual issues

Finally, information was solicited from the parents on their attitudes towards adolescent sexual issues such as whether they would approve of discussing sexual issues with their children. The answers ranged from 1=disapprove to 3= approve. Additionally, the parents were asked if factors such as friends, religion and culture prevented them from talking to their children about sexual issues.

3.7. Pre-data collection activities

3.7.1. Permission for Access to Schools

A letter from the Head of the Department of Population, Reproductive and Family Health from the School of Public Health, University of Ghana was sent to the Director of Ghana Education Service in the Accra Metropolis for permission to be granted to conduct the study in the selected schools in the Accra Metropolis. The

Director of the Ghana Education Service in the Accra Metropolis wrote letters to the head teachers of the selected Junior High Schools to introduce the researcher and permit her to undertake the study in their schools.

The Accra Metropolitan School Health Education Programme (SHEP) coordinator also gave a letter to the researcher to send to the selected heads of the schools for the school SHEP coordinators to assist her conduct the study. The researcher sent the letters to the heads of the schools and met the SHEP coordinators and explained to them the purpose of the study and the roles they had to play in conducting the study. On the convenient dates and days, the research with the help of SHEP coordinators selected the students and conducted the study in the various schools.

3.7.2. Training of School Health Education Programme (SHEP) Coordinators

The School Health Education Programme (SHEP) coordinators at each JHS selected for the study were trained as research assistants. The SHEP coordinators were selected because they were more familiar with the students and their parents and could easily get access to the parents through the students. In all, 12 SHEP coordinators were trained. The training of the SHEP coordinators was done in a day. They were trained in two groups of six. The SHEP coordinators from the Osu Klottey sub-Metropolis were trained first followed by the Ablekuma South Sub-Metropolis. This was because the SHEP coordinators were teaching in two different sub-metropolises. At each training session, the purpose, the objectives of the study and definition of concepts were explained to the SHEP coordinators. The training was to help them understand the objectives of the study and explain the questionnaires to the students and their parents in completing the questionnaires

when they have problem in understanding any question. Each question on the questionnaire for students and parents was discussed with the SHEP coordinators.

After discussing each question, the SHEP coordinators were given the opportunity to ask questions on issues that they did not understand. Various medical terms which adolescents and parents might find difficult to understand in answering the questionnaires, for example, wet dreams, masturbation were typed on a sheet of paper with the meaning explained in simple English and given to the SHEP coordinators. The researcher explained the meaning of each of the terms to the SHEP coordinators. This was to enable the SHEP coordinators explain the meanings of these terms to the students before they filled the questionnaires. After the training the SHEP coordinators were given snack and transport allowances of GHC 10.00 each.

3.7.3. Training of other Research Assistants

One facilitator and two observers who work with adolescent in health institutions were selected and given a day's training. The training focused on the aim of the study, the process of conducting focus group discussion, the role of the facilitator and the observers in focus group discussions as well as the topic to be discussed. Similarly, the research assistants were taken through how to conduct in-depth interviews.

3.7.4. Briefing of training facilitators

The facilitators who trained the parents were specialists in adolescent health from the Ghana Health Service who work with adolescents, both at adolescent-friendly clinics

and on the Adolescent Health Development Programme. The specialists were given one day briefing on the objectives of the study, the training programme and the curriculum of the training. They were also briefed on the various topics to be taught, the number of weeks the training was to take, and the teaching methods were discussed with the trainers. The researcher together with the training facilitators trained the parents.

3.8. Pre-testing

Pre-testing for the quantitative study was conducted with 10 students and their parents from a public JHS not selected for the study. This was to make sure that there was no communication between the schools selected for the study. The pretest was to identify any weakness, fault or omission in the methods before they were used in a larger scale (Walsh & Wiggins, 2003). The pre-test was also to find out the clarity of the questions in the questionnaires and interview guides.

After the pre-testing, few changes were made in in the questionnaires. In the socio-demographic data, religion was classified as Christians, Moslem, traditional religion and no religion, but Christianity had to be categorized into various religious denominations such as Anglican, Catholic, Methodist, and Pentecostal/Charismatic, because all the participants indicated that they were Christians. In the parents' questionnaire, the question was asked as number of children between 12 and 17 years, some of the parents gave answers as 10 and 12. So the question was reframed as 'How many children between 12 and 17 years old do you have?'

For the qualitative data, one in-depth interview and a focus group discussion among parents were used for pre-testing. However, no changes were made in the final in-depth and focus group discussion guides.

3.9. Pre-intervention (baseline) survey

The pre-intervention survey was to assess parents' knowledge about 25 sexual topics and parents' frequency of discussing with their adolescents about the 25 sexual topics. Furthermore, the survey assessed parents' ability, comfort and openness in discussing sexual topics with adolescents as well parents attitudes towards sexual issues.

After recruiting all the participants for the study, a baseline survey was conducted with parents. Before the onset of the survey, permission was sought from parents to participate in the study. An information consent leaflet was developed to provide information about the study to participants and a written consent was signed by them before participating in the study. The parents were informed that participating in the study was voluntary and those who were no longer interested were free to opt out anytime. To ensure confidentiality, parents did not have to write their names on the questionnaires. The questionnaires with meanings of a list of medical terms attached were sent to parents by their children and completed in their homes. They were encouraged to answer the questions as independently as possible and not to discuss their answers with their children. A questionnaire would take about 40 to 50 minutes to complete. The completed questionnaires were collected and brought back by the child in three days and handed over to the SHEP coordinators of the schools.

A baseline survey was also conducted with the adolescents after permission was sought from parents. The students answered their questionnaires at school before sending their parents' questionnaires to them at home. This was to prevent parents and their children from discussing and comparing answers which could influence the results of the study.

The questionnaires were numbered before they were given to the adolescents and parents. The questionnaires were numbered for each school depending on the number of students participating in the study in the school. The number that was given to the child, the same number was given to the parent. For instance, if the adolescent was given adolescent questionnaire number one (1), parent questionnaire number one (1) was sent to the parent. This was to make it easier for the researcher to determine parents who did not return their questionnaires in order to remove the questionnaires of their children from the completed questionnaires.

The students were asked to sit in rows in one classroom in their schools. The SHEP coordinators explained the purpose of the study to them. They were asked if they would all like to take part in the study because they were free to opt out if they were no longer interested in the study but no one opted out after the explanation. They were assured of confidentiality, so names were not written on the questionnaires. The questionnaires were distributed to the selected students and were asked to read through and answer the questions that ensued.

After the questionnaires were distributed to the students, the SHEP coordinators explained the medical terms which the students might find difficult to understand to

them to facilitate easy answering of the questions. The students were asked not to discuss their answers with one another as their individual views were important to the study. They were also not to discuss their questionnaires with parents when they went home because that could influence the results of the study. The questionnaires were completed under examination condition within thirty minutes. This was enough time for even the slow readers and writers to complete the questionnaires. If a student completed his/her questionnaire before the stipulated time he/she was asked to handover her paper and leaves the room. All the students finished on time and the questionnaires were collected within the allocated time. The SHEP coordinators thanked the students for participating in the study. All the students who participated in the study were give a pen and a pencil as an incentive.

3.10. The Training Programme

The parents' health education training programme was adapted from 'Talking Parents, Healthy Teens' by Schuster et al (2008) to train parents to communicate effectively with their children about sexuality. The programme was made up two interactive group workshops which were held on Saturdays for 2 hours per session for a period of 4 weeks for each group. The two groups were trained at a time. Each group consisted of about 35 parents. Each parent undertook 8 hours of structured training. Parents were provided with snack and transport fare of GHC10.00 during each training session. This was to serve as an incentive for parents to attend the training programme. The goal of the training programme was to build parents' knowledge about sexual topics, to frequently discuss sexual topics with adolescents. It was also to build their abilities, comfort and confidence in discussing sexual and reproductive health issues with their adolescents.

3.10.1. Curriculum for training of parents

The training was a four-week, two-hour weekend programme for parents of adolescents between the ages of 12 and 17 years. The programme used discussion, lecture and role play as teaching methods. The training contents consisted of the following which were divided into sessions (Schuster et al 2008).

Week 1: Building Relationship with your child and child development

There was an overview of the training programme and reason for organizing it. This session focused on positive parent-child relationship: the importance of 1) talking to children about sex; 2) establishing a quality parent-child relationship; 3) identifying and reinforcing children's strength; 4) spending time with children; 5) helping children to develop future goals and 6) supervising children.

Communication skills: Parents were encouraged to praise or reinforce their children's strength if they do something good (noticing a positive behaviour and making favourable comments about it).

Week 2: Child development and talking about sex: getting past roadblocks

Parents learnt about adolescent physical, social, emotional and cognitive development. Parents also learned that some adolescent behaviour which may seem baffling and frustrating may be normal part of development. They were taught how physical changes may affect the way adolescents felt about themselves and that adolescent's sexual and romantic feeling were developing. Here the topic of sexual orientation was introduced. Parents identified and discussed reasons that make it reluctant to talk with their children (e.g. fear of talking about sex might encourage it, that child is too young to talk about it).

The programme moved from skill that promotes general communication and positive parent-child relationships to skills that supported communication specifically about sex. Parents identified their beliefs and what they felt about dating and sexual behaviours that might occur instead of intercourse.

Communication skills:

Parents were introduced to the 'I' messages are statements parents made that included the phrase 'I feel ...' e.g. when you shout too loud, I feel annoyed because I get disturbed. This message was not to blame the adolescent; but focused on the parent's feelings and not adolescent's behaviour. 2. Parents were taught strategies for inviting children to talk (help adolescents identify and discuss their own feelings). Here the programme focused on having general, nonspecific conversation with adolescents in addition to engaging in specific conversation about sex.

Parents then learnt active listening which involved paying attention, listening without interrupting, restating what they had heard their children said (to confirm they understood correctly and show that they are listening), and identified the feelings that their children were expressing. This showed adolescents that parents were interested and encouraged adolescents to express themselves.

Parents were introduced to four approaches to initiate conversation about sex: 1) using teachable instants (i.e. everyday situations, such as watching a movie with a love scene, that provide opportunity to start discussions); 2) thinking of opening lines to start the conversation; 3) identifying roadblocks (e.g. what adolescents say to make it hard to talk about sex) and strategies such as an open-ended questions to get past them; and 4) identifying reasons why they wanted to talk about sex with

their children and learning how to avoid lecturing. Parents practiced how to start conversation through role play.

Week 3: Helping your child make decisions and assertiveness skills

Parents thought about reasons that adolescents might and might not want to have sex. Parents considered the adolescent perspectives on sexual matters, and anticipate potential adolescent responses and work to make their discussions proceed smoothly. The first part was assertiveness skills for adolescents who want to remain abstinent from sexual activity in general or refrain from all sexual activities in a particular situation. The second part addressed various methods of preventing STI or unintended pregnancies among adolescents who engaged in sexual activity. Parents were asked to discuss the advantages and disadvantages of condoms and talk to their children about them.

Communication skills: Parents presented reasons why it was important to help children on how to make their own healthy decisions about sexual behaviour rather than dictating to them about what to do. Parents were introduced to decision-making skills that involved the parent asking the adolescent questions to help the adolescent develop decision-making skills called **S.T.O.P.** steps: **S**tate the decision; **T**alk about feelings and needs; brainstorm and discuss **O**ptions and **P**ick the best option and later evaluate.

Parents learnt assertive skills so that they could teach them to their children: how to say 'no' to someone who was applying pressure in an unwanted sexual situation; how to suggest an alternative activity as a means of getting out of pressure without implying a desire to end the relationship (propose to go to the movie), delay tactics or methods of cooling down pressure (going to the restroom).

Week 4: Abstinence, and contraception, coping with conflict and supervising your children

The fourth part involved strategies for negotiating conflicts. Parents were taught adolescents assertive skills that adolescents can use if they decided to have sex and wanted to use contraception e.g. The use of the **S.T.O.P.** steps to solve problems and reduce conflict with others. Parents discussed their supervision practices and how to supervise their children in appropriately in various situations. Finally, parents discussed what it means to ‘respect others’ and how they could help their children understand concepts such as ‘no means no’.

Parents went over all that they had learnt and were encouraged to continue using the skills. Parents had the opportunity to practice all the skills during role-plays. Parents were encouraged to talk to other parents about their experiences and recommended them to take part in such programmes.

Communication skills

Parents learnt how to teach adolescents including stating that they wanted to use a condom, giving a reason why they wanted to use a condom, coming up with a response that they could be used if pressured to have sex without a condom, saying no to sex without condom and using alternative actions and delay tactics.

3.10.2. Training of parents

The training of parents was four weeks, two-hour weekend education programme for parents in Osu Klottey sub-metropolis. After conducting the baseline survey, a day was set to meet all the parents to discuss the purpose of the study and for them to fix

a date and time for the training. All the parents met in one of the schools and the researcher and the training facilitators explained the purpose of the study and the reason for training. The parents were asked to fix the day and time for the training. After various deliberations among the parents, they all agreed that the training should be held on Saturdays from 10 am to 12 noon so that they could have the rest of the day to carry out their individual activities after the training sessions. The parents were then divided into two groups and each group was trained by a facilitator. The researcher acted as a coordinator and trainer and helped the facilitators to train the parents. Before each training sessions, the researcher called all the parents to remind them of the training the following day.

At the start of the training, the objectives and the method of the training were explained to the parents followed by self-introduction by all the parents. They mentioned their names, occupations, where they resided, child's name and child's school. The facilitators then found out whether they have ever talked to their children about sexual issues and why they did so. The parents were asked to mention some sexual topics they knew and narrate some of the sexual topics they discussed with their adolescents. Each parent was given a chance to talk about what they talked about with their children and how they started the conversation.

The actual training programme started by teaching a number of topics at each session. After each teaching session the parents were taught communication skills. For instance, for the first week's topic "Building relationship with your child", the parents were taught to praise or reinforce their children's strength if a child did something good or if they noticed a positive behaviour in their children. They were taught how to build relationship with their children by listening to them when they

are talking with them and praise them when the need arose. They were asked not to be judgmental when talking with their children about sexual topics. Additionally, they were taught how to initiate a conversation on sexual topics with their children using events such as what had happened to her/his friend or watching romantic movies on TV.

At the end of each session, parents were given take home assignments for instance, initiating conversation with their children on sexual topics and encouraged them to practice with their children before the next class. They were also given the handouts for the sessions. The parents were paired in twos and asked to role-play on how to talk to their children about sexual topics. They were introduced to some family planning methods. There was demonstration on how to use a condom. The parents were encouraged to talk to their adolescents about contraceptives and teach them how to use the condom. They were informed that it was better for their children to use contraceptive to prevent pregnancy and sexually transmitted infection than to become pregnant, indulging in abortion or contract sexually transmitted infections which come with consequences. The curriculum was followed as planned and the facilitators were able to complete all the topics within the scheduled time. The parents were given snacks after each training session and transport allowance of GHC 10.00.

At the end of the training, the researcher thanked all the participants for parting in the programme. Each parent was given a book on 'Communicating with the adolescent' from the Adolescent Health Development Programme, Ghana Health

Service. Parents were encouraged to read the books and practice the contents with their adolescents.

3.11. Ethical consideration

The study protocol was cleared by the Ethical Review Committee of the Noguchi Memorial Institute for Medical Research, University of Ghana with an IRB 097/11-12 (see Appendix 5). Parents selected for the study signed consent forms and assent forms on behalf of their children before taking part in the study. Confidentiality and privacy were assured and anonymity was maintained throughout the study. Participants in the in-depth interviews and focus group discussion were known by their first names only. No names or identification data were obtained. Participants were free to withdraw from the study at any point when they felt they were no more interested because participation was voluntary. The audiotapes and the original copies of the transcribed data are being kept in a locked cabinet and will be destroyed after the study. The researcher is the only person who has access to the transcribed interviews and questionnaires data.

3.12. Data collection

The data collection started in October, 2012 to May 2013 from parents and their children in 12 Public JHS in two sub-Metropolises, in the Accra Metropolis.

3.12.1. Post intervention survey

The post intervention survey was conducted 3 months after the training. This was to assess the effects of the training on parents to talk to their children about sexual topics. The same questionnaires used in the pre-intervention survey were used to collect data from the same parents and adolescents who took part in the pre-

intervention survey. The post intervention survey was to compare with the pre-intervention survey to find out if there were any changes in parents' knowledge about sexual topics and frequency of talking with adolescents about sexual topics. Parents completed the questionnaires at their homes in three days and sent the completed questionnaires through their children to the SHEP coordinators in their schools.

Similarly, there was a post intervention survey for adolescents to find out whether parents actually discussed the 25 sexual topics with them. The participation of the adolescents in the study was to authenticate what parents would discuss with their adolescents. The adolescents completed their questionnaires under examination-like condition in their various schools in thirty minutes as in the pre-interventional survey. The SHEP coordinators collected all the completed questionnaires after the survey and kept them for the researcher. Each SHEP coordinator was given GHC 20.00 and GHC30.00 at pre-intervention survey and post intervention survey as an allowance depending on the number of questionnaires she supervised and collected for the study.

3.12.2. Response rate

A total of 360 students selected from 12 public JHS in the Osu Klottey and Ablekuma South sub-metropolises were given invitation letters to be sent to their parents to take part in the study. One hundred and eight parents in the intervention group and 103 in the control groups responded to the invitation letters to take part in the study. Questionnaires were sent to these parents to complete for the pre-intervention survey.

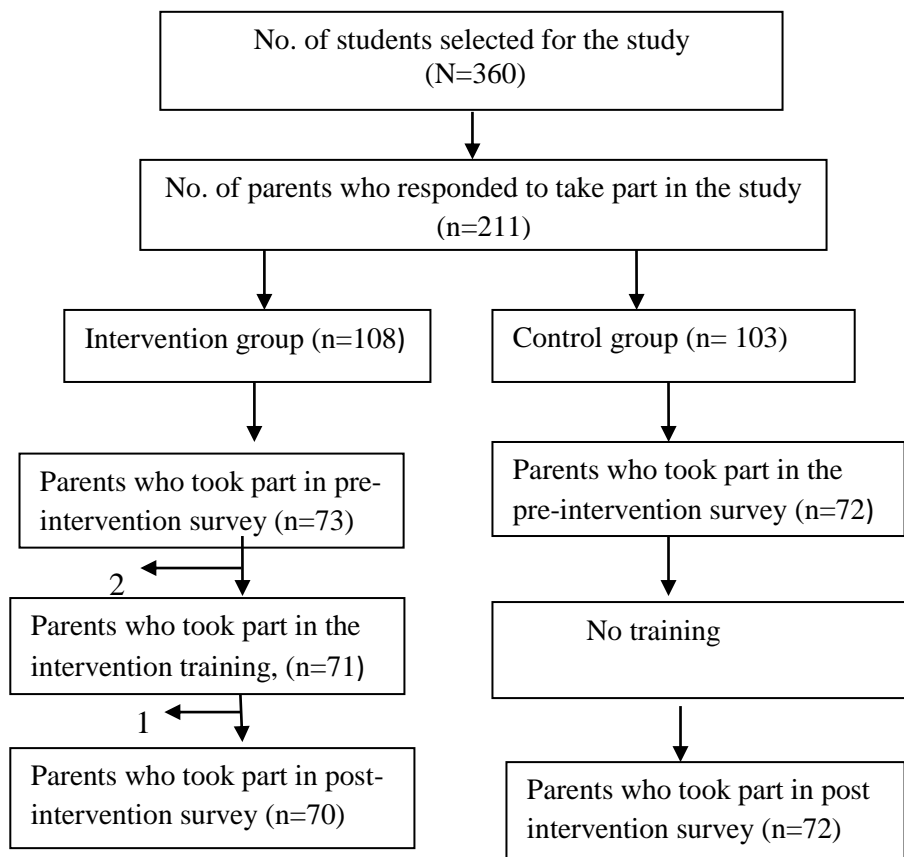


Figure 3.2: Flow of participation of parents through the study.

Out of these numbers only 73 parents in the intervention and 72 in the control groups returned their questionnaires. After the pre-intervention survey 72 parents were recruited from the Osu Klottey sub-metropolis for the training. During the training, two parents dropped out of the study again leaving 70 parents. For the post-intervention survey, 70 parents in the intervention and 72 in the control groups took part in the survey making a total of 142 parent-adolescent pairs instead of 145 at the beginning of the study. The dropout rate was 2%.

3.12.3. Focus Group Discussions

The FGDs were conducted in an atmosphere that ensured privacy. A series of four FGDs (two mothers', one fathers' and one mixed groups) were held among 26

parents from both the intervention and the non-intervention groups. Participation in the FGDS was basically voluntary so only parents who were interested in participating were recruited. All the parents who agreed to participate were asked to sign a consent form and provide brief demographic information.

The FGDS were facilitated by the researcher who was the moderator and a trained observer. Parents' views about socio-cultural factors that influence sexual communication between parents and adolescents were discussed. During the FGDS the various topics such as the influence of culture, media, school sex education and religion on parent-adolescent communication about sexuality were presented one at a time and parents were asked to give their views about each topic. The FGDS were taped recorded, transcribed verbatim before being analyzed. Each FGD lasted between 75 minutes to 120 minutes. The participants were given refreshment after the discussions and transport allowance of GHC10.00 per participant.

3.12.4. In-Depth Interview

The interviews were conducted by the researcher. The interviews were conducted in an atmosphere of privacy in the parents' homes and other places that were convenient to them to find out their experiences regarding discussions on sexual issues with their children. The interview started by asking the participant a general question such as 'please tell me about yourself.' This was to know more about the general information of the participant's background and to create rapport. During the interviews, probing techniques were used such as 'could you please explain more into what you mean by...' or 'do you mean to say that...'. If a parent did not explain a point well more probing was done until the parent clarified and explained into detail what he/she meant. Sometimes, during the interview, parents talked about unrelated

subjects so the interviewer had to redirect the conversation back to the topic needed for discussion. Each interview lasted between thirty and forty minutes and was tape recorded.

3.12.5. Difficulties encountered in the field/data collection.

During the survey, some parents misplaced their questionnaires and they had to be given new ones before they could complete the surveys.

After the selection of the parents for the FGDs, the place and time for meeting was a challenge because all the participants could not agree on the time and place to meet for the discussions. Many parents suggested Sunday after church service, but others wanted to do the discussion on Saturdays. The researcher suggested to them that those parents who could come together on Saturdays should form a group and the others who would be free on Sunday after church should come together to form a group for both mothers and fathers. It took frequent calls to parents before they could be assembled for the discussions.

During the FGDs, there were a lot of arguments among the fathers' group about the answers their colleagues gave during the discussion. The researcher gave the assurance to all the participants that there were no right or wrong answers to the topic under discussion and that every individual views was important to the study. In one of the all mothers' FDGs, the mothers started complaining of time after one hour of discussion because the FGD took place after church. This made the researcher rush through some of the questions.

3.13. Study variables

The study used a number of variables. These included demographic data of parents and adolescents, dependent and independent variables. The variables are stated below:

3.13.1. Independent Variables

The independent variables that were measured in the questionnaires for both parents and adolescents were age, sex, residential arrangement, educational level, religious denomination, influence of family, friends, culture and religion, media, school sex education and gender on sexual communication between parents and adolescents were measured.

3.13.2. Dependent variables

Parents' perceived knowledge about sexual topics, parents' reported sexual communication with adolescents and attitudes towards sexual' issues were the dependent variables for the study. These are:

1. Parents' perceived knowledge about sexual issues
2. Attitudes of parents towards sexual issues
3. Parents' rated ability of talking about sexual topics with adolescents
4. Parents' reported comfort of discussing sexual topics with adolescents
5. Parents' reported frequency of discussing sexual topics with adolescents

3.13.3. Parents' perceived knowledge about sexual topics

The study asked the parents to rate their knowledge about 25 sexual topics. The topics were grouped into biological development topics, sexual risk protection

topics, contraceptive use topics, risky sexual behaviour topics and experiential sexual topics.

The parents were asked to circle the answer which agrees with how they rated their knowledge and understanding of the following sexual term and statements with the responses measured on a 4-point Likert scale 1= no knowledge, 2= little knowledge 3= good knowledge and 4= very good knowledge'.

Under the biological development topics the following questions were posed:

1. How girls bodies change physically as they grow up
2. How boys bodies change physically as they grow up
3. Menstruation or have menstrual periods
4. Wet dreams by boys (as a sign of maturity to produce semen and sperm).
5. How a girl gets pregnant and has babies
6. Masturbation

All the questions that the parents answered were scored to get a total score for each parent. The total score for the 6 questions under biological development were summed up and a score of 24 was obtained. The score was then categorized into four levels, 6-10 = no knowledge, 11-15 = little knowledge 16-19 = good knowledge and 20-24 very good knowledge. The higher the score a parent had, the higher his/her knowledge about biological development topics.

Under the sexual risk protection category, 9 items used were. These were:

1. How to prevent pregnancy
2. Abstinence from sex until marriage
3. How to decide whether or not to have sex
4. How to overcome pressure from friends to have sex

5. Reason why your child should not have sex
6. How to say 'no' if somebody wants to have sex with your child and she does not want to
7. What your child will do when a partner doesn't want to use condom and he/she wants to have sex with him/her
8. How people can prevent getting sexually transmitted diseases
9. How to prevent getting HIV/AIDS.

A total score of 36 was obtained for the 9 questions if parents answered 4 = very good knowledge. The score was then grouped into four levels of 9-15 = no knowledge, 16-22 = little knowledge, 23-29 = good knowledge and 30-36 = very good knowledge. The higher the score a parent had suggested the parent has high knowledge about sexual risk protection topics.

On contraceptive use, 2 items were used to assess parents' knowledge on these sexual topics:

1. Uses of condom/how to use condom
2. Use of contraceptive to prevent pregnancy

A score of 8 was obtained if a parent responded to 4 = very good knowledge to the two items. Based on this score, the score was grouped into 2-3 = no knowledge, 4-5 = little knowledge, 6-7 = good knowledge and 8 = very good knowledge.

For risky sexual behaviour topics, a score of 24 was obtained for 6 questions should a parent respond to 4 = very good knowledge. This was then grouped into 6-10 = no knowledge, 11-15 = little knowledge, 16-19 = good knowledge and 20-24 = very good knowledge. The items were:

1. Consequences of having premarital sex

2. Consequences of getting pregnant/getting somebody pregnant
3. Consequences of abortion if one gets pregnant/gets someone pregnant
4. Pressure from friends to have sex
5. Symptoms of sexually transmitted diseases
6. Effects of substance (alcohol, smoking) use on sex

For the last category, the two questions which were used to measure parents' knowledge on experiential sexual topics were:

1. Having sexual feelings
2. Homosexuality (gays/lesbians)

A score of 8 was recorded for the two questions if a parent answered 4 = very good knowledge then categorized into four levels of 2-3= no knowledge, 4-5 =little knowledge, 6-7 = good knowledge and 8 =very good knowledge. To evaluate the total parents' knowledge, of all the parents, the total score of the 25 questions under parents' knowledge about sexual topics were summed up and the score of 25 and 100 obtained for parents who answered 1= no knowledge and 4= very good knowledge respectively. The scores were categorized into four levels of 1-25= no knowledge, 26-50 = little knowledge, 51-75= good knowledge and 76-100= very good knowledge. The higher the score a parent had the higher his/her knowledge about sexual topics.

3.13.4. Parents reported frequency of parent-adolescent discussion about sexual topics

The same set of 25 questions that were used to assess parents' knowledge about sexual topics was used to measure the frequency of parent-adolescent

communication on sexual topics and grouped as in the parents' knowledge about sexual topics (indicated above). The parents were to state the extent to which they had discussed if ever, the group of sexual topics with their sons and daughters. These items were measured on a 4-point Likert scale 1= never discussed, 2= discussed only once, 3=discussed a few times 4= discussed often. The responses for each item in the various categories were added up and had a frequency scored for the parents which were later grouped into levels.

For the biological development, 6 items scored gave a total score 24 if the parent answered. The score then grouped into 6-10 = never discussed, 11-15 = discussed only once, 16-19 discussed a few times and 20-24 = discussed often. In the sexual risk protection category, 9 items were assessed for a total score of 36; the score was put into four levels 9-15 = never discussed, 16-22= discussed only once, 23-29= discussed a few times and 30-36 =discussed often.

In the contraceptive use grouping, two items were measured which gave a score of 8. So the score was grouped into 2-3 = never discussed, 4-5 discussed only once, 6-7 = discussed a few times and 8 = discussed often. In the case of risky sexual behaviour topics, a score of 24 was acquired for 6 questions and 8 scored for two questions for experiential sexual topics respectively. They were all measured on 4 –point Likert scale of 1= never discussed 2=discussed only once, 3=discussed a few times and 4=discussed often.

To assess the total parents' frequency discussing sexual topics with adolescents, a total score of 25 questions were scored and summed up and the score of 25 and 100 attained for parents who answered 1= no knowledge and 4= very good knowledge

respectively. The scores were grouped into four levels of 1-25= never discussed, 26-50 =discussed only once, 51-75= discussed a few times and 76-100 = discussed often. The higher the score a parent got the higher the frequency of discussing sexual topics with the adolescents.

3.13.5. Adolescents' reported frequency of parent-child discussion about sexual topics

The adolescents were to indicate whether their parents had talked to them about the group of sexual topics (indicated above as for parents) and extent to which both parents (father and mother) have talked to them about each of the topics under the various group. The items were measured on a 4-point Likert scale of 1= never discussed to 4=discussed often. The response for each group was summed up and the scores showed the frequency of communication for each group of sexual topics discussed with the adolescent. The higher the score an adolescent got the higher the frequency of discussing sexual topics with the parent.

3.13.6. Parents' rated ability to discuss sexual topics with adolescents

The parents were asked to rate their abilities to talk about sexual topics with their sons and daughters. Parents' ability to discuss sexual topics was measured with two items grouped under one variable, parents' ability to talk about sexual topics with adolescents on a 3-point Likert scale of 1= poor, 2 =fair and 3=good. The items were:

1. How would you rate your ability to talk about sexual topics with your son?
2. How would you rate your ability to talk about sexual topics with your daughter?

A score of 6 was documented if a parent answered both questions for 3 = good. After that the scores were grouped as 2-3 = poor, 4-5 = fair and 6 = good. The higher the score showed the more likely the parent's ability to talk with the adolescent about sexual topics.

3.13.7. Parents' reported comfort in discussing sexual topics with adolescents

Two items were group to form a composite variable called parents' comfort talking about sexual topics with adolescents. The item was measured on a 3-point Likert scale of 1 = not comfortable, 2 = somewhat comfortable and 3= comfortable. The items were as follows:

1. I feel comfortable (relaxed) talking about sexual topics with my son.
2. I feel comfortable (relaxed) talking about sexual matters with my daughter.

The two items were summed and score of 6 awarded if a parent answered '3= comfortable' for the two item; then categorized into 2-3 = not comfortable, 4-5 = somewhat comfortable and 6 = comfortable. The higher the score indicated the more likely a parent feels comfortable talking about sexual topics with the child.

3.13.8. Parents' reported openness communication with adolescents

Three items were used to measure the openness of communication between parents and adolescents:

1. My child and I talk openly and freely about sexual topics;
2. I allow my child to freely ask me any question about sexual matters;
3. I answer questions that my child ask me about sexual matters frankly and honestly

The items were scored on 3-Likert scale which ranged from 1=disagree to 3= agree.

The total marks for the three questions added up to 9, if a parent responded 3 = open to all three items. The scores were later categorized in 1-3 not open, 4-6 = somewhat open to 7-9 = open. The openness of talking about sexual topics with adolescents depends on the mark score by the parent. The higher the score showed, the more likely the parent's comfort to talk with the adolescent about sexual topics.

3.13.9. Attitudes of parents towards adolescent sexual issues

Two items were used to evaluate parents' attitudes towards allowing adolescents the use of reproductive health services.

1. Would you allow your son to get reproductive health services e.g. family planning?
2. Would you allow your daughter to get reproductive services e.g. family planning?

All the items were scored on a 3-point Likert scales ranging from 1=disallow to 3= allow. The scores of the 2 items were added together and a score of 6 was attained, and was grouped as 2-3 = disallow, 4-5 = neutral and 6 = allow. Higher score indicated parents' positive attitude towards allowing adolescents' access to reproductive health services.

The other attitudes questions measured were:

1. Would you approve of discussing sexual topics with your child/children?
2. Would you allow your child to use condom if he/she is engaging in sex?

3.13.10. Age for sexuality discussions with adolescents

Timing was defined as the age at which the parent first had discussion on sexual matters with the adolescent. The parents were asked an open-ended question to indicate the age at which they would like to start discussing sexual topics with their adolescents. All the ages were grouped into various age groups to note the age that the parents would like to start talking to their adolescents about sexual topics.

3.14. Data quality control measures

To ensure data quality, care was taken in data collection, data handling and data management. Necessary consideration was given to the research objectives in designing the instruments. Data were collected from parents and the adolescents by the trained SHEP coordinators to ensure that the correct information was generated for the study. After collecting the data for each day, the researcher checked the questionnaires for consistency to minimize human errors.

3.14.1. Data processing

Two sets of data were used in the study; quantitative and qualitative.

3.14.2. The quantitative data

The quantitative data was obtained from both parents and adolescents and SPSS Version 16 was used to construct the questionnaires. Necessary consideration was given to the research objectives in designing the instruments. The researcher carefully corrected and cleaned the questionnaires to remove inconsistent answers which may lead to recording irregularities. All open-ended questions were also coded carefully. After collecting the data each day, the researcher checked the

questionnaires for consistency in order to minimize human errors. Both parents' and adolescents' questionnaires for pre-intervention and post interventions were coded differently to prevent mixing up of responses. The data were then entered separately by two trained data entry officers.

3.14.3. Data validation

To make sure that the data was entered correctly, the researcher randomly selected some of the questionnaires that were already entered and checked them against the data that were entered. Any queries about the data that was entered were raised and the data entry officers corrected all errors that were made. The researcher did further cleaning of data to ensure that the data was completely cleaned before the analysis.

3.14.4. Data sets

Four sets of data were collected from parents and adolescents. The first data sets were collected from parents and adolescents at pre-intervention for both control and intervention groups. The second sets of data were collected from parents and adolescents after the intervention from both parents and adolescents in the intervention and control groups. The third and fourth sets of data were collected in FGDs of parents about socio-cultural factors influencing parent-adolescent discussion of sexual topics and parents' experiences in discussing sexual topics with adolescents. The qualitative data were used to support the quantitative data. Before the analysis, the pre-intervention data of parents and adolescents in the intervention and control groups were merged separately. Similarly, the post-intervention data for both parents and adolescents were merged separately and given different codes to prevent the mix up of the two data.

3.15. Data analysis

3.15.1. Quantitative data

The analysis of the data was done using the SPSS software version 16, (SPSS, 2007). A p-value less than 0.05 was considered to be significant.

3.15.2. Descriptive analysis

The descriptive data was summarized into frequency tables and graphs.

3.15.3. Inferential statistics

In analyzing inferential statistics, Pearson's Chi-Square tests (X^2) were used to find the relationship between the intervention and control groups in the study. But where one of the expected frequencies in a cell was less than 5, Fisher's exact test is a more appropriate form of analysis to compare the proportions because the Chi-square (X^2) may produce inaccurate results (Field, 2009).

3.15.4. Agreement of discussing sexual topics with adolescents

The Kappa analysis was done, using the SPSS version 16. First all the topics were dichotomized into never discussed and discussed. Then the Kappa analysis ran for each of the topics to find out if there were agreements or disagreements between what the parents reported and what the children reported. The score of Kappa analysis ranges from -1 to 1 scale with the following interpretation.

Kappa	agreement
< 0	less than chance agreement
0.01- 0.20	poor agreement
0.21- 0.40	fair agreement

0.41- 0.60	moderate agreement
0.61-0.80	good agreement
0.81 – 0.99	very good agreement

During the analysis, the agreement and disagreement between the mother and child and father and child before the intervention and post intervention were noted. There were agreements on most of the topics between mother and child except few topics before the intervention. After the intervention there were agreements between mother and children on all the topics on Kappa values. Some of the topics were also significant after the intervention between mother and child. There were more disagreements between father and child on the sexual topics than mothers before the intervention. After the intervention the agreement between father and child discussing of sexual topics improved and few of the topics also were significant. The variables were run in descending manner and this showed the five most and five least discussed topics between mother-child and father-child.

3.15.5. Difference-in-Differences analysis

Difference-in-difference measures the effects of the intervention between the intervention group and the control group in an intervention study

Before the difference-in-difference analysis, all outcome variables were recoded into binary data. Specifically, for all the 25 questions on parents' knowledge about sexual topics, a minimum and maximum score of 25 and 100 was obtained; these scores were then categorized into two groups, 25-63 for little knowledge and 64-100 for good knowledge. Codes of 0 and 1 were assigned to little knowledge and good knowledge respectively for analysis purposes. Similarly, all the 25 questions about

the parents' frequency of discussing sexual topics with adolescents were regrouped as described above with a-code of 0 assigned to never discussed and 1 assigned to discussed.

For ability to discuss sexual topics with adolescents, A score of 6 was documented for parents' who answered both questions as "3 =good". These score were then grouped into 0 = 1-4 poor ability and 1 = 5-6= good ability respectively. Again, codes of 0 and 1 were assigned to poor ability to discuss and good ability to discuss sexual topics with adolescents respectively. Similarly, for the two questions assessing a parents comfort of discussing sexual reproductive health topics with adolescents, a score of 6 was documented for parents' who answered both questions as "3 =comfortable" and as score of 2 for parents' who answered both questions as "1=not comfortable". These were then categorized as 1-4 for "not comfortable" and 5-6 for "comfortable" respectively. Two items on the questionnaire were used to evaluate parents' attitudes towards allowing adolescents use of reproductive health services and all items were scored on 3-point Likert scales ranging from 1=disapprove to 3= approve. The scores of all the items were added together a score of 6 was attained for parents who answered 1=disallow to 3= allow respectively all the two questions. Higher score indicated parents' positive attitudes allowing adolescents access to reproductive health services. These scores were then categorized as 1-4 and 5-6 disallow and allow respectively.

The difference-in-difference (DID) is the difference in the average outcome in the intervention group before and after the intervention and the difference in average outcome in the control group before and after the intervention. For each outcome

under study, difference-in-differences (DID) was estimated by calculating difference between proportion of participants at baseline and end of study for the intervention and control groups separately using two sample test for Binomial proportions for categorical data (Rosener, 2010). The result of the difference obtained for the control group was then subtracted from the result of the difference obtained for the intervention group to get the difference-in-differences (DID).

3.15.6. Logistic Regression analysis

Based on the binary nature of the five outcomes (dependent variables) under study, logistic regression was used to investigate the influence of the education program on knowledge, ability, comfort, attitude, frequency of communication of sexual topics by parents. The estimates were adjusted for age, sex and marital status of participants/parents.

3.15.7. Qualitative data

The analysis of the qualitative data was done manually by transcribing the tape recordings and notes taken by the observer. The information collected during the focus group discussions, each parent group's data was transcribed separately and later compared with what was recorded by reading the transcribed script while listening to the tape recordings to make sure the correct data was transcribed. The transcribed interviews data were read several times in search of meaning and understanding, in order to identify themes. The analysis of the data began with a search for similar ideas, thoughts, recurring words and differences within the data. Codes were created, based on the ideas, thoughts and words. Similar and related codes were grouped to form themes and sub-themes.

As the analysis continued, related themes were clustered to form categories. Colour markers were used to indicate categories and the word representing the category was written in the margin of the script where the theme or code was found. The goal of the analysis was to identify common themes within the data in order to find similarities between the themes and determine any relationship between the themes. Having developed the themes, the report was written verbatim, which expressed the views and vivid thoughts of all the participants in the focus group discussions. The same method was used for the in-depth interviews, experiences of parents discussing sexual topics with their adolescents.

CHAPTER FOUR

RESULTS OF THE STUDY

Introduction

This chapter presents the results of the study. Data have been collected through questionnaires, in-depth interviews and focus group discussions. The study approach was based on the theoretical framework of the Theory of Planned Behaviour Model of Ajzen (2006). The structure of the will be based on the theoretical framework as below:

1. Socio-demographic characteristics of participants
2. Parents' knowledge of adolescent sexual topics
3. Parents' attitudes towards adolescent sexual issues
4. Subjective norms affecting parent-adolescent communication about sexual issues
5. Perceived Control Behaviour factors influencing parent-adolescent discussion about sexual topics
6. Parents' intention towards discussing of sexual topics with adolescents
7. Manifestation of behaviour: actual parent-adolescent discussion about sexuality

Students from twelve Junior High Schools and their parents comprising of 73 parent-adolescent pairs for the intervention group and 72 parent-adolescent pairs for the control group from two sub-Metropolises of the Accra Metropolis, Greater Accra Region were sampled for the study.

4.1. Socio-Demographics Characteristics of Participants.

4.1.1. The socio-demographic characteristics of parents

The two groups consisted of 64.8% of mothers and 35.2% of fathers. In the intervention group, 69.9% were mothers and 30.1% were fathers and in the control group 59.7% were mothers and 40.3% were fathers. The ages of the parents ranged from 26 years to 63 years, with majority of them in the 45-54 years age group. About 72.2% of parents in the control group were married compared to 53.4% in the intervention group. All the parents had some level of education. Almost half (44.1%) of the parents had middle/JSS/JHS education. More parents in the control group had higher education as compared to the intervention group (30.6% vs. 21.9%). In terms of ethnicity, majority (42.1%) of the parents were Ga/Dangme, 34.5% were Akan and 12.4% were Ewe. There were other ethnic groups such as Gonja, Sissala, Frafra and Guan.

Most of the parents were Christians (93.8%), with majority being Pentecostal or Charismatic and a few were Moslems (6.2 %). With regard to occupation, more than half (60.7%) of the parents were either traders or artisans, 24.1% worked in the formal sector and 15.2% in the private sector, such as banks and private health institutions. About three-quarters (74.8%) of the parents earned a monthly income of less than GHC1, 000.00. There were no significant differences between the two groups in terms of socio-demographic status (Table 4.1).

Table 4. 1: Socio-demographic data of parents

Characteristics	Total (N=145, n (%))	Intervention (n=73)	Control (n=72)	P-value
Gender				
Male	51(35.2)	22(30.1)	29(40.3)	0.201
Female	94(64.8)	51(69.9)	43(59.7)	
Age Group				
25-34	24(16.6)	17(23.3)	7(9.7)	0.078
35-44	49(33.8)	22(30.1)	27(37.5)	
45-54	56(38.6)	24(32.9)	32(44.4)	
≥55	16(11.0)	10(13.7)	6(8.3)	
Marital Status				
Married or living together	91(62.8)	39(53.4)	52(72.2)	0.135
Divorced/separated	26(17.9)	16(21.9)	10(13.9)	
Widowed	12(8.3)	8(11.0)	4(5.6)	
Never married or never live together	16(11.0)	10(13.7)	6(8.3)	
Education Level				
Middle/JSS/JHS	64(44.1)	36(49.3)	28(38.9)	0.375
Secondary/SSS/Tech/Voc	43(29.7)	21(28.8)	22(30.6)	
Higher	38(26.2)	16(21.9)	22(30.6)	
Ethnicity				
Akan	50(34.5)	26(35.6)	24(33.3)	0.609
Ga/Dangme	61(42.1)	27(37.0)	34(47.2)	
Ewe	18(12.4)	10(13.7)	8(11.1)	
Others	15(10.3)	10(13.7)	6(8.3)	
Religious Affiliation				
Catholic	12(8.3)	6(8.2)	6(8.3)	0.082
Anglican	5(3.4)	4(5.5)	1(1.4)	
Presbyterian	21(14.5)	11(15.1)	10(13.9)	
Methodist	19(13.1)	9(12.3)	10(13.9)	
Pentecostal/charismatic	55(37.9)	21(28.8)	34(47.2)	
Other Christians	24(16.6)	14(19.2)	10(13.9)	
Moslem	9(6.2)	8(11.0)	1(1.4)	
Occupation				
Trader	64(44.1)	36(49.3)	28(38.9)	0.05
Artisan	24(16.6)	16(21.9)	8(11.1)	
Public servants	35(24.1)	12(16.4)	23(31.9)	
Private sector	22(15.2)	9(12.3)	13(18.1)	
Income Level				
GHC0-GHC 199	28(19.3)	18(24.7)	10(13.9)	0.252
GHC200-GHC599	46(31.7)	23(31.5)	23(31.9)	
GHC600-GHC999	35(24.1)	19(26.0)	16(22.2)	
GHC1000-GHC1599	26(17.9)	9(12.3)	17(23.6)	
>GHC1600	10(6.9)	4(5.5)	6(8.3)	

4.1.2. Socio-demographic data of adolescents

Table 4:2, provides details of socio-demographic information of the adolescents. The total number of adolescents recruited in the study was 145, made up of 65.5% of females and 34.5% of males.

Table 4. 2: Socio-demographic data of adolescents

Characteristics	Total (N=145 n= %)	Intervention (n=73)	Control (n=72)	P-value
Mean age (SD)	13.92 (1.47)	14.21(1.51)	13.64(1.39)	0.365
Age groups				
12 – 13	60(41.3)	27(37.0)	33(45.8)	0.086
14 – 15	61(42.1)	29(39.7)	32(44.4)	
16 – 17	24(16.6)	17(23.3)	7(9.7)	
Gender				
Male	50(34.5)	28(38.4)	22(30.6)	0.323
Female	95(65.5)	45(61.6)	50(69.4)	
Ethnicity				
Akan	50(34.5)	26(35.6)	24(43.1)	0.698
Ga/Dangbe	61(42.1)	27(37.0)	34(33.1)	
Ewe	18(12.4)	10(13.7)	8(18.1)	
Others	16(11.0)	10(13.7)	6(8.3)	
Class				
JHS 1	49(33.8)	18(24.7)	31(43.1)	0.004
JHS 2	51(35.2)	35(47.9)	16(22.2)	
JHS 3	45(31.0)	20(27.4)	25(34.7)	
Living arrange of child				
Both parents	72(49.7)	40(54.8)	32(44.4)	0.275
Mother	53(36.6)	26(35.6)	27(37.5)	
Father	20(13.8)	7(9.6)	13(18.1)	
Religious Association				
Catholic	12(9.7)	6(8.2)	6(8.3)	0.001
Anglican	6(4.1)	4(5.5)	1(1.4)	
Methodist	21(16.6)	11(15.1)	10(13.9)	
Presbyterian	19(13.1)	9(12.3)	10(13.9)	
Pentecostal/Charismatic	55(37.9)	21(28.8)	34(47.2)	
Other Christian	24(16.6)	14(19.2)	10(13.9)	
Moslem	9(6.2)	8(11.0)	1(1.4)	

The intervention group had 73 adolescents, consisting of 61.6% of females and 38.4% of males and the control group also had 72 adolescents of which 30.6% were males and 69.4% were females. The students that were selected for the study were between ages of 12 and 17 years with 41.3% in the 12 to 13 age group, 42.1% in the 14 to 15 age group and only 16.6% were in the 16 to 17 years age group. More than one-third (33.8%) were in JHS 1 and the rest were in JHS 2 and 3. Almost half (49.7%) of the adolescents lived with both parents, yet more of them lived with their

mothers (36.6% vs. 13.8%) than with their fathers. There was no significant difference between the two groups of adolescents in relation to socio-demographic data at pre-intervention except in terms of their religious affiliations and JHS classes.

4.2. Parents' perceived knowledge about adolescent's sexual topics

The 25 sexual topics that were used to assess parents' perceived knowledge had been grouped into 5 categories- biological development topics, sexual risk protection topics, contraceptive use topics, risky sexual behaviour topics and experiential sexual topics.

Table 4.3 presents parents' perceived knowledge about adolescent sexual topics. The table shows that all parents (100.0%) had some knowledge about adolescent biological development topics at pre-intervention. Both the intervention (46.6%) and control (47.2%) groups had almost equal proportions of parents with good knowledge about biological development topics at pre-intervention. However, the proportion of parents in both groups with very good knowledge about biological development topics was slightly lower than parents with good knowledge (35.6 % vs.29.2%, $p=0.589$) at pre-intervention. After the intervention, the parents in the intervention group either had good knowledge or very good knowledge about adolescents' biological development topics compared to the parents in the control group (100% vs.86.1%, $p=0.001$). On sexual risk protection topics, at pre-intervention, a smaller proportion of parents in the intervention group had good knowledge or very good knowledge compared to the control group (75.3% vs.82.0%).

Table 4. 3: Parents' perceived knowledge about adolescent sexual topics

Topics	Pre-intervention (N=145)		P value	Post intervention (N=142)		P value
	Intervention (n=73)	Control (n=72)		Intervention (n=70)	Control (n=72)	
Biological development topics						
Little knowledge	13(17.8)	17(23.6)	0.589	0(0.0)	10(13.9)	0.001
Good knowledge	34(46.6)	34(47.2)		32(45.7)	36(50.0)	
Very good knowledge	26(35.6)	21(29.2)		38(54.3)	26(36.1)	
Sexual risk protection topics						
No knowledge	1(1.4)	1(1.4)	0.358	0(0.0)	0(0.0)	0.002
Little knowledge	17(23.3)	12(16.7)		0(0.0)	10(13.9)	
Good knowledge	20(27.4)	29(40.3)		19(27.1)	22(30.6)	
Very good knowledge	35(47.9)	30(41.7)		51(72.9)	40(55.6)	
Contraceptive use topics						
No knowledge	27(37.0)	17(23.6)	0.184	1(1.4)	15(20.8)	0.002
Little knowledge	14(19.2)	22(30.6)		22(31.4)	18(25.0)	
Good knowledge	13(17.8)	17(23.6)		30(42.9)	22(30.6)	
Very good knowledge	19(26.0)	16(22.2)		17(23.3)	17(23.6)	
Risky sexual behaviours topics						
No knowledge	6(8.2)	2(2.8)	0.275	0(0.0)	0(0.0)	0.002
Little knowledge	16(21.9)	17(23.6)		0(0.0)	8(11.1)	
Good knowledge	23(31.5)	31(43.1)		30(42.9)	38(52.8)	
Very good knowledge	28(38.4)	22(30.6)		40(57.1)	26(36.1)	
Experiencing sex topics						
No knowledge	13(17.8)	13(18.1)	0.221	1(1.4)	7(9.7)	0.009
Little knowledge	18(24.7)	27(37.5)		10(14.3)	22(30.6)	
Good knowledge	29(39.7)	18(25.0)		35(50.0)	25(34.7)	
Very good knowledge	13(17.8)	14(19.4)		24(34.3)	18(25.0)	

Nevertheless, after the intervention, all the parents in the intervention group either had had good knowledge or very good knowledge about sexual risk protection topics (75.3% to 100.0%). The control group also showed a slight increase in knowledge levels about sexual risk protection topics (82.0% to 86.2 %). At pre-intervention more than one-third (37.0%) of parents in the intervention group and 23.6% in the control group had no knowledge about contraceptive use topics but after the intervention, only one parent (1.4%) in the intervention group reported that he/she had no knowledge about contraceptive use topics.

On the risky sexual behaviours topics, only a few (8.2%) of parents from the intervention group and 2.8% from the control group indicated that they had no knowledge about these topics. After the intervention, all the parents in the intervention group either had had good or very good knowledge about these topics. The parents in the control group also increased their knowledge levels after the intervention. For the experiential sexual topics, after the intervention, parents who indicated that they had no knowledge about these topics in the intervention group decreased (17.8% to 1.4%) than in the control group (18.1% to 9.7%). There was however, an increase in very good knowledge of parents in both the intervention (17.8% to 34.3%) and control (19.4% to 25.0%) groups. The category of topics that parents of both groups had the least knowledge about was contraceptive use.

4.2.1. Mothers' perceived knowledge about sexual topics

The study also looked at the knowledge of mothers separately using the same categories of adolescent sexual topics (Table 4.4). All (100.0%) the mothers of both the intervention and control groups had some knowledge about biological development topics.

About 37.3% of mothers in the intervention group and 32.6%, in the control group, had very good knowledge about the biological development topics at the pre-intervention stage. And after the intervention more (58.3%) of the mothers in the intervention group had very good knowledge of biological development topics, compared to parents in the control group (37.2%).

Table 4.4: Mothers' perceived knowledge about adolescent sexual topics

Topics	Pre- intervention (N=94)			Post intervention (N=92)		
	Intervention (n= 51)	Control (n= 43)	P value	Intervention (n=48)	Control (n=43)	P value
Biological development topics						
Little knowledge	9(17.6)	7(16.3)	0.839	0(0.0)	7(15.9)	0.004
Good knowledge	23(45.1)	22(51.2)		20(41.7)	20(46.5)	
Very good knowledge	19(37.3)	14(32.6)		28(58.3)	16(37.2)	
Sexual risk protection topics						
No knowledge	0(0.0)	1(2.3)	0.737	0.0	0.0	0.005
Little knowledge	10(19.6)	6(14.0)		0(0.0)	8(18.6)	
Good knowledge	15(29.4)	14(32.6)		11(22.9)	8(18.6)	
Very good knowledge	26(51.0)	22(51.2)		37(77.1)	27(62.8)	
Contraceptive use topics						
No knowledge	18(35.3)	12(27.9)	0.318	1(2.1)	8(18.6)	0.015
Little knowledge	10(19.6)	11(25.6)		20(41.7)	9(20.9)	
Good knowledge	8(15.7)	12(27.9)		19(39.6)	15(34.9)	
Very good knowledge	15(29.4)	8(18.6)		8(16.7)	11(25.6)	
Risky sexual behaviours topics						
No knowledge	18(35.3)	12(27.9)	0.318	0(0.0)	0(0.0)	0.008
Little knowledge	10(19.6)	11(25.6)		0(0.0)	7(15.9)	
Good knowledge	8(15.7)	12(27.9)		19(39.6)	17(39.5)	
Very good knowledge	15(29.4)	8(18.6)		29(60.4)	19(44.2)	
Experiencing sex topics						
No knowledge	3(5.9)	2(4.7)	0.359	1(2.1)	7(16.3)	0.016
Little knowledge	12(23.5)	6(14.0)		7(14.6)	13(30.2)	
Good knowledge	15(29.4)	20(46.5)		21(43.8)	13(30.2)	
Very good knowledge	21(41.2)	15(34.9)		19(39.6)	10(23.3)	

Also, about 35.3% of the mothers in the intervention group and 27.9% in the control group had no knowledge about contraceptive use topics at pre-intervention but this number decreased from 35.3% to 2.1% among the mothers in the intervention group and 27.9% to 18.6% in the control group after the intervention. After the training, mothers in the intervention group improved their knowledge levels of risky sexual

behaviour topics from 'no knowledge' of (35.3%) to 'good' (39.6%) and 'very good knowledge' of (60.4%). There was however a marginal decrease in very good knowledge of experiential sexual topics from 41.2% to 39.6% among the mothers in the intervention group and from 34.4% to 23.3% among the control group. The category of topics the mothers in both groups had the highest knowledge levels was about the sexual risk protection topics and the category of topics with lowest knowledge was the contraceptive use.

4.2.2. Fathers' perceived knowledge about adolescent sexual topics

Table 4.5 shows that all the fathers also had various levels of knowledge about biological development topics of adolescents. About 45.5% of the fathers in the intervention group had good knowledge about sexual risk protection topics before the intervention, which increased to 81.8% after the training. More than one-third (36.4%) of the fathers in the intervention group and 17.2%, in the control group indicated that they had no knowledge about contraceptive use topics before the training. After the training parents with no knowledge level decreased from (36.4% to 4.5%, $p=0.026$) among fathers in the intervention group.

Yet, there was an increase in no knowledge level among the fathers in the control group from 17.2% to 24.1%. The very good knowledge level on experiential sexual topics increased among fathers in the intervention group from 13.6% to 40.9% after the training.

Comparing the knowledge of mothers with fathers, mothers in both the intervention and the control groups had slightly higher knowledge levels of all the categories of sexual topics than the fathers' in both groups.

Table 4. 5. Fathers' perceived knowledge about adolescent sexual topics

Topics	Pre-intervention (N=51)			Post intervention(N=51)		
	Intervention (n=22)	Control (n=29)	P value	Intervention (n= 22)	Control (n= 29)	P value
Biological development topics						
Little knowledge	5(22.7)	9(31.0)	0.747	0(0.0)	6(20.7)	0.016
Good knowledge	10(45.5)	13(44.8)		7(31.8)	13(44.8)	
Very good knowledge	7(31.8)	7(24.1)		15(68.2)	10(34.5)	
Sexual risk protection topics						
No knowledge	1(4.5)	0(0.0)	0.161	0(0.0)	0(0.0)	
Little knowledge	6(27.3)	7(24.1)		0(0.0)	10(34.5)	0.001
Good knowledge	5(22.7)	14(48.3)		4(18.2)	8(27.6)	
Very good knowledge	10(45.5)	8(27.6)		18(81.8)	11(37.9)	
Contraceptive use topics						
No knowledge	8(36.4)	5(17.2)	0.374	1(4.5)	7(24.1)	0.026
Little knowledge	5(22.7)	11(37.9)		2(9.1)	9(31.0)	
Good knowledge	5(22.7)	5(17.5)		10(45.5)	7(24.1)	
Very good knowledge	4(18.2)	8(27.6)		9(40.9)	6(20.7)	
Risky sexual behaviours topics						
No knowledge	2(9.1)	0(0.0)	0.374	0(0.0)	0(0.0)	
Little knowledge	6(27.3)	11(37.9)		0(0.0)	7(24.1)	0.011
Good knowledge	7(31.8)	11(37.9)		11(50.0)	16(55.2)	
Very good knowledge	7(31.8)	7(24.1)		11(50.0)	6(20.7)	
Experiencing sex topics						
No knowledge	3(13.6)	6(20.7)	0.159	1(4.5)	8(27.6)	0.006
Little knowledge	5(22.7)	13(44.8)		3(13.6)	11(37.9)	
Good knowledge	11(50.0)	6(20.7)		9(40.9)	6(20.7)	
Very good knowledge	3(13.6)	4(13.8)		9(40.9)	4(13.8)	

4.2.3. Total parents' perceived knowledge of adolescent sexual topics

Figure 4.1 represents total parents' perceived knowledge about adolescent sexual topics. The total score of 25 questions under parents' knowledge about sexual topics were summed up and the score of 25 and 100 were obtained for parents who answered 1= no knowledge and 4= very good knowledge respectively. The scores were categorized into four levels of 1-25= no knowledge, 26-50 = little knowledge, 51-75= good knowledge and 76-100= very good knowledge. The higher the score a parent had the higher his/her knowledge about sexual topics. There was no

significant difference in very good knowledge levels of parents in both groups at pre-intervention (37.0% vs. 27.8%, $p=0.351$). After the intervention, significantly more parents in the intervention group displayed very good knowledge levels (60.0% vs. 34.7%, $p=0.001$).

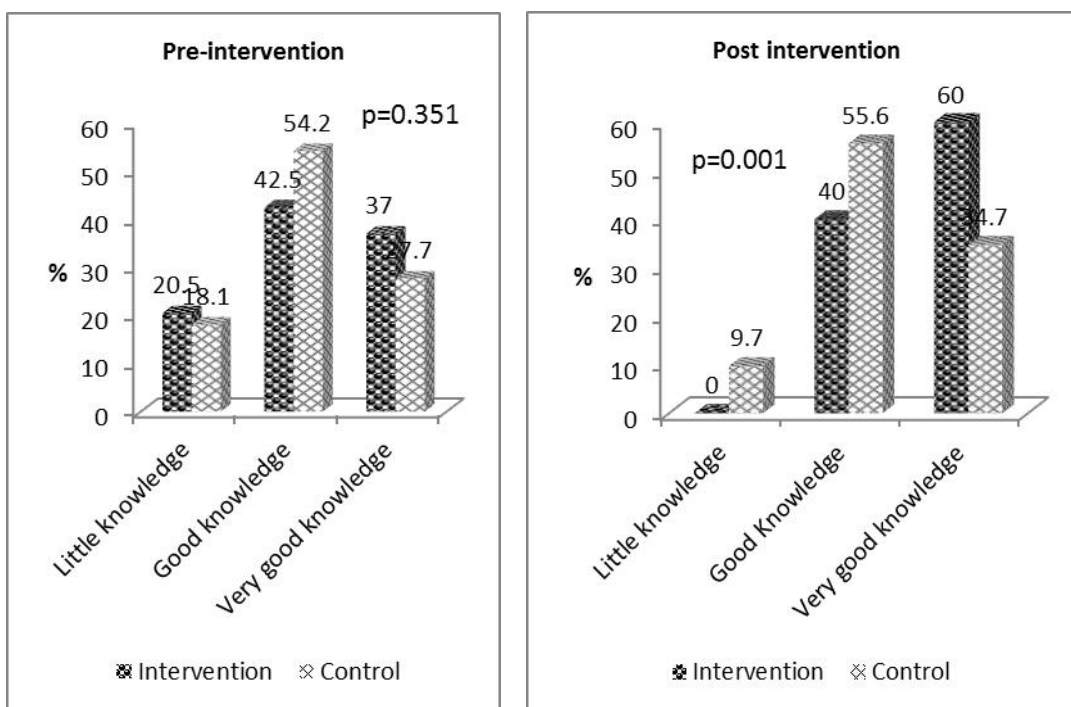


Figure 4. 1. Total parents' knowledge about adolescent sexual topics

4.2.4. Parental sources of knowledge of talking about sexual issues with adolescents

In in-depth interviews, parents cited their sources of knowledge in talking to their children about their sexuality such as reading books about adolescent sexual issues and buying books about adolescent sexuality for their children to read. Some parents also use other parents as resource persons to educate their children while other parents used programmes they watch on television to educate their children on sexuality.

'I read books on adolescent's sexual issues and I buy books about sexuality for my child to read and have information. Sometimes, if I feel I can't talk about a particular topic, I ask my friend to help me to educate my child on it (a mother and trader).

'There is enough information on the television which we watch, like HIV so I call my daughter to come and watch and whatever advice I have I give her. Moreover, I work at the maternity department of a hospital and that has helped me to learn about what happens to young girls subsequently I advise her on situations I have seen here'. Girls come to the department and I see them until they deliver. I see the problems they face, from start to the end (mother and a record officer).

'I read a lot I read about adolescent sexual issues very much. Furthermore, I found myself in an institution which train allied health professionals. As a result I keep abreast of the relevant knowledge that comes with my association with these trained professionals and I use it to advise my children (a father and administrative officer).

4.3. Attitudes of parents towards adolescent sexual issues

4.3.1 Parents attitudes towards allowing adolescents use of family planning services

Information presented in Figure 4.2 indicates that majority of parents in both the intervention and control groups would disallow of their adolescents' access to family planning services at pre-intervention. About half (50.7%) of parents in the intervention group and more than one-third (36.1%) in the control group would disallow of their adolescents to access family planning services at pre-intervention. However, almost equal proportions of parents in the intervention and control groups indicated that they would allow of their adolescents to access family planning services (30.1% vs. 31.9%, $p=0.127$) at pre-intervention. After the intervention (30.1% to 82.9% vs 31.9% to 50.0%, $p=< 0.001$) parents in the intervention group compared to the control group reported that they would allow of their children to use family planning services.

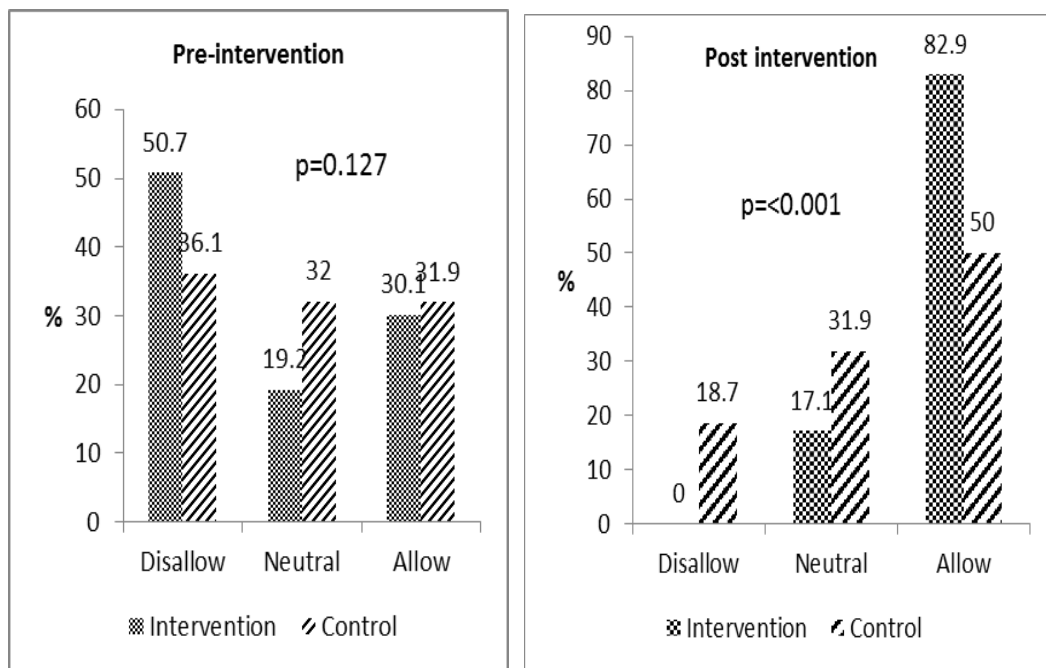


Figure 4. 2. Parents' reported attitudes towards adolescents' use of family planning services

4.3.2. Parents' attitudes towards discussing of sexual topics with adolescents

Figure 4.3 displays data of parents' attitudes towards discussing sexual topics with adolescents. From the figure 4.3, only 11.0% of the parents in the intervention and 2.8% in the control groups specified that they would disapprove of discussing sexual topics with their adolescents before the training. After the training, all the parents in the intervention groups either indicated that they would stay neutral or approve of discussing sexual topics with their adolescents. There was an increase among parents in the intervention group who reported that they would approve of discussing sexual topics with their adolescents from 63.0% to 87.1%. On the other hand, there was a decrease among the parents in the control group from 75.0% to 70.8%.

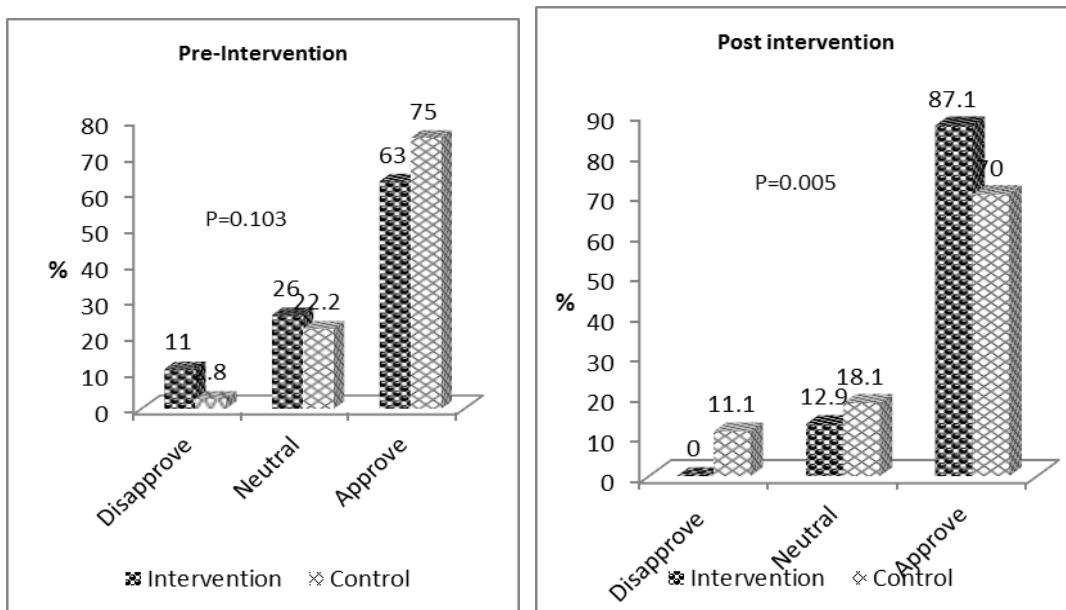


Figure 4. 3: Parents attitudes towards discussing sexual topics with adolescents

4.3.3. Parents’ attitudes towards condom use by sexually active adolescents

Figure 4.4 illustrates parents’ attitudes towards the use of condoms by sexually active adolescents. Before the intervention about 43.8% of the parents in the intervention group and 40.3% in the control group stated that they would not allow their sexually active adolescents to use condoms.

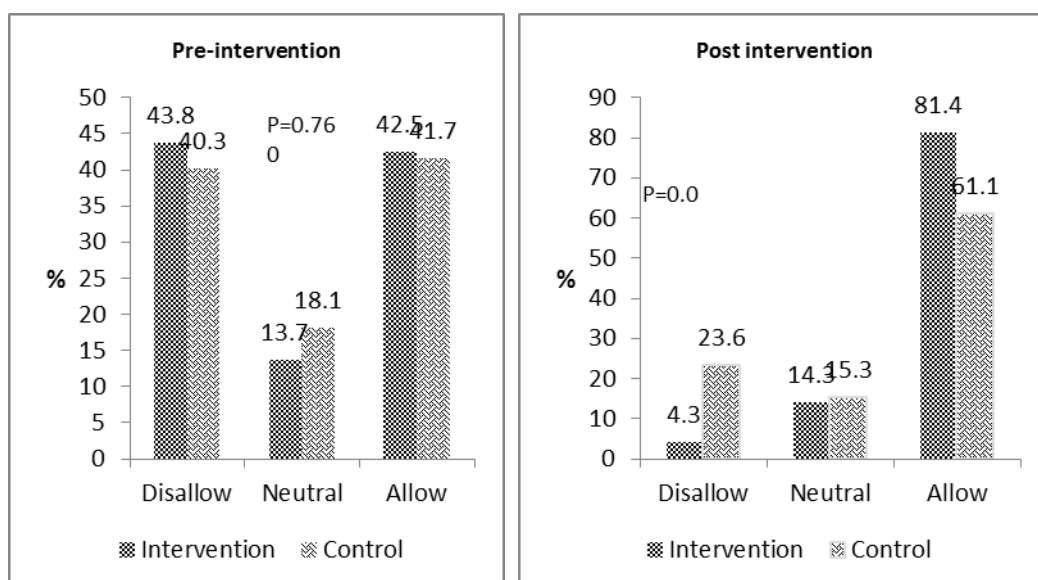


Figure 4. 4: Parents attitudes towards sexually active adolescents’ condom use

After the intervention, parents who indicated that they would allow their sexually active adolescents to use condoms rose from 42.5% to 81.4% among the intervention group. Similarly, there was an increase for parents in the control group from 41.7% to 61.1%.

4.4. Subjective norms affecting parents discussing sexual topics with adolescents

4.4.1. Family sentiments about educating adolescents about sexuality

From Figure 4.5, the majority (65.8%) of the parents in the intervention and control (72.2%) in the groups stated that their family members approve of educating adolescents about sexuality at pre-intervention. After the intervention, there was a marginal increase among the parents of the intervention group who indicated that their family members approve of educating adolescents on sexuality from (65.8% to 67.1%) and a reduction among parents of the control group from (72.2 to 66.7%).

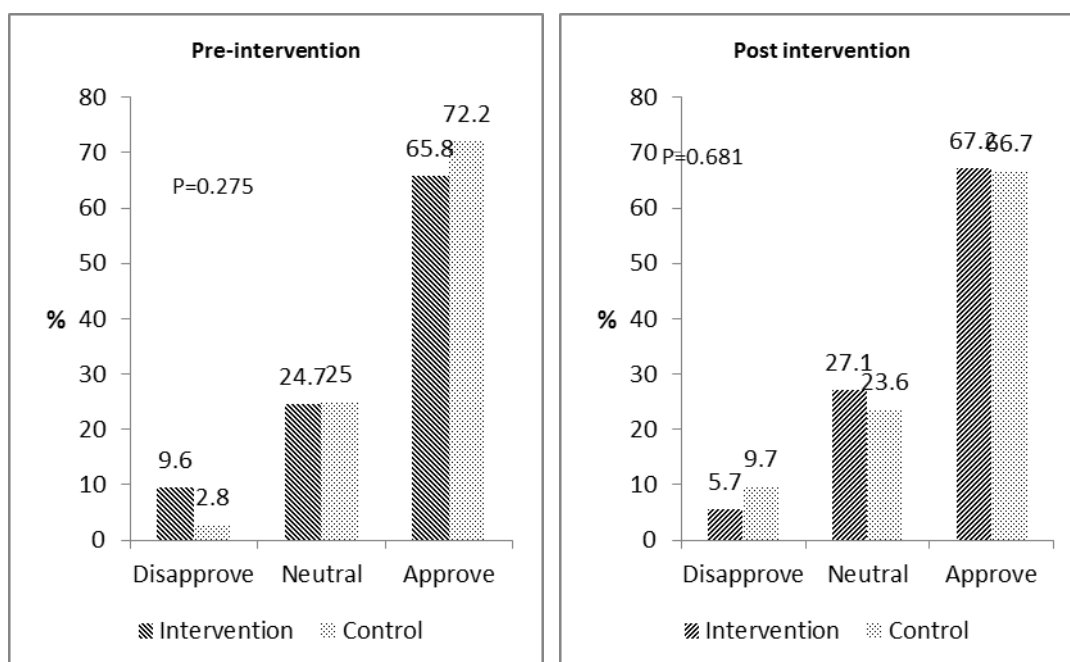


Figure 4.5: Family's sentiments about educating adolescents on sexuality

4.4.2: Influence of parental religious beliefs on sexuality education of adolescents

The parents were asked where their religious beliefs allow them to discuss sexual topics with adolescents. As described in the Figure 4.6, about 74.0% of parents in the intervention and 77.8% in the control groups said that their religious beliefs allow them to discuss sexual topics with their adolescents at pre-intervention. There was a reduction among parents in both groups from 74.0% to 70.0% for the intervention and 77.8% to 75.0% for the control group respectively after the training.

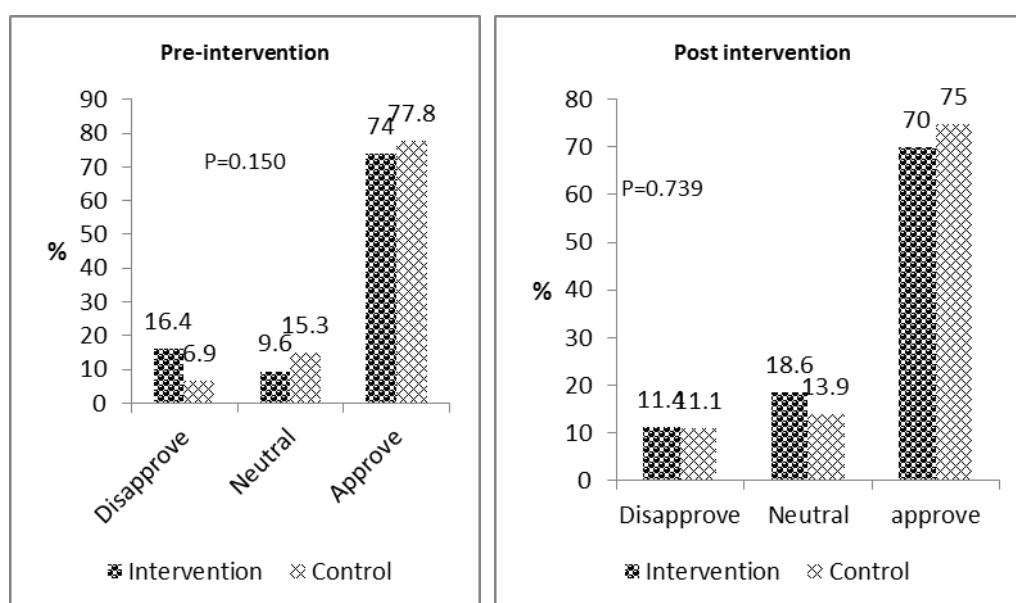


Figure 4. 6. Parental religious beliefs on educating adolescents on sexuality

In the FGDs it was realized that some parents' religious beliefs influence the education of their children on sexuality. A pastor reported:

“I am a charismatic and a pastor, to talk about sexual issues with the youth or the congregation in my church is not there. I can't say whether we don't accept sexuality education or not. It is simply that we don't do it. It is holy, holy. I think it is their belief that such a thing should not be done in the church. They also believed that their children will not indulge in sex so it is not necessary to talk to them about sexuality. Even among the pastors, if there is an issue about sexuality and you talk about it then you are spoilt. The pastors are knowledgeable about sexual issues but they don't want to talk about it. What I have observed is that they believe that once they are

teaching their children about the word of God, they will lead good lives' (a father, Osu Klottey).

Another participant of the women FGDs indicated that her religion allows the discussion of sexuality with adolescents, but her religion does not allow the teaching of modern contraceptives to the youth.

'For us Catholics, the church does not prevent you talking about sexual issues but when it comes to modern contraceptives e.g. condom you are limited. You are not supposed to provide information about modern contraceptives, meanwhile outside the church, adolescents have the information and they are practicing it' (a mother, Ablekuma South).

However, another participant in the women FGDs stated that sexuality education is allowed in her church, so programmes on sexuality education are organized for the youth in the church, saying:

'I am a Methodist and my religion allows us to talk about sexual issues with children. In the church we have many youth groups and as part of our activities, sometimes we include topics like boy/girl relationships and abstinence which we discuss with the youth. Initially, the church was not comfortable about teaching sexuality to children but now it is open' (a mother, Osu Klottey)

4.4.3. Encouraging adolescent sexuality education and religion

Many of the participants in the FGDs believed that religion should encourage sexuality education of the youth. Here are some of the reasons:

'It is very important that the church teaches adolescents about their sexuality because most of them have no knowledge about it. They (church) just tell the adolescent to abstain from sex but they don't tell him/her why he/she has to abstain from sexual activities. Because he/she does not understand why he/she should abstain from sexual activities, he/she will go to experience it which later comes with bad consequences' (a mother, Ablekuma South).

'I think the church should start teaching the youth about sexuality because it will help them to know the advantage and disadvantage of

indulging in early sexual activities which will help them lead a healthy sexual lifestyles' (a father, Osu Klottey).

'I think the church for instance does not know how to go about educating the youth about sexual issues. Before weddings now, the church has started talking about such things because they know that it is affecting young couples. Why are Christian marriages breaking down? It is because of some of these issues on sexuality. We are too holy. I am a virgin and went into marriage at least I should have some knowledge about sexuality?' (a mother, Ablekuma South).

4.4.4. Influence of Culture on sexuality education of adolescents

Figure: 4.7. Describes parents' reactions to whether their culture encourages them to discuss sex-related topics with adolescents.

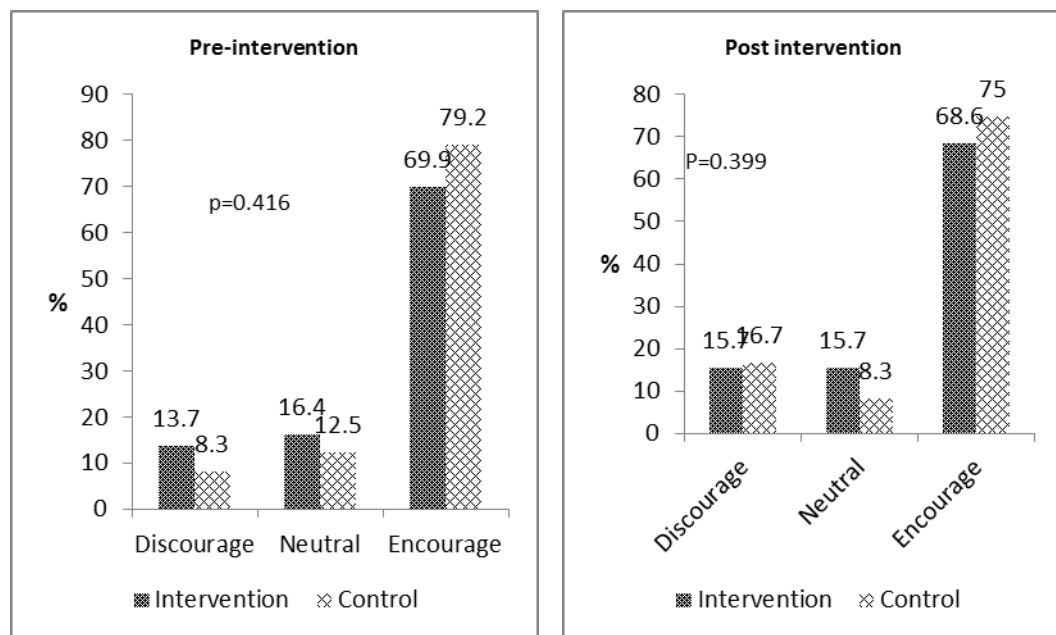


Figure 4. 7: Culture and parents discussing sexual topics with adolescents

The figure 4.7 shows that majority (69.9%) of parents in the intervention and 79.2% in the control groups stated that their culture encourages them to discuss sexual topics with adolescents at pre-intervention. After the intervention there was slight decreased in proportions of parents in both groups from (69.9% to 68.6%) for intervention and (79.2% to 75.0%) for the control.

Even though in the quantitative study many of the parents in the intervention and control groups indicated that their cultures allow them to discuss sexual topics with adolescents, in the FGDs, parents were of the view that culture prevents education of adolescents on sexuality. This view was expressed in the various FGDs. One mother stated:

'It is a taboo for you to talk about sexual issues among the Akans because they believe that if you talk about sex with a child, the child will spoil. Even if the child wants to find out certain things about sex, they will say 'you are not up to that stage yet and when you get there you will know'. There are certain parts of the body you can't mention, so they find a way of saying your 'manhood instead of penis', such a thing. That is why we can't talk to the children (a mother, Osu Klottey).'

'I will say not discussing sexual issues with children is peculiar to Ghana but the whole of Africa. Some sexual discussing only takes place only when the girl starts menstruating. That is where the mother focuses on some sort of education that 'you are now a woman and if you have sex you will become pregnant' and that is generally what they say. It is like something sacred and they don't talk about it' (a mother, Ablekuma South).

One father indicated that modernity is changing culture which has led to discussing of sexuality with adolescents and stated:

'There have been a lot of changes in the system, because of modernity; people have now come to accept the importance of educating teenagers with regards to sexual issues. The issue of extended family now is changing and the nucleus type is being adopted. Subsequently people are now doing away with cultural issues which prevent people from doing certain things or tell people not to do this or do that' (a father, Osu Klottey).

Parents in the FGDs were also asked whether they thought that culturally adolescents should be educated on sexuality. All the parents in the FGDs agreed that culturally, adolescents should be educated. This sentiment was expressed by some of the parents:

'Culture is dynamic so we should include sexuality education into it. Taboos of not talking about sexual issues with children have brought

problems such as teenage pregnancy and poverty to us. We have to limit cultural taboos that prevent us from talking to our children about sexual issues. Talking to the children about sexual issues will prevent them from getting pregnant or impregnating someone so that they can go through school and become somebody in future' (a father, Osu Klottey).

'Culture should allow parents to talk about sexual issues with their children because when you are socializing the child at home you are to teach him/her about everything. Socialization of the child therefore should include sexuality education (a father, Osu Klottey).

The study elicited from parents about how sexuality education of adolescents could be promoted culturally. In FGDs, the parents indicated that there should be education of custodians of tradition to talk to them about the advantages and disadvantages of talking to adolescents about sexuality. Other parents thought that resource persons should visit churches and mosques to talk to the congregation about the need to talk to adolescents about sexuality

'I think we can do that through education of the people because most of the time we attach some myth to talking to children about sexual issues since we see talking to children as a taboo. We should teach our people that it is not a taboo, or not a mistake to teach your child about sexuality. We should talk to the children because of the benefit the child will get. Gradually, people will start shifting from the past of not talking to children about sexual issues to discussing it with them. The education must continue' (a mother, Osu Klottey).

'We should start the education of the people from the custodians of tradition and talk to them about the benefit of talking to children about sexual issues and the consequences of not talking to them such as teenage pregnancy and acquiring STIs including HIV' (a father, Ablekuma South).

'Resource people should visit churches and mosques and talk to the worshipers about the need to talk to our children about sexual issues because many of the people in the communities attend churches and visit the mosques' (a mother, Ablekuma South).

4.4.5. Sex education and adolescents' engagement in pre-marital sex

Majority (82.2%) of parents in the intervention group and 76.4% in the control group disagreed that sex education of adolescents led them into pre-marital sex at pre-intervention. After the intervention, there was an increase in proportions of parents of both groups who disagreed that sex education of adolescents led them into pre-marital sex from (82.2% to 88.6%) for the intervention group and (76.4% to 84.7%) for the control group.

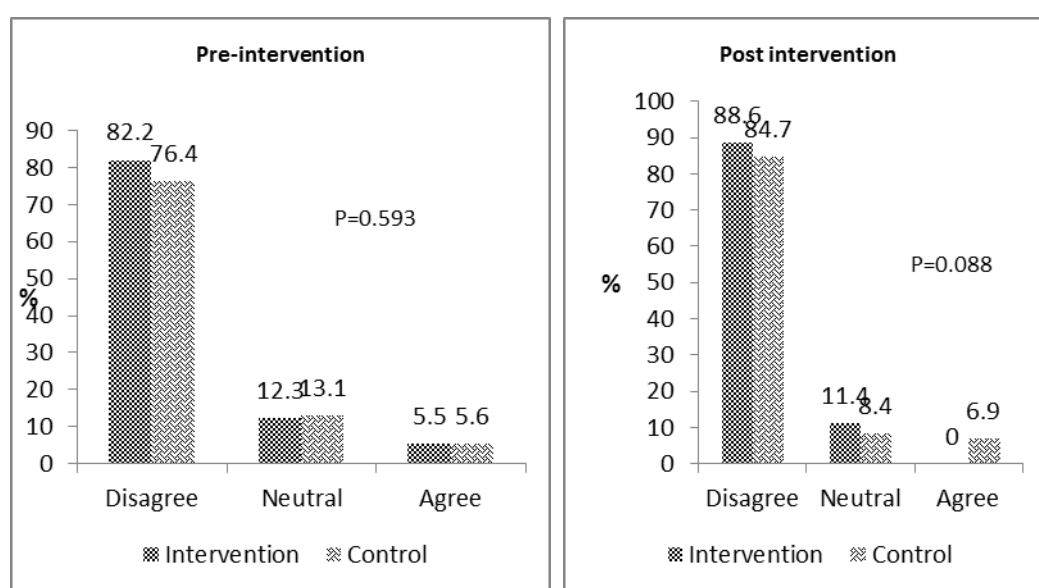


Figure 4.8: Parental sex education and adolescents' involvement in sex

In the FGDs, the parents' opinions varied but many of the parents believed that sex education of the adolescents would not lead to pre-marital sex.

'Yes, because if you educate adolescents, out of curiosity, they would like to find out whether whatever you have told them is practicable or works depending upon the sort of groups they find themselves' (a mother Ablekuma).

No, educating them puts fear in them. Educating them will prevent them from indulging in early sexual activities leading to a healthy sexual life now and in the future. But if we don't educate them now when they grow up, they become ignorant about a lot of things and they may find themselves wanting (a father, Osu Klottey).'

'I think it depends on how you go about the education. Because some of the adolescents are adventurous, and when you talk to them about sex, they will really want to find out what it is about. So it is better we educate them but we should let them know the dangers associated with indulging in sexual activity. Most of the adolescents are into sex because they may learn about it at school but the teacher probably did not educate them about the dangers associated in indulging in sex. So they want to experience it (a mother, Osu Klottey).

'Educating children on sexuality is good because it makes them make informed decisions. Whether we educate them or not they will find out anyway. Therefore it is better we give them the right information in order to make their own decisions about sexual activities. It is better we give them the information than they finding it from their friends. Some may get involved in sexual activity but many of them may abstain because of the education (a mother, Ablekuma South).

In the in-depth interviews parents presented reasons for encouraging sex education among adolescents.

'Adolescents need to be educated on sexuality because they are young and if they are growing up they should know that they are now coming from childhood to adolescence and they are two different stages in life. They should know about the dos and don'ts which they will meet on their way so that they could be very careful' (a father and a trader).

'Providing information to adolescents is the most powerful tool to give to adolescents. They will not be deceived by anybody if they have the right information on sexuality. When somebody is telling them something contrary to what they had been taught they will see the difference and will not take it (a father and an administrative officer).'

'As Adolescents are growing, certainly they should know about their bodies and how their bodies work in order that they don't become victims of sex. Parents, teachers and churches need to talk to adolescents about sexuality in order for them to know what to do when they are faced with sexual issues (mother and a trader)

4.4.6. School sex education and parents' sexuality education of adolescents

In the FGDs, many of the parents were of the view that school education of adolescents on sexual issues is good and that such education could at least benefit adolescents whose parents could not educate them on sexual issues.

Other parents were of the view that school should involve parents in school sexual education so that parents would know what the children are taught in school order to complement it at home. Some of the parents expressed their views about school sex education of adolescents.

'School sex education to adolescents is very good. Children sometimes take what their teachers teach them more serious than what parents tell them. If the teacher teaches the child he/she will take whatever the teacher told him/her seriously. Furthermore, parents who cannot discuss sexuality with their children, the school will at least educate them (a mother, Osu Klottey).

Schools need to involve parents in school sex education by giving parents guidelines on what have been taught at school. This way parents know what the children have learnt so as to complement the effort of the teacher' (a mother, Osu Klottey)

The study found out from the parents, whether they thought school sex education of adolescents had discouraged them from discussing sexuality with their children. About 82.2% of parents in the intervention group and 83.3% in the control group responded in the negative. However, after the intervention, there was an increase among parents of both groups who responded in the negative from (82.2% to 90.0%) for the intervention group and (83.3% to 86.1%) for the control group.

In the FGDs, parents expressed different opinions about whether school sex education of adolescents had prevented them from talking to their children about sexual issues. While some parents indicated that it has others thought otherwise.

A father from Osu Klottey said:

'It has because some parents think that when their children go to school, the teacher will teach the child so at home, sexuality is not talked about'
(a father, Osu Clottey).

A mother also from Osu Klottey stated:

'School sex education should not prevent parents from talking to their children about sexual issues. Both parents and teachers should educate the child about sexuality. If the parent is not talking to the child it is not because the teacher is teaching the child at school. It is not because the parent doesn't want to talk to them but they don't know how to talk to the children about sexual issues' (a mother, Osu Klottey).

The study sought from the parents in the FGDs whose responsibility it was to educate the adolescents on sexuality. Some of the parents believed that it is the parents' responsibility to educate adolescents about sexuality. Others parents were of the opinion that it is a collective responsibility of parents, teachers and health workers to educate adolescents about sexuality because most parents are ignorant about sexual issues.

A mother, in Osu Klottey reported:

'Parents have the first responsibility to educate their children on sexuality but we are starting from an age where the parents themselves did not have any education on sexuality. So it will be difficult to put the responsibility totally on parents now because they are not well- equipped to educate their children on sexuality'.

Another mother, in Ablekuma South indicated:

'It is a collective responsibility because most of the parents are ignorant about sexual issues. Subsequently if we leave everything for parents alone, the adolescents will be lacking somewhere and if we leave everything to teachers too, they may be missing something, so parents, teachers and health workers should come together and teach adolescents about sexuality because they all have different experiences to teach the child'.

4.4.7. The influence of the media on the sexual lives of adolescents

The study sought from the parent in the FGDs their thoughts about the influence of the media on the sexual lives of adolescents. All the parents were worried about the negative influence that the media has on adolescents. Many of the parents were of the view that the media has a great influence on the adolescents because almost every home has a television and the internet. Some of the participants pointed out that, parents were too busy about their jobs that they have no time to supervise children on what to watch on television and on the internet. Parents also blame the TV stations for showing sex related programmes at any time of the day, which permit children to watch these programmes. These frustrations were expressed by some of the parents:

‘I think the media have a great influence on adolescents because almost every home has television and some probably the internet. Parents are so busy, they go to work early and come back late and don’t have time for their children. When children come home from school they find comfort in the TV and internet. Unfortunately, there is no control on the kind of things they watch on the TV and internet. The TV stations show anything anytime of the day that is romantic in nature. When the children see these scenes on the TV they learn about them, then they will say ‘oh! This is how it is and the next time I want to try it myself’ and they start indulging in sexual activity’ (a mother, Osu Klottey).

‘The children listen to some bad programme on radio e.g. ‘woba ada anaa?’ literally meaning ‘is your child asleep?’ It is not a good programme for children to listen to. Such a programme is for married couple who are in bed. But by 8 or 9 pm you can listen to the programme on air. If you ask any adolescent or child they can tell you about the bad things they have heard on radio. I can say it’s very bad. And on TV they show anything including sex and when the children see it they think they are grown so they can also practice and some practice it’ (a father, Osu Klottey).

In the FGDs, the parents discussed how to overcome the media influence on adolescents. A mother from Osu Klottey stated:

‘There is not much we can do about media influence on adolescents unless we start educating them at a younger age that is when it can have an impression on them. But once they get into adolescent age then their ears are blocked. Whatever you say is not what they want to take so we should start educating them at a younger age before they are influence by the media. You can also monitor what they watch at a younger age because you can control them at that age so that they can grow with it.’

‘Parents have to intensify their educational methods on sexual issues because we can’t stop adolescents from accessing the media’ (a father, Ablekuma South).

The parents in the FGDs were to suggest how the media could be used to educate adolescents. Parents suggested various ways in which the media could be used to educate adolescents on sexuality. Some were:

‘Adolescents are more attracted to the electronic media such as TV compared to the print e.g. newspapers. A lot of Soap Opera that are shown on TV can be made more educative in a way to adolescents because most adolescents like watching these programmes (a mother, Osu Klottey).

‘The media should target adolescents e.g. Junior Graphic News Paper have some pages for adolescents and the information there are appropriate and educative so they can learn something good from there’ (a mother, Ablekuma).

‘The media should have programmes for adolescents teaching about sexuality. This is because every media house or TV or radio has some time for children and adolescents. We can use some of the time for children programmes on sexuality education for adolescents e.g. Junior Graphic because young people like reading it (father, Ablekuma South).

4.4.8. Parents’ sentiments about peers as the source of sex education to adolescents

Peers have positive and negative influence on the lives of adolescents. Adolescents tend to adopt the negative influence their peers attached to sexual activities. Some parents were of the view that if peers were trained to educate adolescents, they

would provide the correct information to their peers. But if they were not trained, they would misinform their peers.

'If peers are trained about sexuality then they will intend transfer the right information to their friends. But if they have wrong information they will also communicate the wrong information to their friends' (a mother, Ablekuma South).

'Most adolescents don't have the right information to talk to their friends about sexual issues. They give the wrong information to their friends because they don't have knowledge on sexuality. Since peers don't have the right information to give to adolescents and the adolescents themselves have no knowledge about sexuality they will accept whatever information given to them by their peers. Therefore parents have to talk to their children early on sexuality before they are influence by their peers' (a father, Ablekuma South).

The parents were asked why they thought that adolescents seek information from peers instead of parents. Some of the parents gave their reasons:

'Adolescents feel shy to talk to parents about sexual issues. They find peers more comfortable to discuss such issues. Some adolescents think that parents don't have the knowledge about sexual issues so will prefer to seek information from their peers rather than their parents' (a father, Osu Klottey).

'Culturally, parents don't want to share knowledge about sex with adolescents but make the child grow to see sex as sacred. But peers understand each other and teach their friends. They discuss what they watch and listen to on the media with friends but not with parents' (a mother, Osu Klottey).

'Adolescents will prefer to seek information on sexuality from peers because some parents will think that the adolescents are indulging in sex that is why they are asking such questions. Adolescents are freer with their friends than their parents. They listen to their friends and accept what they friends say and do, to be accepted in their groups' (a father, Ablekuma South).

Parents were to propose ways of overcoming bad peer influence on adolescents. Here are some of the recommendations parents gave:

'Parents should give adolescents the right education about sexuality. Whatever their peers say will be addition information and they can

decide to take or not what peers have told them. Therefore, it is important to give adolescents the first information on sexuality at an early age before they get the secondary information from peers' (a mother, Osu Klottay).

'If we educate our children with the right information they will see the difference in any other information they get from their friends. There should be parental control and monitoring of adolescents. It is our responsibility to see that they move with the right kinds of friends. We have the right to prevent them from keeping bad friends' (a father, Osu Klottay).

4.5. Perceived Behavioural Control factors that influence parent-adolescent discussion about sexual topics

4.5.1. Parents' self-rated ability and comfort discussing sexual topics with adolescents

Parents were asked to rate their ability to talk to their sons and daughters about sexual topics (Figure 4.9). At pre-intervention, majority of parents from both the intervention (65.8%) and control (59.7%) groups rated their ability as good as far as talking about sexual topics with their adolescents is concerned.

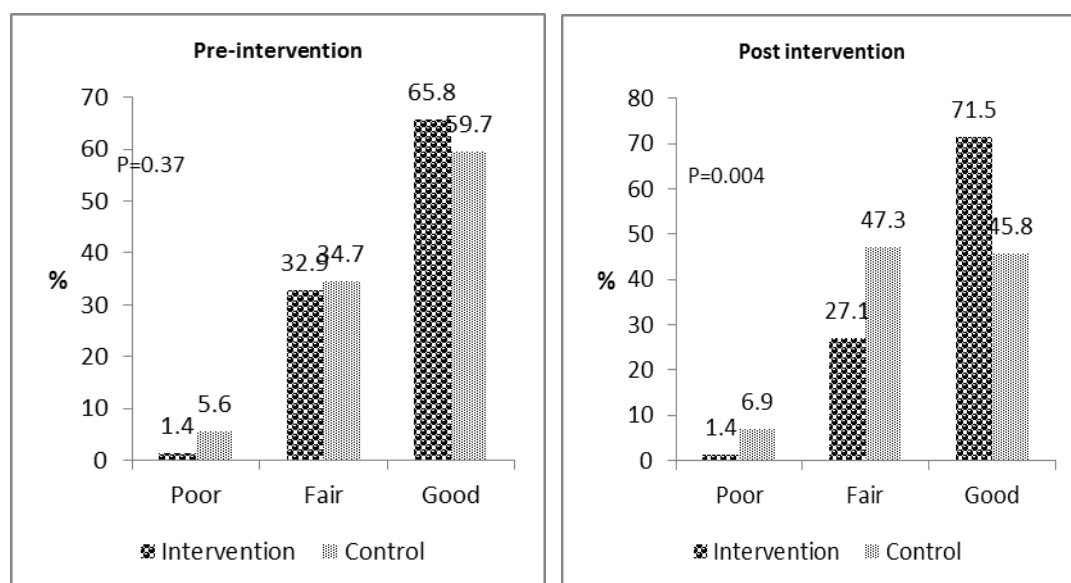


Figure 4. 9: Parents' self-rated ability to discuss sexual issues with adolescents

After the intervention there was an increase in the self-rating ability to talk to adolescents by parents in the intervention group (65.8 % to 71.5%) while the control group showed a reduction (59.7 to 45.8%) in their rating.

Figure 4.10 represents parents' reported comfort levels in discussing sexual topics with adolescents. Many of the parents in both the intervention and the control groups reported that they felt comfortable while discussing sexual topics with their children at pre-intervention (65.8% vs. 54.2%, $p=0.354$). After the training, parents in the intervention group showed an increase in comfort levels when discussing sexual topics with adolescents, compared to the control group (68.6% vs. 48.6%, $p=0.004$).

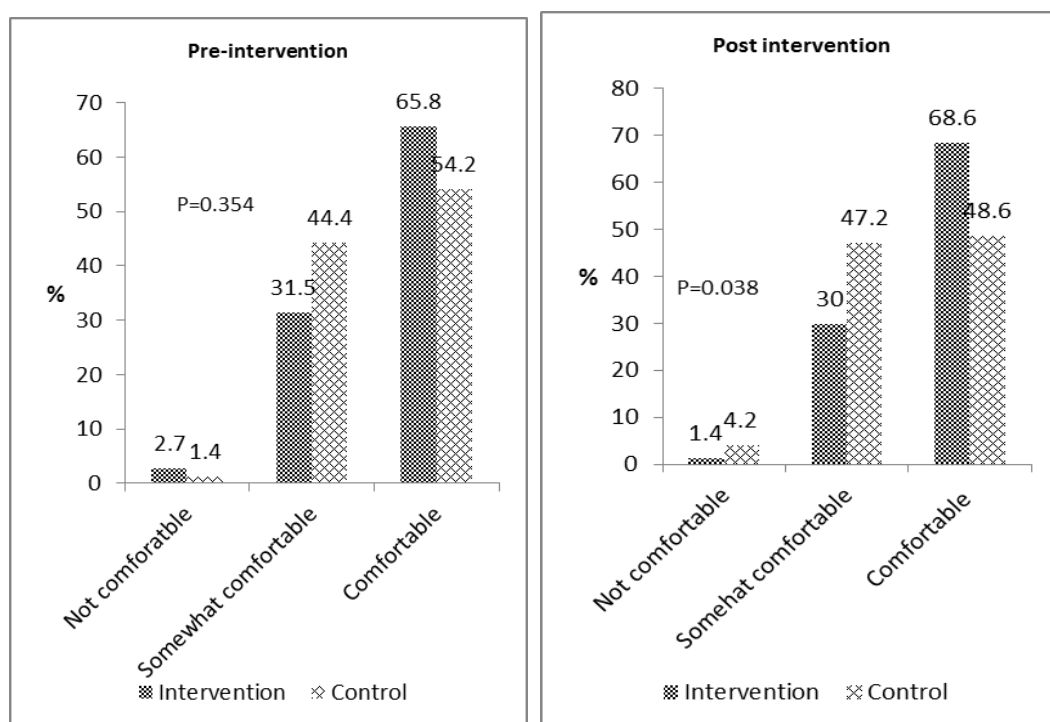


Figure 4. 10: Parents' reported comfort in discussing sexual topics with adolescents

During the in-depth interviews the parents expressed different feelings about their comfort when talking to their children about sexual topics.

'I feel very comfortable when talking about sexual issue with my daughter and friends' children because I have been trained on adolescent sexuality' (A mother and nurse).

'I feel comfortable talking about any sexual topics with my children because I have four girls and I started with the most senior one and gradually the younger ones have also reached adolescence so it made it very easy to talk to them about such issues as I have done so on several occasions' (a father and a mechanic).

I don't feel comfortable because sometimes I think they may ask me questions that need to be answered and I may not have the answers to them. I also think that if you give them too much information, adventurous as children are they may want to try whatever you told them e.g. condom, when they see what it is they may like to try it' (a father and administrative officer).

4.5.2. Parents' openness in discussing sexual topics with adolescents

Figure 4.11 presents details of parents' reported openness while discussing sexual topics with adolescents.

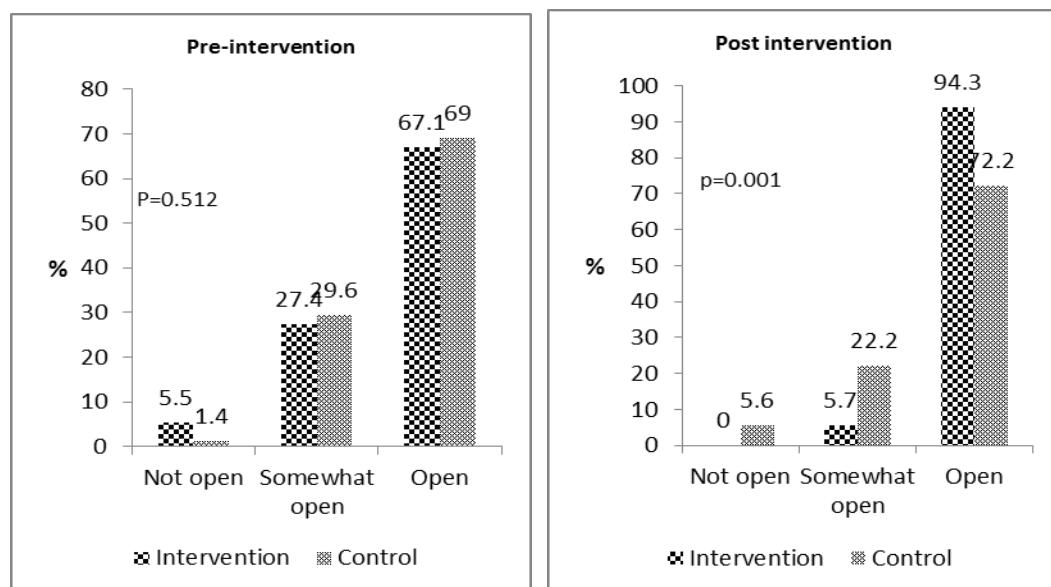


Figure 4. 11: Parents' reported openness discussing sexual topics with adolescents

About 67.1% of the parents in the intervention group and 69.0% in the control group opined that there was open while they were discussing sexual topics with their adolescents at pre-intervention. After the training, parents in the intervention group reported considerably higher proportion of parents had open discussions about sexual topics with their adolescents compared to the parents in the control group (94.3% vs. 72.2%, $p=0.001$).

4.5.3. Training of parents to talk to children about sexuality

In the FGDs, parents were asked if they thought training parents on adolescent sexuality would help them talk to their children about their sexuality. Many of the parents were of the view that if parents were trained on adolescents' sexual topics it would help them to talk to their children about their sexuality. The views of parents varied. Some of the parents were of the view that parents did not need training but they need the confidence and ability about what to say to their children about their sexuality because they had not been brought up to talk to children about their sexuality. Other parents were of the view that parents find it difficult to communicate in the local language on sexual issues because some words could not be translated into the local language or such words did not exist in the local language.

A father from Ablekuma South remarked:

'I don't think parents need training but they need the confidence and ability about what to say. I am sure parents know what to say but it is difficult to say it because we have not been brought up or conditioned to talk about sex'.

A mother from Ablekuma South also noted:

'Parents find it difficult to communicate in the local language but easier to communicate in English because some words could not be translated into the local language or such words don't exist in the local language. That is where the training should be to learn how to express themselves in such terms'.

A mother was of the opinion that since culture has prevented them from talking to children for so long if there should be training it should permeate the whole community instead of focusing on individual training by saying:

'I think because of our culture the training should be infused into society rather than the individual training. Our culture has gone deep against talking to children about sexual issues so the training should start from somewhere may be in the family, groups and churches so that more parents are trained to be able to talk about sexual issues' (A mother, Osu Klottey).

In the in-depth interviews the parents also expressed the opinions on the training of parents to talk to adolescents about sexual topics:

Training parents to talk to their children will help in many ways because if a parent knows exactly what he/she is going to talk about he/she will say it properly and the child will understand. This is because the parent has learnt from the right source and whatever the parent will say to the child will be beneficial to the child' (a father and mechanic).

'Training of parents will help because you see sexuality education is a sensitive topic which you need to be trained. You have to find the appropriate time, put the message into appropriate language and the children should be in a right mood to receive the message. For that matter parents need to be taught how to give the education' (a father and a trader).

'It will be very important to train parents because some parents have no knowledge about sexual issues or how to go about it. Therefore, if parents are trained they will have the knowledge to educate their children and their children will also educate their own children in future and they will be better than the present generation. I told my sister that 'something' like blood is coming from my vagina when I had my first menses and she told my mother. When she told my mother about my experience, my mother said to me 'that is what we called period don't you know and I said I didn't. And she said that is what when a man calls you and you go you will become pregnant'. So how will a man call me and I will go'. You are afraid to go' (a mother and a record officer).

Training parents to talk to their children would help them because the parents themselves would be desensitized. Most parents still find it difficult to mention body parts like the vagina, penis or talk about sexuality. I have been to workshops with adult women and when you mention some parts of the body like the penis and vagina they make some facial expression which showed that they are not happy with

what you are saying. So for peoples like that it is still difficult for them to talk about sexual issues. Such people, you have to train them to loosen their mouths and just mention things they feel uncomfortable about hearing as they are. After that they will feel comfortable to educate their children' (a mother and nurse).

4.6. Parents' Intention towards Discussing Sexual Topics with Adolescents

4.6.1. Gender of child parents would like to talk more about sexual topics

The study revealed that parents from both intervention and control groups would discuss sexual topics more with a higher proportion of daughters than sons (71.2% vs. 28.8%) for intervention group and (79.2% vs. 20.8%) for the control group at pre-intervention. After the intervention there was a small increased among the parents in the intervention (71.2% to 72.9%) who reported that they would like to discuss sexual topics more with their daughters than sons but a reduction (79.2% to 73.6%), in the control group.

Parents in the FGDs had diverse views about which gender of child they would like to discuss more sexual topics with. While many of the parents would like to discuss more about sexual topics with their daughters, other would prefer discussing it with their sons.

A mother, Ablekuma South said:

'I will communicate more with the girl because she is more gullible and easy to prey upon so you have to give her the right information on sexual issues so that she can protect herself. Normally, it is the boys who are doing the chasing so you have to teach the girl to be assertive and how to say 'no' to sex and she will be able to protect herself'.(a mother, Osu Klottey).

On the contrary, another mother from Ablekuma South prefers to talk to the boy rather than the girl.

'I will talk to the boy because there is the issue of homosexuality. In recent times we are having problems with boys being abused by homosexual men and this is now a worrying issue' (a mother, Ablekuma South).

Another parent said she would talk to both sexes because they are all vulnerable. She stated:

'As a mother I will start by talking with the two sexes together but as they grow, I will get the same gender that they can identify with to talk to them. This is because the boy has certain feelings that the mother doesn't know about but only hear of it. The boy and the father can talk as men and the mother can also talk with the girl' (a mother, Osu Klottey).

In the in-depth interviews many of the parents agreed that both sexes are vulnerable, so they need to talk to them about sexual issues, but they would prefer talking to their daughters than their sons.

'I will like to discuss sexual issues more with the girl because girls have poor skills when it comes to negotiating for sex. For the boys they are a bit mature when it comes to these issues depending on the age. Boys seem to be ahead of girls in such matters' (a father and a trader).

'Boys, when you are bringing them up that you have problems with them, but I see boys to be more understanding than girls. But when girls start developing changes in their bodies, the girl will think she is mature and not listen to you. If you are not careful and monitor her, she may go out to bring problems to you. Let's say she got herself pregnant, at least people know that your daughter is pregnant but if the boy goes out and gets somebody pregnant, nobody will see that the your boy is pregnant' (a mother and a teacher).

'As you know the females are the weaker sex. Somebody can tell her something and she will be happy, deceive her and have sex with her which will bring problems to her later. I am not secure there and have to do more work on the girl than the boy (a mother and a record officer).

'I will talk more to my daughter than my son because she is a girl and she is at the receiving end of any sexual action. She is the one who is going to suffer more be it her education, her life, or confidence level. It may affect her physically and psychologically. As for the boy he can still go on with whatever he wants to do even if he involves himself with sexual activity' (a father and an administrative officer).

4.6.2. Age for sexuality education

Table 4.6: presents information on the age that parents would like to start discussing sexual topics with adolescents. About 54.8% of parents from the intervention group and 70.4% from the control group would like to start discussing sexual topics with their children between 10-12 years. After the training, majority (54.3%) in the intervention and 51.4% in the control group would like to start talking to their children about sexual topics when they were between 10-12 years. Yet, (27.1%) parents in the intervention group compared to (9.7%) in the control would like to start talking with their children about sexual topics when they were between 7-9 years.

Table 4. 6. Age for parental sexual discussion with adolescents

Age groups	Pre-intervention (n=145)			Post intervention (N= 142)		
	Intervention (n=73)	Control (n=72)	P-value	Intervention (n= 70)	Control (n= 72)	P-value
7-9	3(4.1)	3(4.2)	0.111	19(27.1)	7(9.7)	0.004
10-12	40(54.8)	50(70.4)		38(54.3)	37(51.4)	
13-15	27(37.0)	18(25.4)		13(18.6)	28(38.9)	
≥16	3(4.1)	0(0.0)		0(0.0)	0(0.0)	

In FGDs parents believed that starting the education of children about sexual issues should not be tied with age and once the children understand what the parents were telling them, the education can start. One mother thought:

‘If a child asks a question, it is right for you to provide the right information to him/her and as he/she grows then you can be adding more information. You can start talking to the child at 5 years and add on later. We don’t have to wait until certain age before we start talking and if he comes with a question and you will say wait. No! We should provide the information as and when they need it’ (a mother, Osu Klottey).

A mother narrated her experience with her 6 year old son about sexual issues and why it is important to start talking to them at a young age and indicated:

My boy before he turned 6 years of age he asked me why do boys urinate through the penis but the girls do not? Does that mean that girls do not have penis? So I have to explain to him that the girls also urinate but through another place but not same as boys. You have to give an answer because they are inquisitive and observant' (a mother, Osu Klottey).

However, in the in-depth interviews, parents gave specific ages that they would like to start talking to their adolescents about sexual topics and gave reasons.

'I would like to start talking to my children when they are 10 years because at this time there are physical changes in their bodies which they will notice so whatever you tell them they will understand (a father and Mechanic).

'I will like to start talking when my child is 9 years because these days some girls start having their periods by this age. The hormones are working on them so they are developing fast. When you see some the adolescents you will think they are grownups and men usual approach them. So when they are educated at this age they will know what to do in any situation' (a mother and a teacher).

'Parents should start talking to their children as early as 6 years because nowadays children are broad minded. Things that you think they don't know they have already heard or seen it somewhere and they will ask you questions. As soon as they start asking you those questions you have to start talking to them about sex' (a mother and trader).

4.7. Manifestation of Behaviour: Actual Parent-Adolescent Communication on Sexuality

4.7.1. Parent-Adolescent Sexuality Discussion

Figure 4.12 presents the result of when parents were asked whether they had ever discussed any sexual topics with their sons and daughters. About 60.3% of parents in the intervention group and 52.8% in the control reported that they had ever discussed sexual topics with their sons. A higher proportion (80.8%) of parents in the intervention group and 84.7% in the control group reported that they had ever discussed sexual topics with their daughters.

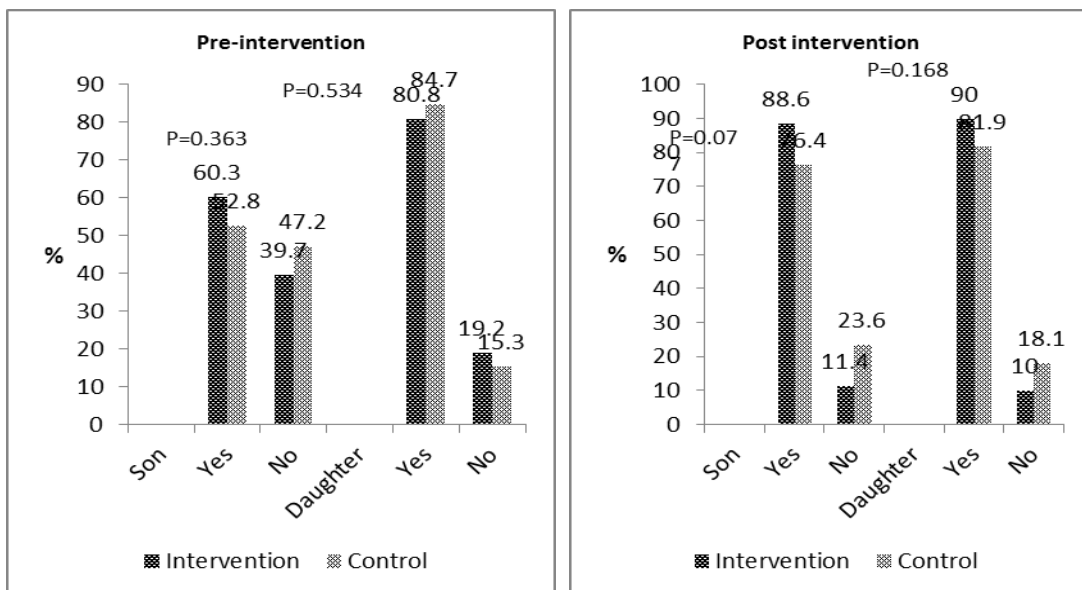


Figure 4. 12: Parents ever discussed sex-related topics with adolescents

After the intervention a higher proportion of parents in both the intervention (60.3% to 88.6%) and the control (52.8% to 76.4%) groups had indicated to have ever discussed sex-related topics with their sons. While there was an increase in the proportion of parents in the intervention group (80.8% to 90.0%) who reported that they had ever discussed sex-related topics with their daughters, there was a decrease among the parents in the control group (84.7% to 81.9%).

4.7.2. Reasons for parents discussing sexual topics with adolescents

In the in-depth interviews, all parents stated that they had talked about sexual issues with the adolescents. The parents cited various reasons for talking with their adolescents about sexual issues.

'I talked about sexual issues with my daughter because she is an early 'maturer' and I know the dangers that befalls early 'maturer' so I decided to start talking to her when she was 9 years old (a mother and a nurse).

'I talked to my daughter because these days girls have many friends and they mingle with so many other adolescents in school. As you are

not there with her, if you don't educate your daughter about sexual issues then you are not doing her any good. She will be influenced by her friends into sexual activities (a mother and a record officer).

'I noticed that at age of 10 years; my daughter was developing some reproductive features so I told her when she sees them it means that she is growing up. I told her that those features are not there for nothing. They are there for a purpose; when the time comes she will use them for the purpose. I talked to her because I think she needs the information. Children as they are if they know that there are some consequences in certain acts like sex, they will to be careful (a father and administrative officer).

4.7.3. Initiation of parent-adolescent discussion on sexuality

The study solicited from parents the circumstances under which they discussed sexual topics with adolescents.

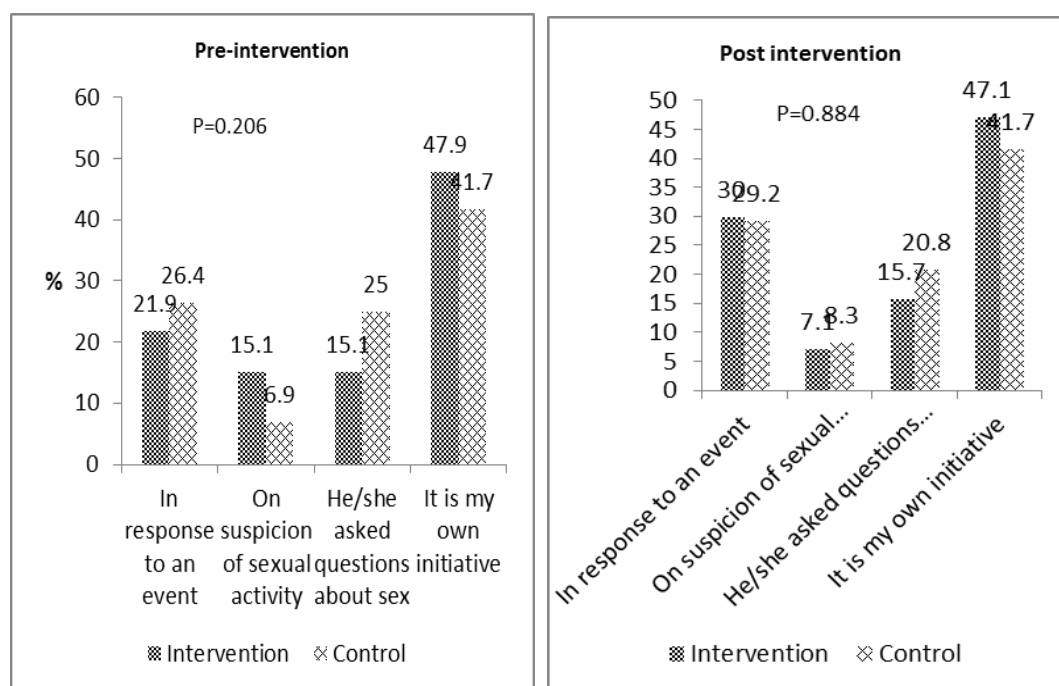


Figure 4. 13: Parents initiation of sexual discussions with adolescents

Figure 4.13, presents the conditions which parents gave for discussing sexual topics with their adolescents. The information shows that at pre-intervention, parents in both the intervention (47.9%) and the control (41.7%) groups reported that the main

condition under which they talked to their adolescents as ‘*parents’ own initiative*’. After the training there was not much difference in the main condition under which parents reported at pre-intervention to have talked to their children after the training, (47.9% vs. 47.1%) for the intervention group and (41.7% vs. 41.7%) for the control group.

Parents in the in-depth interviews started to talk to their children on different occasions. Some started talking to their children when they were watching a TV scene, going out with the children and when something happens to a family member and her daughter was aware of it.

‘When I am going out with the children and we see some kind of dresses young girls wear such as short skirts and dresses that expose their cleavage (space between her breast), I use such things to start talking to them and tell them that wearing such dresses exposes you to harm. Some people may take advantage of what you are wearing and lure you into sexual activity and that will result in all manner of consequences. Other times when we are watching films example African movies and a romantic scene appeared, I use that as an opportunity to start talking to them about sexual matters’ (a father and trader)

‘Sometimes may be something has happened so she gets to know about it. May be something has happened to a family member and we are talking about it, I use such channel to start talking with her. For example I have a cousin who was about 16 years old and she gave birth. Through that she couldn’t continue with her schooling but the boy she had the baby with is still in school. That means that her future is curtailed but the boy will continue with schooling’ (A mother and teacher).

4.7.4. Content of parent-adolescent sexuality discussion

Many of the parents reported that they talked about menstruation, peer pressure, premarital sex and HIV. Other parents talked about personal hygiene, abstinence, the consequences of getting pregnant, abortion and how to say ‘no’ if somebody wanted to force them to have to sex with them.

A father and administrative officer indicated:

'I always hammer on premarital sex because I have two girls. I tell them that premarital sex is not safe because they could get pregnant. And if they become pregnant they would face the consequences alone while the boy would continue his education. She the girl would be drawn back in the number of years she would spend in school because she have to stop the school and have the baby before going back to continue or she might not continue the school at all. Secondly, she could get STDs which could affect their reproductive live in future'.

A mother and teacher stated:

'I talked about personal hygiene especial keeping some the parts of the body like armpits, in-between the thighs and teeth very clean, peer pressure to indulge in sexual activity, boy/girl relationships, and HIV/AIDS. I talk particularly about HIV/AIDS because it is spreading among the youth which is a worrying situation. Sometime when I talk they think I am scaring them about sex. I tell them that if they don't start having sex at all, they would not have any problem. I also talked about abstinence and that they should be able to say 'no' if somebody want to force them to have sex with them'.

A father and mechanic said:

'I talked to the children about the consequences of getting pregnant and abortion so that they will know exactly what to do and what not to do'.

4.7.5. Frequency of parents' discussions about sexual topics with adolescents

Table 4.7, shows that parents in both groups had discussed all the categories of sexual topics with adolescents even though some categories of topics were discussed more than others. As in Table 4.7, before the training, only 5.5% of the parents from the intervention group and 2.8% from the control group reported that they had never discussed biological development topics with their adolescents. After the training all the parents in the intervention and control group reported that they had discussed biological development sexual topics with their children at various times.

Table 4.7. Parents' reported frequency of sexual discussion with adolescents

Topics	Pre-intervention (N=145)			Post intervention (N=142)		
	Intervention (n= 73)	Control (n=72)	P value	Intervention (n= 70)	Control (n= 72)	P value
Biological development topics						
Never discussed	4(5.5)	2(2.8)	0.770	0(0.0)	0(0.0)	0.006
Discussed only once	20(27.4)	21(29.2)		8(11.4)	21(29.2)	
Discussed a few times	36(49.3)	39(54.2)		36(51.4)	38(52.8)	
Discussed often	13(17.8)	10(13.9)		26(37.1)	13(18.1)	
Sexual risk protection topics						
Never discussed	3(4.1)	3(4.2)	0.552	1(1.4)	0(0.0)	0.001
Discussed only once	26(35.6)	18(25.0)		4(5.7)	20(27.8)	
Discussed a few times	24(32.9)	26(36.1)		27(38.6)	27(37.5)	
Discussed often	20(27.4)	25(34.7)		38(54.3)	25(34.7)	
Contraceptive use topics						
Never discussed	38(52.1)	43(59.7)	0.384	24(34.3)	46(63.9)	0.002
Discussed only once	12(16.4)	12(16.7)		21(30.0)	16(22.2)	
Discussed a few times	17(23.3)	9(12.8)		19(27.1)	9(12.5)	
Discussed often	6(8.2)	8(11.1)		6(8.6)	1(1.4)	
Risky sexual behaviour topics						
Never discussed	10(13.7)	7(9.7)	0.790	2(2.9)	1(1.4)	<0.001
Discussed only once	19(26.0)	22(30.6)		4(5.7)	23(31.9)	
Discussed a few times	21(28.8)	23(31.9)		26(37.1)	27(37.5)	
Discussed often	23(31.5)	20(27.8)		38(54.3)	21(29.2)	
Experiencing Sex topics						
Never discussed	24(32.9)	29(40.3)	0.596	4(5.7)	12(16.7)	0.026
Discussed only once	19(26.0)	13(18.1)		17(24.3)	26(36.1)	
Discussed a few times	21(28.8)	19(26.4)		32(45.7)	19(26.4)	
Discussed often	0(0.0)	0(0.0)		17(24.3)	15(20.8)	

About 27.4% of the parents in the intervention group and 34.7% in the control discussed often sexual risk protection topics with their adolescents before the intervention. After the intervention, the parents in the intervention group showed an increase in the proportion of parents who discussed often sexual risk protection

topics with adolescents from (27.4% to 54.3%) but the number of parents who discussed often these topics with adolescent in the control group did not increase.

About 27.4% of the parents in the intervention group and 34.7% in the control discussed often sexual risk protection topics with their adolescents before the intervention. After the intervention, the parents in the intervention group showed an increase in the proportion of parents who discussed often sexual risk protection topics with adolescents from (27.4% to 54.3%, $p=0.001$) but the number of parents who discussed often these topics with adolescent in the control group did not increase.

For contraceptive use topics, more than half (52.1%) of parents in the intervention group and 59.7% in the control group never discussed these topics with their children before the intervention. After the intervention the proportion of parents who had never discussed contraceptive topics with adolescents reduced to 34.3% among the parents in the intervention group. Nevertheless the proportion of parents who never discussed these topics with adolescents increased (63.9%) among the parents in the control group. More parents in both the intervention group (31.5% vs. 54.3) and control group (27.8% vs. 29.2%) discussed often risky sexual behaviour with adolescents after the intervention than before the intervention. Similarly, about 24.3% of parents in the intervention group and 20.4% in the control group discussed often experiential sexual topics with their adolescents after the intervention.

Table 4:8 shows the frequency at which mothers discussed sexual topics with adolescents. The data indicated that very few mothers in the intervention and control groups never discussed biological development topics with adolescents (5.9% vs.

2.3%) before the intervention. After the intervention, all the mothers in both groups reported that they had discussed biological development topics with their adolescents at various times. Also, only 3.9% in the mothers in the intervention group and 2.3% in the control group never discussed sexual risk protection topics with adolescents at pre-intervention but all the mothers in both groups indicated that they had discussions with adolescents after the intervention.

In the case of contraceptive use topics, more than half (51.0%) of the mothers in the intervention group and 62.8% of the mothers in the control group never discussed contraceptive use topics with their adolescents before the intervention. After the intervention the number of mothers who never discussed contraceptive use topics reduced from 51.0% to 33.3% in the intervention group and also slightly from 62.8% to 60.5% among the mothers in the control group.

Considering the discussion of risky sexual behaviour topics with adolescents, 41.2% of mothers in the intervention group and 30.2% in the control stated that they discussed often these topics with adolescents before the intervention.

Table 4. 8: Mothers' reported frequency of sexual discussion with adolescents

Topics	Pre-intervention (N=94)			Post intervention (N=91)		
	Intervention (n= 51)	Control (n=43)	P value	Intervention (n=48)	Control (n=43)	P value
Biological development topics						
Never discussed	3(5.9)	1(2.3)	0.234	0(0.0)	0(0.0)	0.006
Discussed only once	9(17.6)	10(23.3)		0(0.0)	7(16.3)	
Discussed a few times	27(52.9)	28(65.1)		21(43.8)	20(46.5)	
Discussed often	12(23.5)	4(9.3)		27(56.2)	16(37.2)	
Sexual risk protection topics						
Never discussed	2(3.9)	1(2.3)	0.972	0(0.0)	0(0.0)	0.025
Discussed only once	16(31.4)	12(27.9)		3(6.2)	8(18.6)	
Discussed a few times	17(33.3)	16(37.2)		14(29.2)	19(44.2)	
Discussed often	16(31.4)	14(32.6)		31(64.6)	16(37.2)	
Contraceptive use topics						
Never discussed	26(51.0)	27(62.8)		16(33.3)	26(60.5)	0.033
Discussed only once	6(11.8)	8(18.6)	0.068	14(29.2)	11(25.6)	
Discussed a few times	14(27.5)	3(7.0)		14(29.2)	5(11.6)	
Discussed often	5(9.8)	5(11.6)		4(8.3)	1(2.3)	
Risky sexual behaviour topics						
Never discussed	5(9.8)	3(7.0)	0.549 ^a	0(0.0)	1(2.3)	0.012 ^a
Discussed only once	14(27.5)	13(30.2)		3(6.2)	11(25.6)	
Discussed a few times	11(21.6)	14(36.6)		16(33.3)	16(37.2)	
Discussed often	21(41.2)	13(30.2)		29(60.4)	15(34.9)	
Experiencing Sex topics						
Never discussed	17(33.3)	15(34.9)	0.995	2(4.2)	9(20.9)	0.026 ^a
Discussed only once	11(21.6)	9(20.9)		7(14.6)	11(25.6)	
Discussed a few times	15(29.4)	13(30.2)		17(35.4)	11(25.6)	
Discussed often	8(15.7)	6(14.0)		22(45.8)	12(27.9)	

After the intervention the proportion of mothers who indicated that they discussed often risky sexual behaviour topics with adolescents increased among the mothers in the intervention group from (41.2% to 60.4%) and from (30.2% to 34.9%) among the control group. On discussing experiential sexual topics with their adolescents, mothers who discussed often these topics with adolescents in the intervention group showed a great improvement from (15.7% to 45.8%) compared to (14.0% to 27.9%) of the mothers in the control group at pre-intervention and post intervention periods.

Table 4.9 indicates the frequency at which fathers discussed various categories of sexual topics with adolescents. From the Table 4.9, it could be seen that only one (4.5%) father in the intervention group and 20.7% in the control group reported that they had discussed often biological development topics with adolescents. But after the intervention the percentage of fathers who reported to have discussed these topics with their adolescents had increased to 45.5% in the intervention group compared to the same percentage (20.7%) in the control group.

Table 4.9: Fathers' reported frequency of sexual discussion with adolescents

Topics	Pre-intervention (N= 51)			Post intervention (N= 51)		
	Intervention (n =22)	Control (n= 29)	P value	Intervention (n = 22)	Control (n= 29)	P value
Biological development topics						
Never discussed	1(4.5)	2(6.9)	0.322	0(0.0)	7(24.1)	0.004
Discussed only once	12(54.5)	10(34.5)		0(0.0)	5(17.2)	
Discussed a few times	8(36.4)	11(37.9)		12(54.5)	11(37.9)	
Discussed often	1(4.5)	6(20.7)		10(45.5)	6(20.7)	
Sexual risk protection topics						
Never discussed	2(9.1)	4(13.8)	0.296	1(4.5)	0(0.0)	0.005
Discussed only once	9(40.9)	5(17.2)		1(4.5)	12(41.4)	
Discussed a few times	7(31.8)	10(34.5)		13(59.2)	8(27.6)	
Discussed often	4(18.2)	10(34.5)		7(31.8)	9(31.0)	
Contraceptive use topics						
Never discussed	12(54.5)	16(55.2)	0.599	8(36.4)	22(75.9)	0.018
Discussed only once	6(27.3)	4(13.8)		7(31.8)	5(17.2)	
Discussed a few times	3(13.6)	6(20.7)		5(22.7)	2(6.9)	
Discussed often	1(4.5)	3(10.3)		2(9.1)	0(0.0)	
Risky sexual behaviour topics						
Never discussed	6(27.3)	2(6.9)	0.550	0(0.0)	8(27.6)	0.015
Discussed only once	4(18.2)	12(41.4)		4(18.2)	7(24.1)	
Discussed a few times	10(45.5)	8(27.6)		8(36.4)	9(31.0)	
Discussed often	2(9.1)	7(24.1)		10(45.5)	5(17.2)	
Experiencing sex to topics						
Never discussed	7(31.8)	14(48.3)	0.163	2(9.1)	10(34.5)	0.035
Discussed only once	8(36.4)	4(13.8)		5(22.7)	9(31.0)	
Discussed a few times	6(27.3)	6(20.7)		6(27.3)	7(24.1)	
Discussed often	1(4.5)	5(17.2)		9(40.9)	3(10.3)	

About 31.8% of the fathers in the intervention group and 34.5% in the control group indicated that they discussed a few times sexual risk protection topics with their adolescents before the training. After the training, there was an improvement among fathers in the intervention group (31.8% to 59.2%) and a reduction among the fathers in the control (34.5 to 27.6%). The fathers in the intervention group who never discussed contraceptive use topics with adolescents showed a reduction from (54.5% to 36.4%) but an increase among fathers in the control group from (55.2% to 75.9%).

With risky sexual topics and experiential sexual topics the fathers who discussed these topics often with adolescents increased in the intervention group and decreased in the control group (Table 4. 9).

Comparing mothers' frequency of discussing sexual topics with their adolescents with fathers, mothers discussed all sexual topics more frequently with adolescents than the fathers did.

4.7.6. Total parents' reported frequency of sexual discussion with adolescents

Table 4.10 represents total parents' reported frequency of discussing adolescent sexual topics. The total score of 25 questions under parents' frequency of discussing sexual topics were summed up and the score of 25 and 100 obtained for parents who answered 1= never discussed and 4= discussed often respectively. The scores were categorized into four levels of 1-25= never discussed, 26-50 = discussed only once, 51-75= discussed a few times and 76-100= discussed often. The higher the score a parent had the higher his/her frequency of discussing sexual topics with adolescents.

Table 4.10: Total parents' frequency of discussing sexual topics with adolescents

Frequency	Pre-intervention (N=145)			Post intervention (N=142)		
	Intervention (n=73)	Control (n=72)	P value	Intervention (n=70)	Control (n=72)	P value
Never discussed	2(2.7)	1(1.4)	0.888	0(0.0)	0(0.0)	<0.001
Discussed only once	23(31.5)	22(30.6)		4(5.7)	21(29.2)	
Discussed a few times	34(46.6)	32(44.4)		36(51.4)	39(54.2)	
Discussed often	14(19.2)	17(23.6)		30(42.9)	12(16.7)	

At pre-intervention only 2.7% of parents in the intervention group and one person (1.4%) in the control reported that they had never discussed sexual topics with their adolescents. However, after the intervention, all the parents in both the intervention and control groups reported to have discussed sexual topics with adolescents at various times. For example, after the training the parents who reported that they discussed often sexual topics with adolescents in the intervention group increased from 19.2% to 42.9% but there was a reduction among parents in the control from 23.6% to 16.7%.

4.7.7. Differences in sexual communication due sex of adolescent

In measuring adolescent discussion of sexual topics with mother and father, the same categories of questions used to measure the frequency of parents in discussing sexual topics with the adolescents were used to measure adolescents' reported mother and father discussion about sexual topics. The study investigated discussion of sexual topics with adolescents by mother and father. Information presented in Tables 4.11 and 4.12 show that there were differences in adolescent reported discussion of sexual topics between the mother and father. For both mothers and fathers' discussion about sexual topics with adolescents, the greater proportion of adolescents reported

receiving discussion from their mothers in all the sexual topics in both the intervention and control groups than the fathers.

Table 4.11: Adolescents' reported mother-adolescent sexual communication

Topics	Pre-intervention (N= 145)			Post intervention (N= 142)		
	Intervention (n =73)	Control (n= 72)	P value	Intervention (n = 70)	Control (n= 72)	P value
Biological development topics						
Never discussed	9(12.3)	10(13.9)	0.947	0(0.0)	10(13.9)	0.005
Discussed only once	33(45.2)	31(43.1)		30(42.9)	26(36.1)	
Discussed a few times	31(42.5)	31(43.1)		40(57.1)	36(50.0)	
Discussed often	0(0.0)	0(0.0)		0(0.0)	0(0.0)	
Sexual risk protection topics						
Never discussed	8(11.0)	9(12.5)	0.845	2(2.9)	12(16.7)	0.021
Discussed only once	15(20.5)	15(20.8)		12(17.1)	13(18.1)	
Discussed a few times	27(37.0)	30(41.7)		23(32.9)	25(34.7)	
Discussed often	23(31.5)	18(25.0)		33(47.1)	22(30.6)	
Contraceptive use topics						
Never discussed	52(71.2)	52(72.2)	0.738	28(40.0)	50(69.4)	0.002
Discussed only once	11(15.1)	14(19.4)		30(42.9)	15(20.8)	
Discussed a few times	9(12.3)	5(6.9)		11(15.7)	5(6.9)	
Discussed often	1(1.4)	1(1.4)		1(1.4)	2(2.8)	
Risky sexual behaviour topics						
Never discussed	7(9.6)	11(15.3)	0.723	3(4.3)	12(16.7)	0.004
Discussed only once	20(27.4)	21(29.2)		7(10.0)	18(25.0)	
Discussed a few times	32(43.8)	28(38.9)		34(48.6)	23(31.9)	
Discussed often	14(19.2)	12(16.7)		26(37.1)	19(26.4)	
Experiencing sex to topics						
Never discussed	26(35.6)	36(50.0)	0.028	9(12.9)	29(40.3)	0.001
Discussed only once	13(17.8)	18(25.0)		31(44.3)	20(27.8)	
Discussed a few times	22(30.1)	8(11.1)		28(40.0)	18(25.0)	
Discussed often	12(16.4)	10(13.9)		2(2.9)	5(6.9)	

For instance when adolescents reported that only 12.3% of mothers in the intervention group and 13.9% in the control group never discussed biological development topics with them, more than half (54.8%) of fathers in the intervention group and as much as 72.2 % in the control group also never discussed these topics with adolescents before the intervention. After the intervention all the mothers in the

intervention group either discussed once (42.9%) or a few times (57.1%) biological development topics with adolescents compared to the mothers in the control group.

The intervention saw decrease (54.8% to 20.0%) among the fathers in the intervention group who never discussed biological development topics with their adolescents. The fathers in the control group also experienced a marginal decrease (72.2% to 48.6%) among the fathers who never discussed biological development topics with adolescents.

Table 4.12: Adolescents' reported father-adolescent sexual discussions.

Topics	Pre-intervention (N= 145)			Post intervention (N= 142)		
	Intervention (n =73)	Control (n= 72)	P value	Intervention (n = 70)	Control (n= 72)	P value
Biological development topics						
Never discussed	40(54.8)	52(72.2)	0.027	14(20.0)	35(48.6)	0.001
Discussed only once	26(35.6)	19(26.4)		49(70.0)	34(47.2)	
Discussed a few times	7(9.6)	1(1.4)		7(10.0)	3(4.2)	
Sexual risk protection topics						
Never discussed	31(42.5)	34(47.2)	0.144	12(17.1)	33(45.8)	0.003
Discussed only once	15(20.5)	23(31.9)		32(45.7)	22(30.6)	
Discussed a few times	18(24.7)	9(12.5)		22(31.4)	14(19.4)	
Discussed often	9(12.3)	6(8.3)		4(5.7)	3(4.2)	
Contraceptive use topics						
Never discussed	52(71.2)	52(72.2)	0.738	54(77.1)	66(91.7)	0.041
Discussed only once	11(15.1)	14(19.4)		13(18.6)	4(5.6)	
Discussed a few times	9(12.3)	5(6.9)		3(4.3)	2(2.8)	
Discussed often	1(1.4)	1(1.4)		0(0.0)	0(0.0)	
Risky sexual behaviour topics						
Never discussed	34(46.6)	37(51.4)	0.033	17(24.3)	35(48.6)	0.018
Discussed only once	14(19.2)	24(33.3)		30(42.9)	21(29.2)	
Discussed a few times	17(23.3)	6(8.3)		17(24.3)	14(19.4)	
Discussed often	8(11.0)	5(6.9)		6(8.6)	2(2.8)	
Experiencing sex to topics						
Never discussed	43(58.9)	56(77.8)	0.093	32(45.7)	46(63.9)	0.041
Discussed only once	12(16.4)	7(9.7)		15(21.4)	14(19.4)	
Discussed a few times	14(19.2)	8(11.1)		19(27.1)	12(16.7)	
Discussed often	4(5.5)	1(1.4)		4(5.7)	0(0.0)	

The best topic discussed by fathers before and after the intervention with adolescents was sexual risk protection topics (57.5% vs.82.9%) for fathers in the intervention group and (53.0% vs. 54.2) for the control group compared with (89.0% vs 97.1%) for mothers in the intervention group and (87.5% vs. 83.3%) for the control group.

The study also examined the discussion of sexual topics between mother-daughter, mother-son, father-son and father-daughter as in Tables 4.13, 4.14, 4.15 and 4.16.

Table 4.13 shows adolescents' reported mother-daughter discussion about sexual topics. For instance 93.3% of daughters in the intervention group and 98.0% in the control group reported that their mothers discussed biological development topics with them at various times before the intervention. After the intervention, all the daughters in the intervention group stated that their mothers had discussed biological development topics with them at various times. Mothers' discussion of other categories of sexual topics such as sexual risk protection and risky sexual behaviour topics were also high among mothers and daughters after the intervention.

The category of sexual topics that the daughters reported to be least discussed with them by their mothers was the contraceptive use topics before and after the intervention.

Table 4.13: Adolescents' reported mother-daughter sexual communications

Topics	Pre-intervention (N=95)			Post intervention (N= 92)		
	Intervention (n= 45)	Control (n= 50)	P value	Intervention (n=42)	Control (n=50)	P value
Biological development topics						
Never discussed	3(6.7)	1(2.0)	0.490	0(0.0)	7(14.0)	0.011
Discussed only once	16(35.5)	21(42.0)		11(26.2)	17(34.0)	
Discussed a few times	26(57.8)	28(56.0)		31(73.8)	26(52.0)	
Sexual risk protection topics						
Never discussed	3(6.7)	3(3.0)	0.692	1(2.4)	8(16.0)	0.019
Discussed only once	7(15.5)	6(12.0)		3(7.1)	8(16.0)	
Discussed a few times	18(40.0)	26(50.0)		13(31.0)	18(36.0)	
Discussed often	17(37.8)	15(30.0)		25(59.5)	16(32.0)	
Contraceptive use topics						
Never discussed	28(62.2)	33(66.0)	0.606	10(23.8)	31(62.0)	0.033
Discussed only once	10(22.2)	12(24.0)		23(54.8)	13(26.0)	
Discussed a few times	7(15.6)	4(8.0)		7(16.7)	4(8.0)	
Discussed often	0(0.0)	1(2.0)		2(4.8)	2(4.0)	
Risky sexual behaviour topics						
Never discussed	2(4.4)	3(6.0)	0.987	0(0.0)	5(10.0)	0.021
Discussed only once	12(26.7)	13(26.0)		3(7.1)	11(22.0)	
Discussed a few times	22(48.9)	23(46.0)		20(47.6)	16(32.0)	
Discussed often	8(20.9)	11(22.0)		19(45.2)	18(36.0)	
Experiencing sex topics						
Never discussed	13(28.9)	16(32.0)	0.173	3(7.1)	15(30.0)	0.030
Discussed only once	8(17.8)	17(34.0)		17(40.5)	16(32.0)	
Discussed a few times	14(31.1)	8(16.0)		13(31.0)	14(28.0)	
Discussed often	10(22.2)	9(18.0)		9(21.4)	5(10.0)	

As found in Table 4.14 mothers' discussion with sons was however slightly lower than with daughters. As illustrated in Table 4.14, mothers' discussion about various categories of sexual topics with sons in the intervention and control groups was highest about sexual risk protection topics before the intervention and after the intervention in both the intervention (78.5% vs. 96.4%) and the control groups (67.5% vs. 76.3%) and biological development topics for mothers in the intervention

(71.5% vs. 89.3%) and the control group (63.6% vs. 63.7%), risky sexual behaviour topics was (78.6% vs. 85.7%) for mother in intervention and (54.5% vs. 63.6%) mother in the control group. The topic least discussed by the mothers with their sons were contraceptive use topics (17.9% vs. 50.0%) by the mothers in the intervention group and (9.0% vs. 18.2%) by control group and experiential sexual topics (35.8% vs. 75.0%) by mothers in the intervention group and (9.0% vs.36.4%) in the control group.

Table 4.14: Adolescents' reported mother-son discussion about sexual topics

Topics	Pre-intervention (N=50)			Post intervention (N=50)		
	Intervention (n= 28)	Control (n =22)	P value	Intervention (n = 28)	Control (n = 22)	P value
Biological development topics						
Never discussed	8(28.6)	8(36.4)	0.624	3(10.7)	8(36.4)	0.043
Discussed only once	15(53.6)	12(54.5)		12(42.9)	10(45.5)	
Discussed a few times	5(17.9)	2(9.1)		13(46.4)	4(18.2)	
Sexual risk protection topics						
Never discussed	6(21.4)	7(31.8)	0.635	1(3.6)	5(22.7)	0.033
Discussed only once	9(32.1)	7(31.1)		9(32.1)	7(31.8)	
Discussed a few times	7(25.0)	6(27.3)		7(25.0)	8(36.4)	
Discussed often	6(21.4)	2(9.1)		11(39.3)	2(9.1)	
Contraceptive use topics						
Never discussed	23(82.1)	20(90.1)	0.892	14(50.0)	18(81.8)	0.038
Discussed only once	1(3.6)	1(4.5)		11(39.3)	2(9.1)	
Discussed a few times	3(10.7)	1(4.5)		3(10.7)	2(9.1)	
Discussed often	1(3.6)	0(0.0)		0(0.0)	0(0.0)	
Risky sexual behaviour topics						
Never discussed	6(21.4)	10(45.5)	0.101	4(14.3)	8(36.4)	0.040
Discussed only once	9(32.1)	7(31.8)		4(14.3)	7(31.7)	
Discussed a few times	8(28.6)	5(22.7)		13(46.4)	6(27.3)	
Discussed often	5(17.9)	0(0.0)		7(25.0)	1(4.5)	
Experiencing sex topics						
Never discussed	18(64.3)	20(90.9)	0.082	7(25.0)	14(63.6)	0.026
Discussed only once	5(17.9)	1(4.5)		11(39.3)	6(27.3)	
Discussed a few times	4(14.3)	0(0.0)		7(25.5)	2(9.1)	
Discussed often	1(3.6)	1(4.5)		3(10.7)	0(0.0)	

Table 4.15 represents sons reported fathers' discussion of sexual topics with them. As presented in Table 4.15, fathers discussed biological development topics among higher proportion of sons (53.6% vs. 31.8%) than daughters (37.7% vs. 24.0%) in both the intervention and control groups before the intervention. Again after the intervention, fathers discussed more biological development topics with their sons (82.9% vs.72.7%) than daughters (71.4% vs.42.0%) for the two groups.

Table 4.15. Adolescents' reported father-son discussion about sexual topics

Topics	Pre intervention (N=50)		P value	Post intervention (N= 50)		P value
	Intervention (n=28)	Control (n=22)		Intervention (n = 28)	Control (n= 22)	
Biological development topics						
Never discussed	13(46.4)	15(68.2)	0.112	2(7.1)	6(27.3)	0.036
Discussed only once	11(39.3)	7(31.8)		21(75.0)	16(72.7)	
Discussed a few times	4(14.3)	0(0.0)		5(17.9)	0(0.0)	
Sexual risk protection topics						
Never discussed	11(39.3)	11(50.0)	0.543	4(14.3)	8(36.4)	0.027
Discussed only once	9(32.1)	7(31.8)		6(21.4)	9(40.9)	
Discussed a few times	3(10.7)	3(13.6)		10(35.7)	4(18.2)	
Discussed often	5(17.9)	1(4.5)		8(28.6)	1(4.5)	
Contraceptive use topics						
Never discussed	24(85.7)	17(77.3)	0.753	13(46.4)	18(81.8)	0.024
Discussed only once	2(7.1)	3(13.6)		4(14.3)	3(13.6)	
Discussed a few times	2(7.1)	2(9.1)		8(28.6)	1(4.5)	
Discussed often	0(0.0)	0(0.0)		3(10.7)	0(0.0)	
Risky sexual behaviour topics						
Never discussed	13(46.4)	13(59.1)	0.439	4(14.3)	9(40.9)	0.035
Discussed only once	7(25.0)	7(31.8)		9(32.1)	9(40.9)	
Discussed a few times	4(14.3)	1(4.5)		11(39.3)	4(18.2)	
Discussed often	4(14.3)	1(4.5)		4(14.3)	0(0.0)	
Experiencing sex topics						
Never discussed	16(57.1)	18(81.8)	0.163	6(21.4)	12(54.5)	0.032
Discussed only once	5(17.9)	1(4.5)		6(21.4)	4(18.2)	
Discussed a few times	4(14.3)	3(13.6)		10(35.7)	6(27.3)	
Discussed often	3(10.7)	0(0.0)		6(21.4)	0(0.0)	

Conversely, fathers discussed contraceptive use topics more among daughters (37.8% vs. 32.0%) than sons (14.2 vs. 22.7%) before the intervention in both the intervention and control groups (Table 4.16). After the training, the fathers discussed contraceptive use topics among fewer daughters in both the intervention and the control groups (35.7 % vs.12.0%) than they did with their sons (53.6% vs. 18.2%) in the two groups. Generally, father-daughter discussion on all the categories of sexual topics was low.

Table 4.16: Adolescents' reported father-daughter discussion about sexual topics

Topics	Pre-intervention (N = 95)			Post intervention (N= 92)		
	Intervention (n = 45)	Control (n = 50)	P value	Intervention (n =42)	Control (n = 50)	P value
Biological development topics						
Never discussed	28(62.2)	38(76.0)	0.398	12(28.6)	28(56.0)	0.028
Discussed only once	15(33.3)	11(22.0)		26(61.9)	19(38.0)	
Discussed a few times	2(4.4)	1(2.0)		4(9.5)	3(6.0)	
Sexual risk protection topics						
Never discussed	18(40.0)	23(46.0)	0.058	7(16.7)	24(48.0)	0.004
Discussed only once	8(17.8)	17(34.0)		25(59.5)	14(28.0)	
Discussed a few times	15(33.3)	6(12.0)		8(19.0)	10(20.0)	
Discussed often	4(8.9)	4(8.0)		2(4.8)	2(4.0)	
Contraceptive use topics						
Never discussed	28(62.2)	34(68.0)	0.782	27(64.3)	44(88.0)	0.044
Discussed only once	9(20.0)	11(22.0)		7(16.7)	4(8.0)	
Discussed a few times	7(15.6)	4(8.0)		5(11.9)	1(2.0)	
Discussed often	1(2.2)	1(2.0)		3(7.1)	1(2.0)	
Risky sexual behaviour topics						
Never discussed	23(51.1)	19(38.0)	0.005	10(23.8)	26(52.0)	0.024
Discussed only once	6(13.3)	22(44.0)		13(31.0)	12(24.0)	
Discussed a few times	12(26.7)	5(10.0)		12(28.6)	10(20.0)	
Discussed often	4(8.9)	4(8.0)		7(16.7)	2(4.0)	
Experiencing sex topics						
Never discussed	27(60.0)	38(76.0)	0.290	20(47.6)	34(68.0)	0.036
Discussed only once	7(15.6)	6(12.0)		9(21.4)	10(20.0)	
Discussed a few times	10(22.2)	5(10.0)		8(19.0)	6(12.0)	
Discussed often	1(2.2)	1(2.0)		5(11.9)	0(0.0)	

4.7.8 Mean number of topics parents discussed with adolescents

On the number of sexual topics discussed with adolescents at pre-intervention, parents in the intervention group discussed 15.07 of the 25 topics (SD 6.603) and the control group discussed 15.11 of the 25 topics (SD 6.499), $p= 0.971$ with their adolescents.

After the intervention, parents in the intervention group discussed 20.36 of 25 topics (SD 4.549), while the control group discussed 16.39 of 25 topics, (5.078), $p<0.001$.

On average, parents in the intervention group discussed 3.97 topics more than those in the control group.

4.7.9 Effects of educating parents on sexuality when they were young

The study found out from parents whether they were educated by their parents on sexual topics when they were young. Majority 52.1% parents in the intervention group and 45.8% in the control groups confirmed that they were educated on sexual topics when they were young but the rest were not educated at pre-intervention. However, after the intervention there was a minimal increase among parents in both the intervention (52.1% to 54.3%) and the control (45.8% vs. 59.7%) groups who confirmed that they were educated on sexual topics when they were young.

However, many of the parents in the FGDs indicated that their parents did not educate them on sexual issues. Some participants narrated their experiences as a result of parents not educating them when they were adolescents.

‘To be honest, I didn’t have a single education on sex. You are even scared to ask questions on such things. My parent didn’t educate me because it might be that my parents were themselves also not educated by their parents and hardly had any exposure.’ (A father, Osu Klottey).

‘My parents didn’t talk to me may be because my father was a pastor and could not tell me anything on sexuality’ (a mother, Osu Klottey).

‘My parents never talked to me about sexual issues. I don’t know whether or not they were feeling shy to talk to me’ (a father, Ablekuma South).

In the in-depth interviews some parents said they were educated on sexual topics but others were not.

A father and an administrative officer indicated:

'I had some education but it was precautionary. 'If you go and sleep with a girl she will get pregnant and they will come and arrest you'. Such was the education'.

A mother and a records officer stated:

'My mother never educated me on sex, she won't tell you that if you have sex you will be get pregnant. She would tell you if a man touches you, you will be pregnant. So I had that in my mind, whenever a boy approached me I would ask him not to touch me because I don't want to be pregnant. I don't want my mother to see that I am pregnant'.

Another mother and a teacher, who was not educated, on sexual topics by her mother, re-counted her disappointment:

'My mother was a shy person and had no formal education. When I had my first menses I was expecting her to sit me down and talk to me about it but she didn't do anything of that sort. All my elder sisters got pregnant while in school for that matter my mother gave me out to stay with somebody. It was there that I had my first period. I thought I was going to die when I had my menses, so I ran to my mother to tell her about it weeping. But when I went to her she knew what was happening to me therefore she only asked me to go and have a bath after that she gave me sanitary pad to use and food to eat. She never told me anything about the menses, even how to care for myself during my menstrual periods or when you do this or that, this is what will happen to you'.

4.7.10. Parents' perceptions of educating them about sexuality at young age

The parents were asked in the FGDs whether it would have been easier for them to educate their children now if they had been educated by their parents when they were young. Almost all the parents agreed that it would have been easier for them.

These are some reasons that were given by the parents:

'If I was educated when young I would have improved in what I am telling my children now because I would have gained more knowledge and experience than I have. Even the system we have now you a bit restricted to educate our kids because you are not sure about what you are going to tell them so you are reluctant when you want to give certain information to the children (a father Ablekuma South).

'It would have been far easier because I have the knowledge but how to impact the knowledge to my children is the problem. Probably, if my parents had talked to me I could have used the experience I had from them to talk with my child' (a mother, Ablekuma South).

'I think so because once you are exposed to something it will be easier to talk about it. If I don't have the exposure it will be difficult. I remember when my dad tried to talk to me about sexual issues I ran away. Therefore I believe that if the exposure had come from the beginning it would have made it easier for me to talk about sexual issues with my children now. (A mother, Osu Klottey).

In the in-depth interviews, parents also expressed:

'If I was educated about sexual issues when young it would have been easier for me to talk about it to my children. If somebody has learnt something and the person is teaching you it will be very easy to understand and learn (a father and a trader).

Yes, it would have contributed a lot. You know parents are the first teachers and before I grew up if I were to have some information on sexuality, wherever I go with a little top up will ameliorate what I have learnt. I would have had the understanding very well. So when parents educate their children before they grow up it will help very much (a father and an administrative officer).

4.7.11 Difficulties parents confronted in educating adolescents on sexual topics

Table 4.17 indicates that 60.3% of parents in the intervention and 59.7% in the control groups disagreed that they found it difficult in talking to their adolescents on sexual topics.

Table 4.17: Difficulties parents faced talking to adolescents about sexual topics

Sentiments	Pre-intervention (N= 145)			Post intervention (N= 142)		
	Intervention (n=73)	Control (n=72)	P-value	Intervention (n=70)	Control (n=72)	P-value
Disagree	44(60.3)	43(59.7)	0.963	38(54.3)	57(79.2)	0.007
Neutral	16(21.9)	17(23.6)		16(22.9)	8(11.1)	
Agree	13(17.8)	12(16.7)		16(22.9)	7(9.7)	

After the training, the proportion of parents who indicated that they disagreed that they found it difficult in talking to their adolescents about sexual topics, decreased for the intervention group (60.3% to 54.3%) but increased (59.7% to 79.2%) for the control group.

Even though a few of the parents in the quantitative study agreed that they had difficulties in talking to the children about sexual topics, in the in-depth interviews, some parents also indicated that they have difficulties in talking to their children about sexual topics:

'The difficulties I faced talking about sexual topics with my children are: i. the appropriate time to provide the education. ii. There are also some terminologies that I am not able to provide an appropriate explanation for the children to understand me. iii There is some health implication such as having menses which I could not explain e.g. why some girls have regular menses while others have irregular? I don't know whether that is normal or not. Why some girls have their menses early and others late. For instance some girls start their menses at 10 years but others at 15 years of age' (a father and trader).

'Sometime the children are not open to what you are saying to them. They wouldn't like to listen to what you are saying. And if you force him/her, he/she will allow you to talk and after that he/she will ask you 'have you finished? Then he/she gets up and goes' that means he/she is not interested in what you told him/ her (a mother and trader).

In the in-depth interviews, even though many of the parents said they did not find it difficult talking about any sexual topics with their adolescents, a mother admitted:

'I find it difficult talking with my daughter about sexual intercourse and kissing because she would not like me to talk about it.' Sometime you would be watching TV with her and you would see her covering her face during such scenes or she would walk out of the room. Sometimes I call her to come back and ask her to sit down and watch. Then I would tell her that it was just a film and they are just showing what people have been doing it is when you practice what you see that you will have problems' (a mother and a data officer).

4.7.12. The effects of the three months sexual education training on parents

The difference-in-difference analysis was used to examine the effects of the training between parents in the intervention and control groups. The difference-in-difference is the difference in average outcome in the intervention group before and after intervention minus the difference in average outcome in the control group before and after intervention. For each outcome under the study, the Difference-in-Differences (DID) was estimated by calculating the difference between the proportion of participants at the baseline and end of the study for the intervention and the control groups separately, using two samples test for Binomial proportions (Normal-Theory-Test) for categorical data. The result of the difference obtained for the control group was then subtracted from the result of the difference obtained for the intervention group to get the Difference-in-Differences (DID) or the effects of the study (Table 4.18).

Table 4.18 presents the effect of the 3 months education programme on parents. Preceding the intervention, 67% of parents in the intervention group reported that they had the ability to discuss sexual topics with adolescents. After the intervention, the proportion of parents who stated that they had the ability to discuss sexual topics with adolescents increased to 71%. The difference between the proportions of parents who reported to have the ability to discuss sexual topics with adolescents at post intervention and pre-intervention was 4.2%. Among the control group, 59.7% of parents indicated that they had the ability to discuss sexual topics with adolescents at pre-intervention. After the intervention, the proportion of parents who specified that they had the ability to discuss sexual topics with adolescents decreased to 45.8%.

Table 4.18. Effects of 3 months adolescent sexual education on parents

	Pre-intervention ¹	Post-intervention ²	difference ³	Difference in differences
Ability of parents towards SRH				
Intervention [70]	0.6714 (0.057)	0.7143 (0.054)	0.0429 (0.078)	
Control [72]	0.5972 (0.058)	0.4583 (0.059)	0.1389 (0.083)	0.096 (0.048) ⁴ p =0.989
Knowledge of parents on SRH of adolescents				
Intervention [70]	0.6286 (0.058)	0.9571(0.024)	0.3285 (0.069)	
Control [72]	0.5278 (0.0592)	0.5694 (0.059)	0.0416 (0.083)	0.287(0.065) p<0.001
Attitudes of parents towards use of FP services by adolescents				
Intervention [70]	0.4143 (0.059)	0.8571(0.042)	0.4428 (0.081)	
Control [72]	0.5556 (0.0590)	0.6250 (0.058)	0.0694 (0.082)	0.374(0.073) p<0.001
Comfort of parents discussing SRH				
Intervention [70]	0.6571 (0.057)	0.6857 (0.056)	0.0286 (0.079)	
Control [72]	0.5417 (0.059)	0.4861 (0.059)	0.0556 (0.083)	0.027 (0.034) p=0.888
Parents frequency of discussing sexual topics				
Intervention [70]	0.4143 (0.059)	0.7000 (0.055)	0.2857 (0.084)	
Control [72]	0.3472 (0.057)	0.4306 (0.059)	0.0833 (0.081)	0.202 (0.065) p=0.018

The difference between the proportions of parents in the control group at post intervention and pre-intervention was -13.9%. The difference-in-difference between the intervention (4.2%) and the control (-13.9%) groups equalled -9.6%. The same

¹ Proportion of participants at baseline

² Proportion of participants at end line

³ Difference (absolute) in pre and post intervention proportions of participants who were part of either the treated or control group obtained from two-sample test for binomial proportions (normal theory test).

⁴ Two-tailed p-value for the difference-in- differences (DID). Sample sizes are in squared brackets and standard errors are in parenthesis

method was used for all the other variables: knowledge, attitude, comfort and frequency of parents' discussion sexual topics with adolescents.

The difference-in-difference (DID) obtained for knowledge of parents on adolescent sexual topics, showed that the intervention had a greater positive effect on parents in the intervention group than their colleagues in the control group (28.7%, $p < 0.001$). Regarding attitudes of parents towards allowing adolescents use of family planning services, there was a greater positive effect on parents in the intervention group compared to those in the control group (37.4%; $p < 0.001$). For frequency of discussing sexual topics with adolescents, also there was a greater positive effect in the intervention group (20.2%; $p = 0.018$). Non-significant difference-in-difference estimates were obtained for ability of parents to discuss sexual topics with adolescents, (9.6%; $p = 0.989$) and comfort of parents to discuss sexual topics with adolescents (-2.7%; $p = 0.888$).

4.7.13 Effects of Training on parents (Testing the hypotheses of the study)

Table 4.19: Illustrates the Odds Ratio of the outcome variables for the hypotheses of the study. In order to test the proposed hypotheses, the outcomes at the end of the training, were compared for the intervention and control groups.

The odds of knowledge of a parent about adolescent's sexual topics after training for the intervention group compared to the control group when all other factors are held constant is 16.199 (with $p\text{-value} = < 0.001$). This means that being part of the intervention group increases the odds of knowledge of parents about sexual topics by 16- fold.

Table 4.19: Effects of the training on parents (testing of the hypotheses)

Outcome variables	Post intervention		
	OR	95% CI	p-value
Ability of parents discussing SRH	3.19	1.49 - 6.83	0.029
Knowledge of parents on SRH of adolescents	16.199	4.41- 59.48	<.001
Attitudes of parents towards of adolescents use of family planning services	3.717	1.53- 9.06	0.039
Comfort of parents discussing SRH	1.836	0.88 - 3.85	0.108
Parents frequency of discussing sexual topics	3.212	1.49 - 6.91	0.029

Estimates adjusted for age, sex and marital status.

The odds of attitude of a parent toward adolescent's use of family planning services, after the training, in the intervention group compared to the control group when all factors are held constant is 3.717 (with p-value= 0.039). This shows that being part of the intervention group increases the likelihood of parents' attitudes towards approval of adolescents' use of family planning services by 4 folds. The odds of ability of a parent to discuss sexual topics with adolescents after the training for the parents in the intervention group compared to the control group is 3.19 (with p-value = 0.029). This means that being part of the intervention group increases the odds of parents' ability to discuss sexual topics with adolescents by 3 folds.

On the contrary, the odds of comfort of a parent discussing sexual topics with an adolescent after the intervention for the parents in the intervention group compared to the control group is 1.84 (with p-value = 0.108). This indicates that being part of the intervention group does not increase the odds of comfort of parents to discuss sexual topics with adolescents. At post intervention the odds of the frequency of a parent to discuss sexual topics with an adolescent was increased for participants in the intervention group compared to the control group is 3.212 (with p-value = 0.029). This indicates that participation in the intervention increases the odds of

parents in the intervention's frequency of discussing sexual topics with adolescents by 3 folds.

4.7.14 Parent- adolescent agreement on discussing sexual topics

The study assessed the responses of mothers and adolescents with respect to whether or not they had had a discussion on selected sexual topics. Of the 25 study topics, it was determined that for 20 topics, the responses of mothers agreed with adolescents (positive kappa values, Table 20). For the other five topics; *physical development of boys, consequences of getting pregnant/getting somebody pregnant, what to do if a partner doesn't want to use condom and wants to have sex with you, how to prevent getting STDs and homosexuality*; the responses of the mothers did not agree with those of the children (negative kappa values, Table 20).

Table 4.20: Mother-Child Agreement on Discussion about Sexual Topics

Variable	Pre -intervention		Post intervention		difference due to intervention
	Kappa value	P value	Kappa value	P value	
Prevention of pregnancy	0.002	0.997	0.252	0.003*	0.250
Wet dreams in boys	0.017	0.829	0.266	<0.001*	0.249
How to prevent getting STDs	-0.033	0.692	0.205	0.010*	0.238
Consequences of getting pregnant/getting someone pregnant	-0.044	0.599	0.155	0.053	0.199
Masturbation	0.118	0.156	0.310	<0.001*	0.192
What to do when a partner doesn't want to use condom and he/she want to have sex with you	-0.017	0.841	0.147	0.066	0.164
Overcome pressure from friends to have sex	0.119	0.156	0.274	<0.001*	0.155
How to say 'no' to sex	0.036	0.667	0.177	0.032*	0.141
Contraceptive use	0.035	0.679	0.169	0.044*	0.134
Homosexuality	-0.018	0.826	0.113	0.131	0.131
How girls get pregnant and have babies	0.071	0.399	0.171	0.036*	0.100
Consequences of abortion if you get pregnant	0.029	0.727	0.129	0.118	0.100
Abstaining from premarital sex	0.070	0.400	0.169	0.013*	0.099
Pressure from friends to have sex	0.065	0.437	0.141	0.66	0.076
Symptoms of STDs	0.090	0.285	0.161	0.051	0.071
Physical development of boys	-0.016	0.806	0.054	0.209	0.070
Physical development of girls	0.026	0.694	0.084	0.062	0.058
How to prevent getting HIV	0.064	0.411	0.122	0.110	0.058
Menstrual in girls	0.076	0.303	0.090	0.189	0.014
Condom use	0.048	0.558	0.058	0.467	0.010
Consequences of premarital sex	0.098	0.244	0.097	0.149	-0.001
Effects of substance use on sex	0.109	0.145	0.094	0.259	-0.015
Reason why you child should not have sex	0.099	0.220	0.024	0.732	-0.075

* Agreements where statistically significant

The study also evaluated the responses of the fathers and adolescents with respect to whether or not they had had a discussion on the selected topics

Table 4.21: Father-Child Agreement on Discussion About Sexual Topics

Variable	Pre-intervention		Post intervention		difference due to intervention
	Kappa value	P value	Kappa value	P value	
Masturbation	-0.108	0.173	0.183	0.010*	0.291
Wet dreams in boys	-0.047	0.441	0.132	0.006*	0.179
How to say 'no' to sex	0.015	0.821	0.139	0.014*	0.124
Reason why you child should not have sex	-0.064	0.200	0.056	0.128	0.120
Prevention of pregnancy	-0.030	0.651	0.076	0.143	0.106
How to prevent getting HIV	0.027	0.703	0.119	0.042*	0.092
What to do when a partner doesn't want to use condom and he/she want to have sex with you	0.042	0.619	0.112	0.176	0.07
How girls get pregnant and have babies	-0.028	0.655	0.040	0.435	0.068
Symptoms of STDs	0.092	0.215	0.146	0.029*	0.054
Physical development of boys	0.037	0.583	0.088	0.049*	0.051
Physical development of girls	0.000	0.993	0.027	0.160	0.027
Consequences of abortion if you get pregnant	0.023	0.594	0.043	0.459	0.02
Overcome pressure from friends to have sex	0.038	0.591	0.047	0.365	0.009
Pressure from friends to have sex	-0.014	0.815	-0.009	0.839	0.005
Sexual feeling	-0.044	0.560	-0.043	0.425	0.001
Abstaining from premarital sex	0.011	0.863	0.007	0.866	-0.004
Consequences of getting pregnant/getting someone pregnant	0.087	0.165	0.080	0.108	-0.007
Condom use	0.109	0.164	0.101	0.111	-0.008
Homosexuality	0.074	0.354	0.060	0.252	-0.014
Consequences of premarital sex	0.083	0.168	0.060	0.070	-0.023
Menstruation in girls	0.047	0.168	0.011	0.701	-0.036
Contraceptive use	0.117	0.078	0.070	0.244	-0.047
How to prevent getting STDs	0.051	0.391	-0.033	0.534	-0.084

*agreement where statistically significant

Of the 25 topics, it was determined that for 18 topics, the responses of the fathers agreed with those of their children (positive kappa values, Table 21).

For the other seven topics; *masturbation, wet dream in boys, reasons why your child should not have sex, prevention of pregnancy, how girls get pregnant and have babies, pressure from friends to have sex, sexual feeling*, the responses of the fathers did not agree with the their children (negative kappa values, Table 21).

4.7.15. The relationship of the study with the Theoretical framework

Table 4.22; represent the relationship between the study and the theoretical framework.

As in the Table 4.22, the data from this study showed that having good knowledge about sexual and reproductive health topics was positively associated with increased frequency of discussing sexual and reproductive health topics with adolescents in both the intervention and control groups at pre-intervention and post intervention. This was in agreement with the theoretical framework. The data from the study did not however, show a significant positive association for parental attitude towards allowing adolescents access to family planning services, parental ability and parental comfort with sexual and reproductive topics discussions.

In this study, knowledge about sexual topics is the main determinant of a parent's intention to discuss sexual topics with the adolescents. This mean that a parent must have the knowledge about sexual topics to be able to talk to his/her adolescent about sexual issues.

Table 4.22: Effects of knowledge, attitude comfort and ability on frequency of parent-adolescent Sexual discussions

	Control group at pre- intervention	Control group post intervention	Intervention group at pre- intervention	Intervention group post intervention
Outcome variables	OR 95% (CI)	OR 95% (CI)	OR 95% (CI)	OR (95% CI)
Good knowledge	6.36 (1.99, 20.34)	15.14 (3.97, 57.71)	10.18 (2.46, 42.18)	29.21 (2.83, 301.74)
No Knowledge	1.00	1.00	1.00	1.00
Good Attitude	1.35 (0.46,3.98)	1.18 (0.35, 3.95)	3.09 (0.98, 9.76)	0.87 (0.14, 5.32)
Bad Attitude	1.00	1.00		1.00
Comfortable	0.76 (0.24, 2.41)	0.76 (0.24, 2.39)	1.98 (0.56, 6.99)	3.27 (0.97, 11.00)
Not comfortable	1.00	1.00	1.00	1.00
Good Ability	1.64 (0.49, 5.46)	3.73 (1.05,13.23)	2.25 (0.60, 8.50)	0.83 (0.21, 3.19)
Poor ability	1.00	1.00	1.00	1.00

CHAPTER FIVE

DISCUSSION

5.0. Introduction

The main objective of this study was to assess the effects of training parents on parent-adolescent communication about sexuality. The study approach was guided by the concepts in the Theory of Planned Behaviour Model of Ajzen (2006). The structure and content of the discussion is based on the concepts borrowed from the theoretical framework:

1. Parents' perceived knowledge of sexual topics
2. Parents' attitudes toward adolescent sexual issues
3. Subjective norms affecting parent-adolescent communication about sexual topics
4. Perceived behaviour control factors influencing parent-adolescent communication on sexual topics
5. Parents' intention to discuss sexual topics with adolescents
6. Manifestation of behaviour: actual parent-adolescent discussion about sexuality

5.1. Parents' perceived knowledge about adolescent sexual topics

Parents' knowledge about sexual topics motivates them to discuss sexuality with their adolescents. The more knowledgeable a parent is about sexual topics, the more confident he/she feels about discussing such topics with his/her adolescent. Ubaidur et al. (2006) in their study, reported a lack of knowledge among parents on basic understanding of adolescent reproductive and sexual health issues in Bangladesh. The parents in the current study, however, had varied levels of knowledge of

adolescent sexual topics. For instance, with topics relating to biological development, the parents in both the intervention (46.6%) and the control (47.2%) groups had good knowledge about these topics at pre- intervention. This is because these topics centre on common physical features that a parent may notice on an adolescent as he/she develops. This finding is therefore not surprising that in this study most of the parents had good or very good knowledge about these topics. The parents in the intervention group showed increased knowledge of sexual risk protection topics after the training compared to the control group. These topics may have been of importance to the parents, who therefore made the effort to learn these risk protection topics so that they can educate their adolescents better against risky sexual behaviours. Evidence had shown that parent-adolescent communication about risk sexuality behaviours reduces such behaviours among adolescents (Edelman, 2003; Mitchell, 2009; National Parent Teachers Association, 2003).

Even though the benefits of contraceptive use are acknowledged, most parents lack knowledge on this topic (Frost & Lindberg, 2013). Most parents in the study did not have knowledge of topics on contraceptive use. Many factors could account for this lack of knowledge of topics on contraceptive use, the most probable being parents' fear that their adolescents would engage in sexual activities if such topics are discussed with them by parents. Among parents in the present study, mothers had higher levels of knowledge of all the categories of sexual topics, than fathers. These higher levels of sexual knowledge among mothers may be an indication that the mothers were more interested in learning more about adolescent sexual topics that could facilitate the discussing of these topics with their adolescents. In contrast to the

present study, Gallegos, Villarruel, Gomez, Onofre, and Zhou (2008) found out in Mexico that fathers had higher levels of sexual knowledge than mothers.

In Ghana, mothers and aunties are mostly the main educators of children about sexual issues. Evidence in an earlier study indicated that the mother is the most common household member involved in sexual communication with adolescents in Ghana (Kumi-Kyereme, Awusabo-Asare, Biddlecom, & Tanle, 2007). Mothers may view the education of adolescents as their responsibility and therefore make more effort to acquire knowledge to enable them discuss these issues with their adolescents. Fathers may not be so interested in adolescent sexual topics because they may think that it is the mothers' duty. Some fathers may also genuinely not have the knowledge about sexual topics and need to be motivated to learn more about sexual topics in order to educate their children about such issues. For the total parents' perceived knowledge about sexual topics, after the intervention the parents in the intervention increased their knowledge levels of very good (37% to 60%; figure 4.1). Data from this study support the hypothesis that the intervention will improve parents' knowledge about sexual topics. Parents in the intervention group recorded a 16-fold increase in knowledge, compared to the control group ($p < 0.001$). The training increased the knowledge, enhanced the confidence and ability of the parents in the intervention group to engage in discussion on sexual topics with their adolescents.

5.1.1. Parents' sources of knowledge of adolescent sexual topics

Parents in the focus group discussions stated having read books on sexual topics, buying books for their children to read themselves, watching TV programmes and

friends as their sources of knowledge of adolescent sexual and reproductive health issues. A similar finding was reported by an American study by Wilson et al. (2010) who indicated that to help parents talk to their children, parents used available resources such as books on the topics for themselves and their children, TV programmes and other parents. Parents reading books on sexual topics and buying books for their children to read suggest that they have realized the need for them and their children to have more information on sexual and reproductive health issues. Unfortunately, the purchasing of these books for their children to read to acquire information on sexual issues may not be sufficient for some children who might have difficulty in understanding what they read. Such children may therefore need parental support. Beyond what may be read in the books, parents may need to adapt and interpret knowledge in relation to the context that their adolescent lives in. However, parental use of other parents as resource persons in educating their adolescents about sexual topics is commendable.

5.2. Attitudes of parents towards adolescent sexual issues

Parental attitudes towards adolescent's sexuality could either encourage or discourage adolescents from living healthy sexual lives. In the study, about 30.1% of parents in the intervention and about 31.9% in the control groups at pre-intervention indicated that they would not approve of their adolescents to have access to family planning services. This finding supports the finding of an earlier study in Lesotho, which indicated that some parents, especially fathers argued that unmarried adolescents were not supposed to plan a family, therefore they should not be provided with reproductive health services (Mturi, 2003).

After the training, there was a significant increase in the proportion of parents in the intervention group (30.1% to 82.9% $p=0.005$; Figure 4.2) who reported that they would approve of their adolescents to access these services. The training had provided the parents with enough information on contraceptive and condom use. Therefore, they saw the need for adolescents to access such services. The hypothesis that the intervention will improve parents' attitudes towards adolescents' sexual and reproductive health issues was supported since the data from the study showed that participating in the training improved the attitudes of parents towards adolescent sexual issues in the intervention group compared to the control group by 4-fold ($p=0.039$). Adolescents' access to reproductive health services are not meant for family planning services alone, but also to enable them to seek information about their sexuality. Similarly, sexually active adolescents need to protect themselves against unprotected sex by the use of contraceptive like condoms which they can access at these health facilities.

5.3. Subjective norms affecting parent-adolescent discussion about sexual topics

5.3.1. Religious beliefs

Parents' religious beliefs are of great importance and influence when it comes to educating adolescents about their sexuality. Some leaders of religion discourage the education of adolescents on sexuality (Ankomah, 2001). In this study, majority of parents, both at pre-intervention and post intervention reported that their religious beliefs allow them to discuss sexual issues with their adolescents. During the FGDs, the parents identified some charismatic churches as those that place restrictions and do not allow discussion of sexual topics with adolescents. The participants noted that even though the Catholic Church allows the discussion of sexual topics with

adolescents, it does not allow the discussion of modern contraceptives with the youth. This tendency by these religious organizations may place adolescents from such religious backgrounds at high risk and must be targeted for interventions to help prevent risky sexual behaviours among them.

5.3.2. Culture

Some cultures may be more tolerant than others regarding discussions of sexual topics with adolescents. In the present study culture did not appear to be a hindrance to discussion of sexual topics. This lack of restraint on cultural grounds may have been strengthened by the fact that the parents lived in the capital city where cultural influences on individuals are relatively weaker compared to those living in more rural homogenous populations. It can also be attributed to the fact that the parents had adopted a nuclear family system which appeared to be the norm in the city and were again not influenced by cultural pressures. The media exposure and content on sexual topics in the city are also more likely to influence the parents.

While culture in itself was not a direct impediment to discussing sexual topics, some parents in the FGDs cited cultural taboos as an impediment to open discussion of sexual issues with adolescents. It is believed that talking to the child about sex will encourage the adolescent to indulge in sex. As far back as 1997 UNAIDS assessed 53 programmes on sexuality education of adolescents and found that only three (3) reported any negative impact on parent-adolescent sexual communication and adolescent sexual behaviour (UNAIDS, 1997). The FGDs parents indicated that cultural taboos have made it difficult to talk about sex generally, for which certain parts of the body are mentioned in euphemism where by 'manhood' is used for

penis. Evidence from Kenya also revealed that traditional taboos are the main obstacles to meaningful sex-education between mothers and their daughters and prevented parents from talking about sex with their children (Mbugua, 2007).

5.3.3. School sex education

Sexuality education of adolescents in Ghana is school-based and most parents play no role in educating their children. In the FGDs, parents indicated that they are in support of school sex education of adolescents because children are more likely to take what is taught by their teachers more seriously than what parents teach them. A similar finding in support of school sex education programme was reported by Bleakly et al. (2006) in the United States. The parents in the present study supported school sex education programmes. Since many of the parents could not educate their adolescents on sexuality, they were grateful that the school was doing it. Even though parents' support for school sex education is good, it is important that ways must be found through which parents are empowered to discuss sexual topics with their adolescents. The adolescents may take what the teacher teaches at school more seriously primarily because such courses are examinable.

While some parents expressed their support for school sex education programmes, other parents indicated that schools need to involve parents in sexuality education of their children by providing guidelines of what is taught in school, for parents to complement the efforts of teachers. The call for parents to be involved in school sex education of their children has been expressed by Mitchell (2010). Schools involving parents in sex education programmes will allow the parents to be abreast of what their children are learning so as to complement what the school is teaching. In

support of this Kirby and Miller (2002), found that school sex education programmes prevent sex risk-taking among adolescents and promote healthy sexual lifestyles. Parents could be allowed to join school sex education programmes that are organized for students and contribute towards discussions in the programmes to see what is being taught at school.

5.3.4. Influence of the media on the sexual lives of adolescents

The Media serves as an agent of sexual socialization to adolescents. Adolescents acquire both positive and negative forms of sexual information from the media. In the FGDs, parents were concerned about the negative effects that the media especially TV and the internet, has on the sexual lives of adolescents. Television stations were blamed for showing sex provoking movies during the day, which young people watch and learn from. Radio stations were blamed for airing 'bad' programmes on radio early in the evening which children listen to, an example being 'woba ada aanaa?' literally meaning is your child asleep? Results of a prior study in the United States found that adolescents acquired sexual messages and ideas about sex from the television, movies and the internet (Carpenter, 2003; L. M. Ward, 2003). Wilson et al. (2010), also found from FGDs in the United States that parents blamed the television and the internet media for the risky sexual behaviour of children. They expressed their frustration about children's easy access to pornography on the internet and cable TV, the negative role models on television, open sexual content of music and video games and sexual overtones of advertising.

Although the media has been blamed for its negative influences on adolescents, it was also highlighted as a medium of promoting healthy lifestyles among adolescents. Parents in the FGDs suggested that the soap operas that are shown on

television, for instance, could have stronger sex education components since adolescents enjoy watching these programmes. This finding agrees with Kim and Ward (2004) findings where healthy sexual behaviour was promoted, adolescents obtained information from media sources such as magazines. This has the potential of promoting healthy adolescent sexuality in conjunction with and other life skills. Due to media proliferation and divergence of views, parents will need to help adolescents make choices with respect to programmes viewing to prevent exposures to programme that can provoke adverse sexual outcomes in adolescents.

5.3.4. Peers as source of sex education for adolescents

Adolescents usually seek information on sexuality from peers as they seem to understand each other. Consistent with the finding of an earlier study (The Media Project, 2005) it was found out that adolescents prefer to seek information from their peers instead of from parents. The FGDs showed that lack of sexual communication between parents and their adolescents made adolescents turn to their peers for information on sexuality. This lack of communication may be primarily that they feel more comfortable in discussing with their peers than parents. Alternatively, adolescents may be talking to peers rather than parents because some parents would not tolerate adolescents' questions about sex or have time to discuss such issues with their adolescents. This is also confirmed by a study by the Palo Alto Medical Foundation (2001) which observed that if the adolescent have problems with or felt uncomfortable in talking with his/her parents, he/she would turn to their peers. This presents a challenge in which adolescents may be exposed to wrong information from their 'seemingly knowledgeable' colleagues, which can lead to avoidable negative sexual outcomes. It is necessary that parents seek expert advice on

performing the task of educating their adolescents on sexual topics if they feel unable to do so. Parents can also make use of available training materials and programmes that offer the necessary skills required for more open, comfortable and frequent parent-adolescent sexual communication that will yield positive sexual outcomes in adolescents.

A new barrier to parent-adolescent sexual communication identified in this study was the parental suspicion of adolescents' involvement in premarital sex when they asked questions about sex. This suspicion yields reluctance on the part of adolescents to start discussion on sexual topics with parents. Parents will need to be sensitized on the need to avoid unnecessary suspicions in order to allow their adolescents the freedom of asking any mind bothering questions that may be crucial for their sexual decision-making.

5.4. Perceived behavioural control factors that influence parent-adolescent sexual communication

5.4.1. Parents' self-rated ability and comfort to discuss sexual topics with adolescents

Parents' ability to discuss sexual topics with adolescents can enhance healthy sexual behaviours among adolescents. Parents in the intervention group reported an increase in their self-rated ability for discussing sexual topics with their adolescents after the intervention (65.8 % to 71.5%, $p=0.004$; Figure 4.9). This finding agrees with a previous study in the United States which also revealed that parents in the intervention group increased their ability of discussing sexual topics with their adolescents after the intervention compared to the control group (Schuster et al., 2008). Data from the study support the hypothesis that the intervention will increase

parents' ability of talking with their adolescents but parents' comfort in talking with their adolescents about sexual topics was not supported by the data because it not significant. Parents in the intervention group improved their ability of talking to their adolescents about sexual topics by 3-fold ($p=0.029$).

Similarly, parents in the intervention group showed increased comfort levels in discussing sexual topics with their adolescents after the training (65.8% to 68.6%, $p= 0.038$; Figure 4.10). This finding concurs with results of previous studies which observed that following an intervention, parents in the intervention group had increased their comfort in talking about sexuality with their children (Bell et al., 2008; Dilorio et al., 2006; Forehand et al., 2007). This suggests that the training was able to boost the parents' ability and the confidence to freely talk to their adolescents about sexual topics.

Parental fear of being unable to answer sex-related questions posed by their adolescents emerged during the in-depth interviews as a reason for discomfort in discussing sexual topics with adolescents. Wilson et al. (2010), had earlier identified parental inability to handle questions posed by their children due to lack of technical knowledge on sexual topics. Stakeholders, interested in adolescent sexual and reproductive health must provide funds for training parents on sexual and reproductive health issues.

5.4.2. Importance of training parents to talk to adolescents about sexuality

Training gives the learner knowledge and/or skills to enable him/her to perform a desired activity. It was observed that parents who had not previously received any

information on sexuality, found it difficult to discuss sexuality with their adolescents. This is not surprising as Mbugua (2007) also observed that among mothers who had no sex education from parents, providing sex education to their own daughters became difficult.

However, some parents had the knowledge but how to communicate the information to their adolescents was a challenge since this was considered as a sensitive issue. They therefore, would prefer not to talk about it. Many of the parents in both the FGDs and in-depth interviews asserted that if parents were trained on adolescent sexuality, it would enable them to talk with their adolescents about sexuality. The finding of this study concurs with previous researches which also trained parents to talk to their adolescents about sexuality (Dilorio et al. 2007, Schuster et al. 2008; Bell et al. 2008; Phetla et al. 2008). Training parents to talk to their children about sexuality has a positive impact on their knowledge of sexual topics and which will in turn give the parents the confidence, ability and comfort to talk about such topics with their children.

5.5. Intention of parents to discuss sexual topics with adolescents

5.5.1. Gender influence on parental intention to discuss sexual topics with adolescents

Although parents have the responsibility of discussing sexual topics with both daughters and sons, some parents prefer to discuss such topics with one gender rather than the other. An interesting finding in the in-depth interviews from all the parents was the higher priority given to educating their daughters more than their sons about sexual topics. This finding contrasts with prior studies by Dilorio et al. (2003) and Swain et al. (2006) who found that more mothers would like to talk with

their daughters than with their sons about sex-related topics. Parents may be more concerned with the welfare of their daughters rather than sons as they would not like their daughters to indulge in early sex. This may also be due to the fact that parents are protective of their daughters as in any event such as pregnancy, the daughters bear the greatest consequences but the sons end up with some marginal consequences. For instance, whereas the girl can lose her life from unsafe abortion, the boy may just have to drop out of school. Hence, parents deem it important to talk to their daughters about their sexuality. However, parents need to talk to their sons as much as they will talk to their daughters as the sons also have sexual challenges.

5.5.2. Age for sexuality education

The timing of when to give sex education to the child depends on the individual parent or guardian. While some parents may want to start talking to their children about sexual topics early, others may want to wait until they notice any sexual behaviour in the child or when the child is old enough. The present study found that at pre and post intervention (54.8% vs. 54.3 %,) parents in the intervention and (70.4% vs. 51.4%) in the control groups agreed that they would like to start talking to their children about sexual topics between the ages of 10 and 12 years (Table 4.6). An age estimate identical to that found by Wilson et al. (2010) and Kakavoulis (2001) in the United States and Greece respectively revealed that parents opined that their children should be educated about sex topics during the primary school years (between 10 and 12 years). However, after the training some parents (27.1%) in the intervention group indicated that they would like to start talking to their children at an earlier age of 7 and 9 years. This finding agrees with findings by Walker (2001),

who indicated that parents would like their children to be educated about sex earlier than 10 years.

Among the parents who indicated a desire to educate children about sexual topics between the ages of 10 and 12 years or younger, during the pre-adolescence stage, the reason for the choice of age range was the desire to provide their children with the right information before they become sexually active. This could also be due to the fact that it would be easier to start talking to children when they are pre-adolescents since they are more likely to listen and adopt and practice it when they grow older. It is essential that parents start educating their children early as they are exposed to information about sex earlier than parents may think. If parents do not talk to their children about sex, it will mean that they will not have control over what their children learn about sex. Children are generally exposed to sexual issues from peers, sexual images and sexual content in magazines, television, radio and movies. Thus, parents cannot prevent adolescents from accessing sexual information, no matter how hard they try (Ross, 2012). Parents should seize such opportunities to empower their children on sexuality.

5.6. Manifestation of behaviour: actual parent-adolescent discussion about sexuality

5.6.1. Parent-adolescent sexual discussions

Parent-adolescent sexual communication has been found to have many benefits to adolescents (Edelman, 2003; Lefkowitz et al., 2003; Meschke et al., 2002). The findings of the present study indicate that, after the training, the proportion of parents who reported to have ever discussed sexual topics with both sons and daughters increased for the intervention group compared to the control group. The training

provided the parents with skills which made it possible and easier and gave them confidence to discuss sexual topics with their adolescents. It is also possible that the training made the parents realize the important benefits of talking about sexual topics with their sons as well as their daughters. The finding of this study supports earlier studies (National Parent Teachers Association, 2003; The National Campaign to prevent teen pregnancy, 2003) in the United States which observed that parent-adolescent communication about sex has been associated with reduced number of sex partners, delayed start of early sexual intercourse, protective sexual behaviour and increase in contraceptive use.

5.6.2. Initiation of parent-adolescent communication on sexuality

Discussion of sexuality with adolescents has been a controversial issue. While some people advocate for age appropriate time to start talking to children others talk about situations which prompt such discussions. Reports from the quantitative data indicated that parents are the main initiators of discussion on sexual topics with their adolescents for both the intervention and the control groups respectively. Although being the initiator of sex education is a positive sign of educating adolescents, it is possible that the parent may dictate what is to be discussed and the adolescents may have no option but to listen, even when it is not what they would like to know more about. It is commendable that parents are becoming aware of their responsibility of taking an active role in sex education of their adolescents.

However, some adolescents make use of such opportunities and ask questions concerning sexuality. Within this study, only a small proportion of adolescents asked questions for parents to initiate sexual discussions with them (15.1% to 15.7%) for the intervention group and (25.0% to 20.8%) for the control group at pre and post

intervention. This low proportion of inquisitive adolescents may be an indication that the adolescents may be afraid to ask their parents questions concerning sex for fear of the parents' reaction to such questions. It is important to encourage adolescents to ask parents questions about sexual issues they do not understand as this may initiate discussions and clarify issues for the adolescents.

Parents recounted during in-depth interviews that they started talking to their children on different occasions and on varied issues. Many of them reported that they initiated talking about sexual topics with their adolescents while viewing television shows that had romantic scenes. Discussions were usually initiated whilst these scenes were being shown. This finding supports previous studies by Lefkowitz and Stoppa (2006) and Wilson et al. (2010) who found that parents take advantage of events like watching television to talk about sex-related topics with their children. It is worthy of note that parents also took advantage of life situations as a case study for sex education, especially, in instances when an adolescent's family member gets pregnant. They use such a happening as an opportunity to start talking with their children on sexual topics. This helps them to initiate discussion on safer and more protective sexual behaviour so that younger siblings/children can identify problems and solutions as they watch the consequences that befell victims of early sexual activities and not to repeat the same mistakes.

5.6.3. Content of parent-adolescent communication on sexuality

The main objective of sexuality education for adolescents by parents is to prevent them from engaging in premarital sex. However, identifying the right content for

sexual discussions is very difficult for some parents as well as the range of topics to address.

The sexual contents that are discussed with adolescents differ by the gender of the child. Parents in the in-depth interviews reported that they discussed menstruation, peer pressure, premarital sex, HIV/AIDS, boy/girl relationships, personal hygiene, pregnant, abstinence, STIs, abortion and how to say 'no' to forced sex. The findings are consistent with findings of past studies (Eisenberg et al., 2006; Epstein & Ward, 2008; Guilamo-Ramos et al., 2006; Kline et al., 2005; Wamoyi et al., 2010) which reported that parents discussed a similar range of sexual topics with their children. Among all the topics discussed, abstinence was a major topic discussed mostly by the parents as they did not want their adolescents to indulge in premarital sex. Parents are particularly concerned with their female adolescents' indulgence in premarital sex since the outcomes of such actions are normally disastrous.

Another interesting finding is that parents never talked about contraceptive and condom use with their adolescents. This finding is however consistent with the previous studies in Tanzania (Wamoyi et al., 2010) and (Izugbara, 2008) in Nigeria, in which it was found that the topic least talked about by parents with their children during sexual discussions were contraceptives and condom use. This finding however, is at variance with a previous study (Pluhar & Kuriloff, 2004) which detected that parents often discuss issues such as condom use and protection with their adolescents. The parents did not talk about contraceptives and condom use

with their adolescents because they believed that such discussions would promote promiscuity.

5.6.4 .Parents reported frequency of parent-adolescent sexuality communication

The frequency of discussing sexual topics between parents and adolescents depends on the quality of the relationship between the parent and his/her adolescent as well as the parent's knowledge about sexual issues. The frequency of discussion of sexual topics promotes healthy sexual behaviour among adolescents. The finding of this study illustrates that parents in the intervention group exhibited higher frequency of parent-adolescent discussions on all the categories of sexual topics after the training than the control group. This finding is consistent with previous studies (Bell et al., 2008; Forehand et al., 2007) which found that after the intervention, the parents in the intervention group reported increased frequency of talking about sexual topics with their adolescents. For instance, on total parents' reported frequency in discussion about sexual topics, after the training, the parents in the intervention often discussed sexual topics with their adolescents (19.2% to 42.9%; <0.001 ; Table 4.10) compared to the control group. Data from the study supports the hypothesis that parents in the intervention will communicate more frequently about sexual topics with their adolescents. Parents in the intervention group often discussed sexual topics with their adolescents compared to the control by 3-fold ($p=0.029$).

The main reason for the increase in parents' frequency of discussing sexual topics with adolescents was as a result of the training they received. The training had provided the parents with skills that enabled them to talk to their adolescents more frequently about sexual topics. The results of this study further demonstrated that the

parents in the intervention group increased the frequency of discussing sexual risk protection and risky sexual behaviour topics with their adolescents more than the other categories of topics. These sets of sexual topics may be of interest to the parents as the adolescents may use frequent discussion to protect themselves against risky sexual behaviours. The category of topics least frequently discussed by parents with their adolescents was contraceptive use. This may mean that the majority of parents did not have the requisite knowledge to enable them discuss these topics.

5.6.5. Differences in communication due to sex of parent

The findings of the present study demonstrated that mothers and fathers differ in their frequency of discussing sexual topics with adolescents. The finding indicated that mothers discussed sexual topics with their adolescents more often than fathers. This finding agrees with Swain et al. (2006) who reported that mothers had discussions with their children about the negative effects of sex and where to access contraceptives than fathers. Feldman and Rosenthal (2000), also found mothers to be more consistent communicators of sexual topics than fathers. In the present study, fathers communicated with their adolescents less frequently than mothers did in all the categories of sexual topics. This finding of the study concurs with the findings of an earlier study (Wilson et al., 2010) which found that fathers communicated less with both sons and daughters about sexual topics compared to mothers. This result of the present study further indicated that after the training a higher proportion of fathers in the intervention group than the control group discussed sexual topics with adolescents. This result agrees with an earlier study in the USA (Dilorio et al., 2006) which found that the fathers in the intervention group reported considerably more talking about sexuality with adolescents than the fathers in the control group.

Mothers' frequent discussions about sexual topics with adolescents may be possible as children tend to spend more time with mothers than fathers. This enables mothers to have the opportunity to talk to their children on various topics, including those on sexuality. This closeness could be explained from the mother-child bonding at birth which continues as the child grows, relative to both daughters and sons. Mothers are also the primary care givers in the home and take up the responsibility of sex educators as part of the socialization of their children. On the contrary, the low discussions of sexual topics between fathers and their children seems to suggest that fathers are not so close to their children compared to mothers so they find it difficult to discuss such issues with them. Moreover, fathers may communicate less with their children since they may think it is the mothers' responsibility to talk to their adolescents about sexual issues. The opportunity for fathers to talk to their children about sexually is always there but this role is socially ascribed to women.

5.6.6. Differences in communication due to sex of adolescent

Female adolescents mostly reported that they received more information on sexuality from their mothers, while the male adolescents reported that they received more information from their fathers. The finding of this study confirmed that for both mothers and fathers in terms of discussing sexual topics with adolescents, a greater proportion of adolescents in the intervention group reported that they have discussions with their mothers on all the categories of sexual topics after the training than the control group. This finding is supported by that of an earlier study (Lefkowitz et al., 2002) which observed that adolescents in the intervention group acknowledge that they have frequent discussions with their mothers about sexuality, after training than the control group. A previous study in the USA also showed that a

higher-level mother-daughter discussion of sexual topics averted increased number of incidents of intercourse and unprotected intercourse among adolescents (Hutchinson et al., 2003).

The present study indicated that sons reported that a higher proportion of fathers discussed all the categories of sexual topics with them except contraceptive use topics before the training than daughters. After the training, sons reported increased proportion of fathers discussing contraceptive use topics with them than daughters. The finding of the present study supports the preceding research by Namisi et al. (2009) conducted in three sites in Tanzania and South Africa in which adolescents were to identify their preferred parents as regards sexual communication. The researchers found that mothers were preferred as communication partners by majority of female adolescents at all the three sites while sons preferred fathers at two sites. After the training, a higher proportion of fathers in the intervention group talked to their sons compared to their daughters about contraceptive use topics (Tables 15 and 16) a result which could be attributed to the training they received.

5.6.7. Education of parents on sexuality during adolescence

It is always important to educate children on sexuality at a young age so that they can live healthy sexual lives in their adult years. In the FGDs, many of the parents complained that they were not educated on sexuality when they were young. In the in-depth interviews, those parents who stated that they were educated on sexuality said it was just precautionary:

I had some education but it was precautionary. 'If you go and sleep with a girl she will get pregnant and they will come and arrest you'.

Other parents agreed that they never had any education on sex from their parents but received metaphoric caution against sex and said:

My mother never educated me on sex, she won't tell you that if you have sex you will get pregnant. She would tell you that if a man touches you, you will be pregnant so I had that in my mind, whenever a boy approached me I would ask him not to touch me because I don't want to be pregnant. I don't want my mother to see that I am pregnant'.

The above quotations support the result of an earlier study (Izugbara, 2008) which observed that parents deliberately misinform their daughters about the realities of sex in order to discourage their interest in sexual matters and put fear into them not to indulge premarital sex.

The results of this study also found that parents were of the opinion that if their parents had educated them on sexual issues when they were young, it would have been easier for them to educate their own children. Wilson et al. (2010) in their study recounted that, parents also complained about their parents' inability to talk to them about sex, makes it difficult for them to dialogue with their own adolescent children about sexuality. It is significant for parents to dialogue with their adolescent children to break the tradition of silence of talking about sexuality. Sex education in schools needs to be improved by training teachers to teach the subject effectively.

5.6.8. Difficulties confronting parents in discussing sexuality with adolescents

Many parents face difficulties while discussing sexual topics with their adolescents, either the parents have problems when talking to their children or the children are not prepared to listen to the parents. After the training, 22.9% of parents in the intervention group and 9.7% in the control group agreed that they had problems

when they were discussing sexual topics with their adolescents. Similarly, some parents in the in-depth interviews confirmed that they had difficulties when talking about sexual issues with their adolescents. For example a mother was worried because her children would not listen to what she would say and when she forced them they would allow her to talk but after that they would ask her *'have you finished ?* And he/she would get up and go. Another mother indicated that she found it difficult when talking with her daughter about sexual intercourse and kissing because she would not like her to talk about them. Parents in previous studies also reported that they experienced some types of difficulty such as unease about physical development and embarrassment when discussing sexual issues with their children in the United States (Jerman & Norman, 2010).

Another parent had difficulty with technical aspects of sexuality such as the terminologies which he could not explain to his children to understand him. A number of studies had found similar results in the United States, which suggested that Latino parents have difficulty when talking about technical aspects of sexuality, including contraceptives as they require specialised knowledge (Raffaelli & Green, 2003; Raffaelli & Ontai, 2008). The parents had difficulties when talking to their children as they may not have started talking to their adolescents at an early age. Therefore, as the children grew up they felt uncomfortable to discuss such sexual issues with their parents. For such discussions to take place a good parent-child relationship needs to be built with the child at a young age. This would encourage parent-adolescent communication when the children become adolescents.

One critical issue that came out during in-depth interviews was imposition of sexual discussion on adolescents. Even though parents need to discuss sexual issues with their adolescents, parents need not impose such discussions on adolescents. There should be a mutual consent between parents and adolescents concerning sexual discussions such that a dialogue may ensue rather than it being a one way communication.

Sexuality is a specialised area which needs expert knowledge. Thus, some parents find it difficult in talking about some typical issues on sexuality. The need for expert knowledge therefore is paramount for parents to communicate better. Innovative ways of empowering women on sexuality must be developed. For instance, in the country 's quest to achieve the Millennium Development (MDGs) Goals 4 and 5, many groups such as mother-to mother-support groups and father-to father support groups have been formed to accelerate this achievement. These groups can be used to promote sex education among families which will go a long way to inform the adolescent.

5.6.9. Effects of three month sexual health education programme on parents

The three month sexual health education programme for parents had some level of influence on the various variables used to measure the impact of this education on parents' behaviours. Difference-in-difference estimates obtained for a parent's knowledge was significant, with higher proportion of parents in the intervention group showing an increase in their knowledge on sexual topics after the training than their colleagues in the control group (28.7% increase). This means that educating parents about sexuality has the potential to increase their knowledge, and this will

enable them to talk to their adolescents about sexual topics. Again, as a measure of impact, the difference-in-difference estimates for parents' attitudes towards adolescents' use of reproductive health services was significant. This is an indication that educating parents about sexuality improved their attitudes towards adolescents' use of reproductive health services. Additionally, from the same difference-in-difference evaluation, a significant impact was obtained for frequency of discussing sexual topics with adolescents. This means that educating parents about sexual topics increases their frequency of talking to their adolescents.

However, as an assessment of effect, the difference-in-difference estimate for comfort levels of parents in discussing sexual topics with adolescents was not significant. This association not being significant could be due to the fact that the sample size was simply not large enough to determine the effect of comfort in this study. Similarly, as a measure of impact the difference-in-difference estimate for ability of parents to discuss sexual topics with adolescents was not significant. This again could be attributed to the sample size not being large enough to detect the effect of self-rated ability levels of the parents.

5.6.10. Strengths of the study

1. In this study, both genders of parents were included in the study while most of the previous studies usually were conducted with mothers and their children. This study has given some insight into how both parents communicate with adolescents. The study took into consideration parents' knowledge about sexuality before examining them about sexual topics which many studies did not do.

2. The procedure used for the training sustained the interest of the parents in the study therefore their participation was high and there were only few drop outs.
3. The study used both qualitative and quantitative methods to examine the sexual communication between parents and their adolescent children. Information that the questionnaire could not explore adequately were investigated by using qualitative methods of data collection.

5.6.11. Limitations of the study

1. The main limitation was the sensitive nature of the topic and for that matter; it is possible that answers given by some parents and adolescents to some of the questions might not be completely truthful.
2. Parents in the intervention group may have over-reported answers after the training, simply because they had had the training.
3. The different assessments were based on self-report and parents could have given answers favourable to what they considered to be right.
4. The finding of the study cannot be generalized for the whole country due to the small sample size and the fact that it was conducted in only two sub-metropolitan areas of the Accra Metropolis. This is in spite of the fact that the parents come from different ethnic groups in Ghana.

5.6.12. Contribution to knowledge

This study has provided evidence that when parents are trained on sexual topics; it impacts positively on their knowledge, attitudes and frequency of discussing sexual issues with their adolescents/children.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.0 Introduction

This chapter presents the conclusions and recommendations, based on the findings of the study. The main objective of the study was to assess the effects of training parents on parent-adolescent communication about sexuality in the Accra Metropolis, Ghana.

6.1. Conclusion

Parents' knowledge about sexual issues is very important when they are faced with the need to discuss and educate children on sexuality. Parents in both the intervention and control groups exhibited varied levels of knowledge about all the categories of sexual topics. However, the parents in the intervention group achieved a greater increase in their knowledge levels after the training than the control group. The category of sexual topics which parents had least knowledge was related to contraceptive use. This shows that the parents themselves are not well educated about contraceptives. The mothers in the intervention group increased their knowledge levels on all the categories of sexual topics than those in the control group. The mothers also had a higher level of knowledge on all the categories of sexual topics than the fathers.

Parents in the intervention group had more positive attitudes towards adolescents' sexual health topics after the training. Consequently, a high proportion of parents agreed to approve of their adolescents to use reproductive health services. Similarly,

after the training, a higher proportion of parents in the intervention group also accepted to allow discussions about sexual topics with their adolescents and to allow their sexually active adolescents to use condoms. The training increased the self-rated ability of parents in the intervention group to discuss sexual topics with adolescents. Also, the trained parents felt more comfortable in discussing sexual topics with adolescents which is an indication that parents had acquired the skills and confidence and hence the ability to talk with their adolescents. After the training and sensitization, parents, not only discussed and talked to their adolescents about sexual issues, but also did so with daughters as well as sons more frequently. Higher proportions of mothers than fathers discussed sexual topics with their adolescents.

The adolescents reported that their mothers discussed sexual topics more frequently with them compared to their fathers but the fathers talked more to their sons than their daughters. There is a high level of agreement between mothers and adolescents on the occurrence of discussion on all the sexual topics after the training.

Generally, the training impacted on the knowledge, attitude, ability and frequency with which the parent in the intervention group would discuss sexual issues with their adolescents.

6.2. Recommendations

On the basis of the study results and their implications the following recommendations are made to stakeholders.

6.2.1. Parents

- i. Parents who have difficulty talking to their adolescents about adolescent sexuality need to enrol themselves into programmes which teach parents the required processes and skills to enable them discuss such issues more freely and comfortably with their adolescents. Parents are also encouraged to read books on adolescent sexuality to facilitate effective sexual discussion with their children.
- ii. Community-based organization like Planned Parenthood Association of Ghana (PPAG) and Church groups should adopt the training programme and train parents in their communities on how to communicate with their children about sexual topics.
- iii. As fathers were found to have less knowledge of adolescent sexual issues and communicated less with their adolescents, they should be encouraged to learn more about adolescent sexual topics to be able to communicate more with their adolescents effectively.
- iv. Parents must ensure that adolescents, both boys and girls, receive adequate sex education at home with due consideration given to the roles, rights and obligations of adolescents in-group and, as an individuals.

6.2.2. The mass media

- i. The Ministry of Communication/Information and the Media Commission should liaise with media houses, social networks sites such as Facebook/Twitter etc. to ensure that the electronic media have guidelines for censoring the type of films they show on television.

- ii. The mass media should consider airing positive sexual messages through talk shows, teen beats, drama and open line (hotlines) services for adolescents.
- iii. The television stations should show films and videos such as soap operas which are educative to adolescents since, most adolescents like watching these soaps. They should also show films which depict the consequences of adolescent irresponsible risky behaviours such as teenage pregnancy and HIV/AIDS.

6.2.3. The Ministry of Education/Ghana Education Service

- i. The Ministry should develop sex education policy guidelines which would ensure that sex education is started at an early age in schools.
- ii. The Ministry should organize programmes which provide continuous training to teachers who teach sexuality education at all levels so that they can teach adolescent sexuality accurately and comfortably.
- iii. Schools should involve parents in school sex education programmes in order for the home to effectively and meaningfully complement what is taught adolescents at school.

6.2.4. Other stakeholders

- i. Funding agencies interested in adolescent sexual health should provide funding to support the training of parents about adolescent sexuality.
- ii. Religious and traditional leaders should see it as a duty to organize programmes to educate adolescents about their sexuality.

- iii. Traditional elders and custodians of culture should ease the restrictions that make it a taboo to talk to children about sex and encourage parents to talk to their children about sexuality.
- iv. Faith-based organizations and institutions, such as churches and mosques should have programmes to educate parents on adolescent reproductive health issues so that they become well-informed, to facilitate talks to their children about such issues.

6.3. Implications for further study

1. The results of this study highlight the need to replicate this study in other regions of the country, using a much larger sample size.
2. Earlier studies have shown that fathers do not talk much to their children about sexuality. Therefore, studies should be conducted into the effects of fathers' training and father-adolescent communication about sexuality.
3. Studies should be promoted on assessing community perception of education of adolescents about sexuality.
4. Study should to be conducted to assess the effects of sexuality and sex education at home and school on the adolescent.
5. Studies regarding traditional methods aimed at sexuality education of adolescents, should be promoted so that if necessary these methods can be streamlined, modernised and promoted in schools and at home.

REFERENCE

- Abdul-Rahman, L., Marrone, G., & Johansson, A. (2011). Trends in contraceptive use among female adolescents in Ghana. *African Journal of Reproductive Health, 15*(2), 45-55.
- Ahorlu, C. S., & Pfeiffer, C. (2009). Resilience of adolescent against teenage pregnancy in urban Ghana. Noguchi Memorial Institute for Medical Research, Ghana, Swiss Tropical and Public Health Institute, Switzerland.
- Ajzen, I. (2002). Perceived behavioural control, self-efficacy, locus and the theory of planned behaviour. *Journal of Applied Social Psychology, 32*, 665-685.
- Ajzen, I. (2006). The Theory of Planned Behaviour model.
- Ajzen, I., & Fishbein, M. (1985). *Understanding attitudes and predicting social behaviour*. Englewood Cliff NJ: Prentice Hall.
- Aklorbortu, D.M. (2008, 10th May, 200). Crude abortion on the rise-Medical staff frightened about figures, *Saturday Mirror*,.
- Albert, D. (2009). With one voice. Washington: National Campaign to prevent teen and unplanned pregnancy. Retrived from <http://www.thenationalcampaign.org/resources/pdf/pub/wov> Lite 2009.16/8/2012
- Alford, S. (2005). *Adolescent Protection Behaviour: Abstinence and contraceptive use. Advocates for youth*. . Retrived from <http://www.advocatesforyouth.org>.
- Allison, B. N. (2000). Parent-adolescent conflict in early adolescence: Research and implications for middle school programmes. *Journal of Family and Consumer Science Education, 18*(2), 1-6.
- American Academy of Paediatrics Committee on Public Health Education. (2000). Sexuality, Contraception and the Media. *Paediatrics*., 107, 191-194.
- Ankomah, A. (2001). The International Encyclopedia of sexuality: Ghana. (Robert T. Francoeur Ed. ed.). New York: Continnum.
- Arnett, Jeffrey Jensen. (2003). Conceptions of the transition to adulthood among emerging adults in American ethnic groups. *New directions for child and adolescent development, 2003*(100), 63-76.

- Arumi, A.M. . (2005). *Nearly 3 in 19 young teens are sexually active (Television Broadcast) New York: New York Broadcasting Company.*
- Asmal, K. (2001). *Protecting the Right to Innocence. The importance of Sexuality Education. Report of the Protecting the Right to Innocence: .* Paper presented at the Conference on Sexuality Education Pretoria, South Africa. .
- Aspy, C. B., Vesely, S.K., Oman, R. F., Rodine, S. Marshall, L., & MaLeory, K. (2007). Parental communication and youth sexual behaviour. *Journal of Adolescence, 30*(3), 449-466.
- Averett, P. (2005). *Parental communications and young women's struggle for sex agency. .* (PHD Dissertation.).
- Babalola, Stella, Tambashe, B Oleko, & Vondrasek, Claudia. (2005). Parental factors and sexual risk-taking among young people in Cote d'Ivoire. *African journal of reproductive health, 49-65.*
- Baku, E.A. (2009). *Decision on contraceptive use among second cycles students in the Greater Accra Region of Ghana, University of Ghana.* (MPhil Thesis in Public Health).
- Bearinger, L.H., Sieving, R.E., Ferguson, J., & Sharma, V. (2007). Global perspective on sexual and reproductive health of adolescent: Patterns, prevention and potential. *Lancet, 369*, 1220-1231.
- Beckett, M.K., Elliot, M.N. , Martino, S., & Corona, R. Kanouse, D.E. (2010). Timing parent and child communication about sexuality relative to children's sexual behaviours. . *Pediatrics, 125*, 34-42.
- Bell, C.C., Bhana, A., Petersen, I., Mckay, M.M., Gibbons, R., & Bannon, W. (2008). Building protective factors to offset sexually risky behaviours among black youth: A randomized control trial. *Journal of National Medical Association, 100*(8), 936-944.
- Bleakly, A., Hennessy, M., & Fishbein, M. (2006). Public opinion on sex education in US Schools, . *Archives of Paediatric and Adolescent Medicine,, 160*, 1151-1156.
- Bobbee, S. (2009). The nature of parent adolescent communication about relationships. Retrieved from <http://hdl.handle.net/10724/11524>. 24/9/2012.

- Bokpe, S. J. (2012, 23 July). More Girls cause abortion, *Daily Graphic*, p. 1.
- Brotto, L.A., Woo, J.S., & Ryder, A.G. (2007). Acculturation and sexual function in Canada East Asia men. *Journal of Sexual Medicine*, 4(1), 72-82.
- Brown, J. D., L'Engle, K. L., Pardun, C. J., & Guo, G. (2006). Sexy media matters: Exposure to sexual contents in music , television and magazine predicts black and white adolescents' sexual behaviour. . *Paediatrics.*, 117(4), 1018-1027.
- Carpenter, L. M. (2003). 'Investigating media's influence on adolescent sexuality'. *Journal of sex Research*.
- Central Bureau of Statistics, & Ministry of Health. (2004). Demographic and Health Survey, Final Report 2003 Kenya, *Central Bureau of Statitistics*.
- Cianelli, R., Ferrer, L., & McElmurry, B. J. (2008). HIV Prevention and low-income Chilean women: Machismo,marianismo and HIV misconceptions ,. *Culture, Health and Sexuality*, 10, 297-306.
- Clawson, C. L. (2003). The amount and timing of parent-adolescent sexual communication as predictors of late adolescent sexual risk-taking behaviours. *Journal of Sex Research*, 40(3), 256-265.
- Collin, R. L. , Elliot, M.N., & Berry, S.H. (2004). Watching sex on television predicts adolescents' initiation of sexual behaviour. . *Paediatrics.*, 114(3).
- Connell, Patricia, McKevitt, Christopher, & Low, Nicola. (2001). Sexually transmitted infections among black young people in South-East London: results of a rapid ethnographic assessment. *Culture, Health & Sexuality*, 3(3), 311-327.
- Davis, B. (2000). Ritual as therapy, Therapy as ritual. *Journal of Feminist Family Therapy*, 11(4), 115-130.
- Deardorff, J., Tscham, J., & Flores, E. (2008). Sexually values among Latino youth: Measurement development using a culturally based approach. . *Culture, Diversity and Ethnic Minority Psychology* 14, 138-146.
- DiClemente, R. J., Wingod, G.M., Crosby, R., Sionean, C., Cobb, B.K., & Harrington, K. (2001). Parental Monitoring: Association with adolescents' risk behaviours. . *Pediatrics*, 107(6), 1363-1368.

- Dilorio, C., Pluhar, E., & Belcher, L. (2003). Parent-child communication about sexuality: A review of literature from 1980-2002. *Journal of HIV/AIDS & Education for Adolescents and children*, 5(3/4), 7-32.
- Dilorio, C., Resnicow, K., McCarty, F., De, A. K., Dudley, W.N., Wang, D.T., & Denzmore, P. (2007). REAL Men: A Group-randomised Trail of an HIV Prevention intervention for adolescent boys. . *American Journal of Public Health*, 97(6), 1084-1089.
- Dilorio, C., Resnicow, K., McCarty, F., De, A.K., Dudley, W.N., Wang, D.T., & Denzmore, P. (2006). Keepin, it R.E.A.L..! results of mother-adolescent HIV prevention programme. . *Nursing Research*, 55(1), 43-51.
- Diop, N. (2001). Improving the reproductive Health of Youth in Senegal- Baseline Report, FRONTIERS Programme. Dakar: Population Council.
- Dittus, P., Miller, K.S., Kotchick, B. A., & Forehand, R. (2004). Parents Matters!: The conceptual basis for a community-based HIV Prevention programme for the parents of Africa American youth. *Journal of child and Family studies*, 13(1), 5-20.
- Edelman, M. W. (2003). "The parent gap: Teen pregnancy and parental influence: A national survey." The national campaign to prevent teen pregnancy.
- Eisenberg, M., Sieving, R., Bearinger, R., Swain, C., & Resnick, M. (2006). Parents' communication with adolescents about sexual behaviour: A missed opportunity for prevention? . *Journal of youth and Adolescence*, 35(6), 893-902.
- El- Shaieb, M., & Wurtele, S.K. . (2009). Parents' plans to discuss sexuality with their young children. *American Journal of Sexuality Education*, 4(2), 103-115.
- Epstein, M., & Ward, L.M. (2008). "Always use protection". Communication boys receive about sex from parents, peers and the media. *Journal of Youth and Adolescence*, 37, 113-126.
- Essah, D. (2003). Family Life Education needs of school children: A study in Akwapim Akropong. Research Review NS. *Research Review NS*, 18(1), 43-50.

- Feldman, S.S., & Rosenthal, D.A. . (2000). The effects of communication characteristics on family members' perceptions of parents as sex educators. *Journal of research on Adolescents, 10*(2).
- Feldmann, J., & Middleman, A.B. (2002). Adolescent sexuality and sexual behaviour. *Curr Opin Obstet Gynecol, 14*(5), 489-493.
- Fentahun, N., Assefa, T., Alemseged, F., & Ambaw, F. (2012). Parents' perception, students and teachers' attitude towards school sex education. . *Ethiopian Journal of Health Science, 22*(2), 99-106.
- Flay, B.R., Graumlich, S., Sagawa, E. , Burns, J., & Holiday, M.Y. (2004). Effects of 2 Prevention programmes on high-risk behaviours among African American Youth. . *Archives of Padiatrics and Adolescent Medicine, 158*(4), 377-384.
- Forehand, R., Armistead, L., Long, N., Wyckoff, S.C., & Kotchick, B.A. (2007). Efficacy of parent-based sexual-risk prevention programme for African American preadolescents. . *Archive of Paediatrics Medicine, 161*(12), 1123-1129.
- Frost, J.J., & Lindberg, L.D. . (2013). Reasons for using contraception: Perspectives of US women seeking care at specialized family planning clinics. *Guttmarker Institute, 87*(3), 465-472.
- Gallegos, E.C., Villarruel, A. M., Gomez, M.V., Onofre, D.J., & Zhou, Y. (2008). Sexual communication and knowledge among Mexican parents and their adolescent children. *Journal of Association of Nurses AIDS CARE, , 18*(2), 28-43. doi: 10.101.1016.j.jana.2007.01.007.
- Ghana AIDS Commission. (2004). *Annual Report Ghana . Ghana AIDS Commission, Accra.*
- Ghana Statistical Service. (GDHS, 2008). *Ghana Demographic and Health Survey.*
- Ghana Statistical Service, & MII. (1994 and 2004). *A Situation analysis of family planning Service Delivery Points in Ghana.* Ghana.
- Glover, E.K., Bannerman, A., , Pence, B.W., Jones, H., Miller, R., & Weiss, E. (2003). Sexual Health experiences of adolescents in three Ghanaian Towns. . *International Family Planning Perspectives, 29*(1), 32-40.

- Goldberg, D. (2000). Employment: Letter Writing with troubled adolescents and their families. . *Clinical Child Psychiatry*, 5, 63-76.
- GSS, GHS, & ICF Macro. (2009). Ghana Demographic and Health Survey 2008 *Accra, Ghana; Ghana Statistical Service, Ghana Health Service, and ICF Macro*
- Guilamo-Ramos, V. (2010). Dominican and Puerto Rican mother-adolescent communication: Maternal self-disclosure and youth risk. . *Hispanic Journal of Behavioral Sciences*, 32(2), 197-215.
- Guilamo-Ramos, V., Dittus, P., Jaccard, J., & Goldberg, V. (2006). The content and process of mother-adolescent communication about sex in Latino families. . *Social Work Research*, 30(3), 169-181.
- Halpern-Felsher, B.L., Kropp, R.Y., Boyer, C.B., Tschann, L.M., & Jonathan, M.E. (2004). Adolescents' self-efficacy to communicate about sex: Its role in condom attitudes, commitment and use. . *Adolescence*, 39.
- Harper, C., Callegari, L., & Raine, R. (2004). Adolescent clinic visits for contraception: Support from mothers, male partners and friends. . *Perspectives on sexual and Reproductive Health*, 36(1), 20-26.
- Hutchinson, M.K. (2004). The influence of sexual risk communication between parents and daughters on sexual risk behaviour. *Family Relations*., 51(3), 238-247.
- Hutchinson, M.K., Jemmot, J.B., Jemmot, L.S., Braveman, P. , & Fong, G.T. (2003). "The role of mother-daughter sexual risk communication in reducing sexual behaviours in urban adolescent females: A prospective study". *Journal of Adolescent Health*, 33, 98-107.
- Ito, K., Gillice, Z., Owen, J., Foust, E., & Leon., P. (2006). Parents' opinion of sexuality education in a state with mandated abstinence education: Does policy match parental preference? *Journal of Adolescent Health*, 39(5), 634-641.
- Iyaniwura, CA. (2005). Attitude of teachers to school based adolescent reproductive health interventions. *Journal of Community Medicine and Primary Health Care*, 16(1), 4-9.
- Izugbara, C.O. (2008). Home-based sexuality education: Nigerian parents discussing sex with their children. . *Youth and Society*., 39(4), 575-600.

- Jaccard, J., Dodge, T. , & Dittus, J. P. (2002). Parent-adolescent communication about sex and birth control: Conceptual framework. *New Directions for Child and Adolescent Development*, 97, 9-42.
- Jaccard, J., Dodge, T., & Dittus, P. (2003). "Do adolescents wants to avoid pregnancy? Attitudes towards pregnancy as predictor of pregnancy". *Journal of Adolescence Health*, 33(2), 79-83.
- Jerman, P. , & Norman, C. (2010). Demographic and Psychological predictors of parent-adolescent communication about sex. A representative statewide analysis. . *Journal of Youth and Adolescents*, 39, 1164-1174.
- Kakavoulis, A. (2001). Family and sex education: a survey of parental attitudes. . *Sex Education*, 1(2), 163-174.
- Kane, Roslyn. (2007). Sex and relationship education: bridging the gap between research and practice. *Health Education*, 108(1), 5-9.
- Karofsky, P.S., Zeng, L., & Kosorok, M.R. (2001). Relationship between adolescent-parental communication and initiation of first intercourse by adolescents. *Journal of Adolescent Health*, 28, 41-45.
- Kiapi-Iwa, L, & Hart, G.L. (2004). The sexual and reproductive health of young people in Adjumani district Uganda: Qualitative study of the role of the formal and traditional health providers. *AIDS CARE*, 16(3), 339-347.
- Kim, Janna L, & Ward, L Monique. (2004). Pleasure reading: Associations between young women's sexual attitudes and their reading of contemporary women's magazines. *Psychology of Women Quarterly*, 28(1), 48-58.
- Kirby, Douglas, & Miller, Brent C. (2002). Interventions designed to promote parent-teen communication about sexuality. *New directions for child and adolescent development*, 2002(97), 93-110.
- Kirkman, M., Rosebtahal, D. A., & Feldman, S. (2002). Talking to a tiger: Fathers reveal their difficulties in communicating about sexuality with adolescents. . *New Directions for Child and Adolescent Development*, 97, 57-74.
- Kline, J.D., Sabaratnam, P., Pazos, B., Auerbach, M.M., Havens, C.C., & Brach, M J. (2005). Evaluation of the parents as primary sexuality educators programme. *Journal of Adolescent Health*, 37 3suppl, S94-S99.

- Kumi-Kyereme, Akwasi, Awusabo-Asare, Kofi, Biddlecom, Ann, & Tanle, Augustine. (2007). Influence of social connectedness, communication and monitoring on adolescent sexual activity in Ghana. *African Journal of Reproductive Health, 11*(1), 133.
- Lefkowitz, E.S., Boone, T.L., & Kit-fong Au, T. (2002). He said, She said: Gender differences in mother-adolescent conversations about sexuality. *Journal of Research on Adolescence, 12*(3), 217-242.
- Lefkowitz, E.S., Boone, T.L., Kit-fong Au, T., & Sigman, M. (2003). Mothers' and adolescents' discussion about sexuality and AIDS/HIV. . *Oxford Journal of Medicine & Health Education Research, 18*(3), 341-351.
- Lefkowitz, E.S., & Stoppa, T.M. (2006). Positive sexual communication and socialization in the parent-adolescent context. . *New Direction for Child and Adolescent Development, 112*, 39-55.
- Locker, S. . (2001). *The real dirt on everything from sex to school* (1st Edition ed.). New York: Harper Collins.
- Losada, A., Knight, B.G., Marquez-Gonzalez, M., Montorio, I., Etxeberria, I., & Penacoba, C. (2008). Confirmatory factor analysis of familism scale in a sample of dementia caregivers. . *Aging and Mental Health, 12*(4), 504-508.
- Luwaga, L.C.N. (2004). *Parent-adolescent communication on sexuality in the content of HIV/AIDS in Uganda: An exploratory study*. . (MPhil Thesis in Health Promotion).
- Martin, Karin A, & Luke, Katherine. (2010). Gender differences in the ABC's of the birds and the bees: What mothers teach young children about sexuality and reproduction. *Sex Roles, 62*(3-4), 278-291.
- Mbugua, N. (2007). Factors inhibiting educated mothers in Kenya from giving meaningful sex-education to their daughters. . *Social Science and Medicine, 64*(3), 1079-1089.
- McKay, M., Paikoff, R., Baptise, D., Bell, C., Coleman, D., & Madison, S. (2004). Family-level impact of CHAMP family programme: A community collaborative effort to support urban families and reduce youth HIV risk exposure. . *Family Process, 43*(1), 79-91.

- Mensche, B.S., Grant, M.J., & Blanc, A.K. (2006). The changing context of sexual initiation in Sub-Saharan Africa. . *Population and Development Review*, 32(4), 699-727.
- Meschke, L.L., Bartholomae, S., & Zentall, S.R. (2002). "Adolescent sexuality and parental processes: Promoting healthy teen choices" *Family Relations*, 49, 143-154.
- Miller, Brent C. (2002). Family influences on adolescent sexual and contraceptive behavior. *Journal of Sex Research*, 39(1), 22-26.
- Miller, K. S., Levin, M.L., Whitaker, D.J. , Xu, X., & (1998). Patterns of Condom use among adolescents. The impact of mother-adolescent communication. *American Journal of Public Health*, 88, 1542-1544.
- Mitchell, P.J. (2009). Rate PG: how parental influence impacts teens sexual activity. Ottawa: Institute of Marriage and Family Canada Retrived from www.imfcanada.php-dev.domain7.com/issues/rated-pg. 16/8/2012.
- Mitchell, P.J. (2010). Parents are the primary sex educators.Ottawa: Institute of Marriage and Family Canada. www.imf.org/issues/parents-are-primary-sex-educators.
- Mohammadi, Mohammad Reza, Alikhani, Siamak, Farahani, Farideh K Abadi, & Bahonar, Alireza. (2007). Parents' attitudes towards adolescent boy's reproductive health needs and practice in Tehran. *Iranian Journal of Psychiatry*, 2(1), 13-24.
- Mturi, A .J. (2003). Parents' attitudes to adolescent sexual behaviour in Lesotho. . *African Journal of Reproductive Health*, 7(2), 25-33.
- Mullen, S. (2001). *Parent-adolescent reproductive health communication in Lome, Togo: Does it makes a difference? Presented during the 29th Annunal Meeting of America Public Health Association.*
- Muyinda, H., Kengeya, J., & Pool, R. (2001). Traditional sex counselling and STI/HIV prevention among women in rural Uganda. . *Culture, Health and Sexuality*, 3(3), 353-361.
- Nakkazi, D. (2001). *Communication between mothers and their adolescent daughters on the subject of sexuality and HIV/AIDS in Uganda. Gender Issues Research Report Series. 14. Organisation for Social Sciences Research in Eastern and Southern Africa.*

- Namisi, F.S., Flisher, A.J., Overland, S., Bastien, S., Onya, H., & Kaaya, S. (2009). Sociodemographic variations in communication on sexuality and HIV/AIDS with parents, family members and teachers among in-school adolescents: A multi-site study in Tanzania and South Africa. *Scandinavian Journal of Public Health*, 37(suppl 2), 65-74.
- National AIDS and STI Control Programme, & Ministry of Health, Kenya. (2005). AIDS in Kenya, Nairobi:NASCOP:2005 (7th edition ed.).
- National Parent Teachers Association. (2003). Talking with your teens about sex. Retrived from www.npta.org. 18/5/2011
- Ndyanabangi, B., & Kipp, W. (2001). Reproductive health of adolescent school students in Kabarole district, western Uganda: A qualitative study. *Journal of Health and Populatioln in Developing countries*, 3(2).
- Njue, C., Voeten, H., & Ahlberg, B .M. (2011). 'Youth in a void' : sexuality, HIVAIDS axnd communication in Kenya public schools *Sex Education.*, 11(4), 459-470.
- Nobelius, A . M., Kalina, B., Pool, R. , Whitworth, J., Chesters, J., & Power, R. (2010). Delaying sexual bebut among out-of-school youth in rural southwest Uganda, Culture, Health and Sexuality: . *An international Journal for Research, Intervention and Care*, 12(6), 663-676.
- O'Connell, B. (2001). *Solution focused stress counselling*. London Continuum.
- O'Donnell, L., Stueve, A., Agronick, G., Wilson-Simmons, R., Duran, R., & Jeanbaptiste, V. (2007). Saving sex for Later: an evaluation of a parent education intervention. . *Perspectives Sex and Reproductive Health*, 37(4), 166-173.
- O'Sullivan, L.F., & Meyer-Bahlburg, B. (2001). Mother-daughter communication about sex among urban African American and Latino families. *Journal of Adolescent Research*, 16, 269-292.
- Obeng, C. S. (2006). 'We were victims of our families' uncooperative behaviour: Problems faced by school dropouts in rural Ghana. . *Nordic Journal of African Studies*, 15 (4), 544-565.
- Olukoya, A. (2001). Unsafe abortions in adolescents. . *International Journal of Gynaecology and Obstetrics.*, 75, 137-147.

- Palo Alto Medical Foundation. (2001). "Parents-teens and sex". from [Http://www.pamf.org/teen/parents/sex/sex.html.26/8/2011](http://www.pamf.org/teen/parents/sex/sex.html.26/8/2011)
- Phetla, G., Busza, J., Hargreaves, J.R., Pronyk, P.M., Kim, J.C., Morison, C., . . . Porter, J.D.H. (2008). 'They have opened our mouths': Increasing women's skills and motivation for sexual communication with young people in rural South Africa, . *AIDS Education and prevention*, 20(6), 504-518.
- Pluhar, E. I ., & Kuriloff, P. (2004). What really matters in family communication about sexuality? A qualitative analysis of the effect and style among African American mothers and adolescent daughters. . *Sex Education.*, 4(3), 3003-3321.
- Raffaelli, M., & Green, S. (2003). Parent-adolescent communication about sex: Retrospective reports by Latino College students. *Journal of Marriage and the family*,, 65(2), 474-481.
- Raffaelli, M., & Ontai, L.L. (2008). She's 16 years old and there's boys calling over the house': An exploratory study of sexual socialization in Latino families. . *Culture, Health & Sexuality*, 3(3), 295-310.
- Raskin, J.D. (2008). The evolution of constructivism. *Journal of Constructivist Psychology*, 21, 1-24.
- Reamer, F., & Siegel, D. (2009). Guiding families in choosing the right intervention for their struggling teens. . *Brown University Child and Adolescent Behaviour Letter*, 25(5), 1-6.
- Regnerus, M.D. (2005). Talking about sex: Religion and patterns of parent-child communication about sex and contraception. *The Sociological Quarterly*, 46, 79-105.
- Rogo, K.O. . (2004). Unsafe abortion and maternal mortality: Is Africa prepared to face reality? . *East Africa Medical Journal*, 81(2), 61-62.
- Roque, F. H., & Gubhaju, B. B. (2001). *Situation of the sexual and reproductive health of young people in the Asia and Pacific Region*. . Paper presented at the The third Asian- Pacific inter-governmental meeting on human resource development for youth., Bangkok, United Nation Economic and Social Council.
- Rosener, B. (2010). *Fundamentals of Biostatistics* (7th Edition ed.). Canada: BROOKS/COLE CENGAGE Learning Inc.

- Sallar, A.M. . (2001). *Sexual risk taking in the era of HIV/AIDS: Case study of adolescents resident in Ketu South, Upper Denkyira and Offinso electoral constituencies in Ghana*, . (Dissertation, University of Columbia, Vancouver).
- Schaalma, H. P., Abraham, C., Gillmore, M. R., & Kok, G. (2004). Sex education as health promotion: what does it take? *Archives of sexual behavior*, 33(3), 259-269.
- Schalet, Amy. (2004). Must we fear adolescent sexuality? *Medscape General Medicine*, 6(4).
- Schueller, J, Liku, J, Hubbard, G, Odede, W, Shaban, S, & Njeri, A. (2006). Assessment of Youth Reproductive Health and HIV/AIDS Programs in Kenya. Nairobi, Kenya: United States Agency for International Development. *Family Health International*.
- Schuster, M. A., Corona, R., Elliott, M.M., Kanosue, D.E., & Eastman, K.L. (2008). Evaluation of talking parents, healthy teens, a new worksite based parenting programme to promote parent-adolescent communication about sexual health: a randomized controlled trial. . *British Medical Journal*, 337: 39609.657581.25.
- Sedge, G., Hussain, R., & Bankole, A. (2007). Women with unmet needs for contraception in developing countries and their reasons for not using a methods a method. Occasional Report NO. 37 June, 2012,
- Sheen, F.J. (2008). Unsafe abortions rife among teenagers. Daily Graphic, page 1. from Retrieved from www.modernghana.com/newsp/189674/1/pageNum1/unsafe-abortion-rife-among-teenagers.15/7/2012.
- SIECUS. (2005). Sex Education That Works. SIECU. from www.avert.org/sex-education.htm.23/7/2012.
- Singh, S., & Darroch, H. (2002). Adolescent pregnancy and child bearing: Levels and trends in developed countries. *Family Planning Perspectives*, 32, 14-23.
- Somers, C.L., & Gleason, J. H. (2001). Does source of sex education predict adolescents sexual knowledge attitudes and behaviors? *Education*, 121(4), 674-681.

- Somers, C.L., & Surmann, A.T. (2005). Sources and timing of sex education: Relationship with American adolescent sexual attitudes and behaviour. *Educational Review*, 57(1), 37-54.
- Swain, C.R., Ackerman, L.K., & Ackerman, M.A. (2006). The influence of individual characteristics and contraceptive beliefs on parent-teen sexual communications: Structural model. . *Journal of Adolescent Health*, 38(6), 753.e 759-718.
- The Media Project. (2005). Parent-child communication: Helping teens make healthy decisions about sex. Retrived from [htt://www.themediaproject.com/topics/pcc.htm.25/3/2012](http://www.themediaproject.com/topics/pcc.htm.25/3/2012)
- The National Campaign to prevent teen pregnancy. (2003). Parent power: What parents needs to know and do to help prevent teen pregnancy. from www.teenpregnancy.org/resources/reading/parentpower/default.asp. 18/5/2011.
- Ubaidur, R. , Bhuiya, I., & Rahman, L. (2003). *Bangladesh parents' knowledge and attitude about adolescent reproductive health issues. The 131st Annual Meeting(November 12-19) of APHA.*
- Ubaidur, R., Ghafur, T., Bhuiya, I., & Taluker, N. (2006). Reproductive and sexual health education for adolescents in Bangladesh: Parent' view and opinion. . *International Quartely of Community Health Education*, 25(4), 351-365.
- UNAIDS. (1997). Impact of HIV and sexual health education on the sexual behaviour of young people: a review up data. Joint United Nation Programme on HIV/AIDS.
- UNICEF. (2001a). *Innocenti Report Card-A league table of teenage birth in rich nations. 3 Florence, Innocenti Research Centre.*
- Villarruel, A. M, Cherry, C. L., Cabriales , E. G., Ronis, D. L., & Zhou, Y. (2008). A parent-adolescent intervention to increase sexual risk communication: Results of a randomized control trail. . *AIDS Education Prevention.*, 20(5), 371-383.
- Walker, J.L. (2001). A quality study of parents' experiences of providing sex education for their children: The impaction for health education. . *Journal of Health Education*, 60(2), 132-146.

- Walsh, M., & Wiggins, L. (2003). *Introduction to Research: Foundation in Nursing and Health Care*. Delta Place, United Kingdom: Nelson Thomas Ltd.
- Wamoyi, J., Fenwick, A., Urassa, M., Zaba, B., & Stones, W. (2010). Parent-child communication about sexual and reproductive in rural Tanzania. Implication for young people's health intervention. . *Reproductive Health*, 7, 6-23.
- Ward, L Monique, & Friedman, Kimberly. (2006). Using TV as a guide: Associations between television viewing and adolescents' sexual attitudes and behavior. *Journal of research on adolescence*, 16(1), 133-156.
- Ward, L. M. (2003). Understanding the role of the entertainment media in the sexual socialization of American youth: Review of empirical research. *Developmental Review*, 23(3), 347-388.
- Weaver, Angela D, Byers, E Sandra, Sears, Heather A, Cohen, Jacqueline N, & Randall, Hilary ES. (2001). Sexual health education at school and at home: Attitudes and experiences of New Brunswick parents. *Canadian Journal of Human Sexuality*, 11(1), 19-32.
- Weiss, J . A. (2007). Let us talk about it. Safe adolescent sexual decision. *Journal of the America Academy of Nurse Practitioners.*, 19(9), 450-458.
- White, Fiona A, & Matawie, Kenan M. (2004). Parental morality and family processes as predictors of adolescent morality. *Journal of Child and Family studies*, 13(2), 219-233.
- WHO. (2002). *Adolescent friendly health services: Agenda for change*. Geneva. WHO Press.
- WHO. (2003b). *Issues in adolescent health and development: Adolescent pregnancy*, . Geneva 2003b.
- WHO. (2004). *Adolescent health and development in Nursing and Midwifery education*. Geneva. WHO Press.
- WHO. (2007a). *Adolescent pregnancy-unmet needs and undone deeds. A review of literature and programmes*, Department of Child health and Development. Geneva. WHO Press.
- WHO. (1998). *Strategies for adolescent health and development. South-East Asia Region. Report of an inter-country consultation , 26-29 May.*, New Delhi.

- Williams, A. (2003). Adolescents' relationship with parents. . *Journal of Language and Social Psychology*, 22(1), 58-65.
- Wilson, E.K., Dalberth, B.T., & Koo, H.P. (2010). Parents' perspectives on talking to pre-teenage children about sex. *Perspectives on Sexual and Reproductive Health*, 42(1), 56-63.
- Yesus, D.G., & Fantahum, M. (2010). Assessing communication on sexual and reproductive health issues among high school students with their parents, Bullen, Woreda, Benishangul Gumuz Region, North West Ethiopia. . *Ethiopian Journal of Health Development*, 24(2), 89-95.

APPENDICES

APPENDIX 1 PARENT QUESTIONNAIRE

UNIVERSITY OF GHANA, SCHOOL OF PUBLIC HEALTH

Project Title: Parent training and parent-adolescent communication on sexuality in Accra Metropolis, Greater Accra Region.

PARENT QUESTIONNAIRE

Respondent's ID: P / / / / /

Date of interview: (dd/mm/yy) / /

SECTION A: DEMOGRAPHIC DATA

NO	QUESTION	CODING CATEGORY
A1	Sex of parent	1. Male 2. Female
A2	Place of resident	1. Ablekuma South 2. Osu Clotley
A3	How old are you at your last birthday	Age in complete years _____
A4	Marital status	1. Married or living together 2. Divorced/Separated 3. Widowed 4. Never married or never lived together
A5	To which ethnic group do you belong?	1. Akan 2. Ga/Dangme 3. Ewe 4. Guan 5. Mole-Dagbani 6. Others specify) _____
A6	What is the highest level of school you have completed	1. Primary 2. Middle/JSS/JHS 3. Higher 4. No education
A7	What is your occupation?	1. Unemployed 2. Farmer 3. Artisan 4. Public Sector 5. Private Sector 6. Others (specify) _____
A8	What is your income level in a month	1. Less than GHC 100 2. GHC 200-500 3. GHC 600-900 4. GHC 1000-1500 5. GHC1600 plus
A9	What is your religion	1. Catholic 2. Anglican 3. Presbyterian

		<ol style="list-style-type: none"> 4. Methodist 5. Pentecostal/Charismatic 6. Other Christian 7. Moslem 8. Traditionalist/Spiritualist 9. No religion
<p>SECTION B: PARENTS' ABILITY AND COMFORT COMMUNICATION ON SEXUALITY Please read the following questions and possible answers and circle the answer to each question you consider appropriate to your situation.</p>		
B1	Have you ever discuss sex-related matters with your son?	<ol style="list-style-type: none"> 1. Yes 2. No
B2	Have you ever discuss sex-related matters with your daughter?	<ol style="list-style-type: none"> 1. Yes 2. No
B3	With which of your children do you talk more about sexual matters	<ol style="list-style-type: none"> 1. Son 2. daughter
B4	Under what circumstance do you start to talk about sexual matters with your adolescents	<ol style="list-style-type: none"> 1. In response to an event 2. Suspicion of sexual activity 3. He/she asked questions about sex 4. It is my own initiative
B5	How would you rate your ability to about sexual matters with your son?	<ol style="list-style-type: none"> 1. Poor 2. Fair 3. Good
B6	How would you rate your ability to about sexual matters (topics) with your daughter?	<ol style="list-style-type: none"> 1. Poor 2. Fair 3. Good
B7	How comfortable (relaxed) do you feel talking about sexual matters with your son?	<ol style="list-style-type: none"> 1. Not at all comfortable 2. Somewhat comfortable 3. Comfortable
B8	How comfortable (relaxed) do you feel talking about sexual matters with your daughter?	<ol style="list-style-type: none"> 1. Not at all comfortable 2. Somewhat comfortable 3. Comfortable
B9	With which of your children do you feel more comfortable (relaxed) talking about sexual topics/matters?	<ol style="list-style-type: none"> 1. Son(s) 2. Daughter(s)
B10	My child and I talk openly (frankly) and freely about sexual topics.	<ol style="list-style-type: none"> 1. Disagree 2. Neutral 3. Agree
B11	I allow my child to freely ask me any question about sexual matters	<ol style="list-style-type: none"> 1. Disagree 2. Neutral 3. Agree
B12	I answer questions that my child asks me about sexual matters frankly and honestly.	<ol style="list-style-type: none"> 1. Disagree 2. Neutral 3. Agree
B13	How will you rate your frequency of talking about sexual matters (topics) with your son/daughters?	<ol style="list-style-type: none"> 1. Once 2. A few times 3. A moderate amount 4. Often
B14	Were you educated by your parents on sexual issues when you were young?	<ol style="list-style-type: none"> 1. Yes 2. No
B15	If yes which topics	<ol style="list-style-type: none"> 1. Body changes of boys and girls as they grow up 2. Sex and reproductive health 3. Sexually transmitted disease including HIV/AIDS 4. Condom/Contraceptive

		5. Morality (eg morals, decency). 6. Other (specify)
B16	If no, what are the possible reasons	<u>Possible reasons</u>
EDUCATION ON SEXUALITY		
Please read the following questions and possible answers and circle the answer to each question you consider appropriate to your situation.		
B17	Parents who were educated on sexual issues when young are able to educate their own children on sexual issues?	1. Disagree 2. Neutral 3. Agree
B18	It is important to educate adolescents about sexual issues.	1. Disagree 2. Neutral 3. Agree
B19	Educating children on sexual issues would lead them into sex.	1. Disagree 2. Neutral 3. Agree
B20	Apart of yourself, which other family member(s)/persons have talked to your child about sexual matters?	1. Sister 2. Aunty 3. Uncle 4. Grandparents 5. Others(specify)
B21	I find it difficult talking to my child about sexual matter?	1. Disagree 2. Neutral 3. Agree
SECTION C: PARENT'S KNOWLEDGE ABOUT SEXUAL TOPICS		
From the following statements, please indicate the extent of your knowledge. Circle the answer which agrees with how you rate your knowledge and understanding of the following sexual terms and statements.		
	Questions	1=Not at all 2= A bit 3=Moderately 4=very well
Biological Development topics		
C1	How girls change physically as they grow up	1 2 3 4
C2	How boys change physically as they grow up	1 2 3 4
C3	Menstruation or having periods	1 2 3 4
C4	Wet dreams by boys (as a sign of maturity to produce semen and sperms).	1 2 3 4
C6	How a girl gets pregnant and has babies	1 2 3 4
C8	Masturbation	1 2 3 4
Sexual risk Protection topics		
C7	How to prevent pregnancy	1 2 3 4
C9	Abstaining from sex until marriage	1 2 3 4
C13	How you will decide whether or not to have sex	1 2 3 4
C17	How to overcome pressure from friends to have sex	1 2 3 4
C18	Reasons why your child should not have sex	1 2 3 4
C19	How to say 'no' if somebody wants to have sex with you and you don't want to.	1 2 3 4
C20	What your child will do when a	1 2 3 4

	partner doesn't want to use condom and he/she wants to have sex with him/her.				
C21	How people can prevent getting sexually transmitted diseases.	1	2	3	4
C22	How to prevent getting HIV/AIDS	1	2	3	4
Contraceptive use topics					
C12	Uses of condom/how to use condom	1	2	3	4
C14	Uses of contraceptives to prevent pregnancy	1	2	3	4
Risk sexual Behaviour topics					
C10	Consequences of having premarital sex	1	2	3	4
C11	Consequences of getting pregnant/getting somebody pregnant.	1	2	3	4
C15	Consequences of abortion if you get pregnant or get somebody pregnant	1	2	3	4
C16	Pressure from friends to have sex	1	2	3	4
C23	Symptoms of sexually transmitted diseases	1	2	3	4
C24	Effects of substance (alcohol, smoking...) use on sex	1	2	3	4
Experiential sexual topics					
C5	Having sexual feelings	1	2	3	4
C25	Homosexuality	1	2	3	4
SECTION D: PARENT COMMUNICATION ABOUT SEXUAL TOPICS WITH ADOLESCENTS					
Please indicate the extent to which you discussed with your son/daughter the following topics. Circle the answer you agree with.					
	Have you talked to your son/daughter about the following topics?	1=Never	2=Once	3=A few times	4=Often
Biological Development topics					
D1	How girls change physically as they grow up	1	2	3	4
D2	How boys change physically as they grow up	1	2	3	4
D3	Menstruation or having periods	1	2	3	4
D4	Wet dreams by boys (as a sign of maturity to produce semen and sperms).	1	2	3	4
D6	How a girl gets pregnant and has babies	1	2	3	4
D8	Masturbation	1	2	3	4
Sexual Risk Protection topic					
D7	How to prevent pregnancy	1	2	3	4
D9	Abstaining from sex until marriage	1	2	3	4
D13	How you will decide whether or not to have sex	1	2	3	4
D17	How to overcome pressure from	1	2	3	4

	friends to have sex				
D18	Reasons why your child should not have sex	1	2	3	4
D19	How to say 'no' if somebody wants to have sex with you and you don't want to.	1	2	3	4
D20	What your child will do when a partner doesn't want to use condom and he/she wants to have sex with him/her.	1	2	3	4
D21	How people can prevent getting sexually transmitted diseases.	1	2	3	4
D22	How to prevent getting HIV/AIDS	1	2	3	4
Contraceptive use topics					
D12	Uses of condom/how to use condom	1	2	3	4
D14	Uses of contraceptives to prevent pregnancy	1	2	3	4
Risky sexual Behaviour topics					
D10	Consequences of having premarital sex	1	2	3	4
D11	Consequences of getting pregnant/getting somebody pregnant.	1	2	3	4
D15	Consequences of abortion if you get pregnant or get somebody pregnant	1	2	3	4
D16	Pressure from friends to have sex	1	2	3	4
D23	Symptoms of sexually transmitted diseases	1	2	3	4
D24	Effects of substance (alcohol, smoking...) use on sex	1	2	3	4
Experiential sexual topics					
D5	Having sexual feelings	1	2	3	4
D25	Homosexuality	1	2	3	4
SECTION E: PARENTAL ATTITUDES TOWARDS ADOLESCENTS SEXUAL ISSUES					
E1	Would you approve of discussing sexual topics with your child/children?	1. Disapprove 2. Neutral 3. Approve			
E2	At what age would you like to discuss sexual issues with your child/children	Age =			
E3	Is it right that your daughter to engage in sexual activity before marriage?	1. Yes 2. No			
E4	Is it right that your son to engage in sexual activity before marriage?	1. Yes 2. No			
E5	How will you feel if you found your adolescent child engaging in sex?	1. Advise him/her to stop 2. Advise him/her on condom use 3. Warn or threaten him/her 4. Punish him/her 5. Others (specify).....			
E6	Would allow your child to use condom if he/she is engaging in sex?	1. Disallow 2. Neutral 3. Allow			

E7	Would you allow your son to get reproductive health services e.g. family planning clinic?	1. Disallow 2. Neutral 3. Allow
E8	Please give reason for your answer	
E9	Would you allow your daughter to get reproductive health services e.g. family planning clinic?	1. Disallow 2. Neutral 3. Allow
E10	Please give reason for your answer	
E11	Does your family approve of discussing sexual matters/topics with your child?	1. Disapprove 2. Neutral 3. Approve
E12	Do your friends approve of discussing sexual topics with your adolescent children?	1. Disapprove 2. Neutral 3. Approve
E13	Please give reasons for your answer	
E14	Does your religious beliefs approve of you discussing sexual topics with your child?	1. Disapprove 2. Neutral 3. Approve
E15	Please give a reason for your answer	
E16	Does sex education in school prevent you from talking to your child/children about sexual matters/topics	1. Yes 2. No
E17	If yes how does sex education in school prevent you from discussing sexual matters with your child? Please explain	
E18	Does your culture discourage you from talking with your child/children about sexual matters?	1. Discourage 2. Neutral 3. Encourage
E19	Please give a reason for your answer	

Thank you for your time.

Please indicate whether your mother has ever talked to you about the following sexual topics as you are growing. Circle the answer you agree with.					
	Question	1=never	2= Once	3= A few times	4=Often
Biological Development topics					
B1	How girls change physically as they grow up	1	2	3	4
B2	How boys change physically as they grow up	1	2	3	4
B3	Menstruation or having periods	1	2	3	4
B4	Wet dreams by boys (as a sign of maturity to produce semen and sperms).	1	2	3	4
B6	How a girl gets pregnant and has babies	1	2	3	4
B8	Masturbation	1	2	3	4
Sexual risk Protection topics					
B7	How to prevent pregnancy	1	2	3	4
B9	Abstaining from sex until marriage	1	2	3	4
B13	How you will decide whether or not to have sex	1	2	3	4
B17	How to overcome pressure from friends to have sex	1	2	3	4
B18	Reasons why your child should not have sex	1	2	3	4
B19	How to say 'no' if somebody wants to have sex with you and you don't want to.	1	2	3	4
B20	What your child will do when a partner doesn't want to use condom and he/she wants to have sex with him/her.	1	2	3	4
B21	How people can prevent getting sexually transmitted diseases.	1	2	3	4
B22	How to prevent getting HIV/AIDS	1	2	3	4
Contraceptive use topics					
B12	Uses of condom/how to use condom	1	2	3	4
B14	Uses of contraceptives to prevent pregnancy	1	2	3	4
Risky Sexual Behaviour topics					
B10	Consequences of having premarital sex	1	2	3	4
B11	Consequences of getting pregnant/getting somebody pregnant.	1	2	3	4
B15	Consequences of abortion if you get pregnant or get somebody pregnant	1	2	3	4
B16	Pressure from friends to have sex	1	2	3	4
B23	Symptoms of sexually transmitted diseases	1	2	3	4
B24	Effects of substance (alcohol, smoking...) use on sex	1	2	3	4
Experiential sexual topics					
B5	Having sexual feelings	1	2	3	4
B25	Homosexuality	1	2	3	4
Please indicate whether your father has ever talked to you about the following sexual topics as you are growing. Circle the answer you agree with.					
	Questions	1=never	2= Once	3= A few times	4=Often
Biological Development topics					
C1	How girls change physically as they grow up	1	2	3	4
C2	How boys change physically as they grow up	1	2	3	4
C3	Menstruation or having periods	1	2	3	4

C4	Wet dreams by boys (as a sign of maturity to produce semen and sperms).	1	2	3	4
C6	How a girl gets pregnant and has babies	1	2	3	4
C8	Masturbation	1	2	3	4
Sexual risk Protection topics					
C7	How to prevent pregnancy	1	2	3	4
C9	Abstaining from sex until marriage	1	2	3	4
C13	How you will decide whether or not to have sex	1	2	3	4
C17	How to overcome pressure from friends to have sex	1	2	3	4
C18	Reasons why your child should not have sex	1	2	3	4
C19	How to say 'no' if somebody wants to have sex with you and you don't want to.	1	2	3	4
C20	What your child will do when a partner doesn't want to use condom and he/she wants to have sex with him/her.	1	2	3	4
C21	How people can prevent getting sexually transmitted diseases.	1	2	3	4
C22	How to prevent getting HIV/AIDS	1	2	3	4
Contraceptive use topics					
C12	Uses of condom/how to use condom	1	2	3	4
C14	Uses of contraceptives to prevent pregnancy	1	2	3	4
Risky Sexual Behaviour topics					
C10	Consequences of having premarital sex	1	2	3	4
C11	Consequences of getting pregnant/getting somebody pregnant.	1	2	3	4
C15	Consequences of abortion if you get pregnant or get somebody pregnant	1	2	3	4
C16	Pressure from friends to have sex	1	2	3	4
C23	Symptoms of sexually transmitted diseases	1	2	3	4
C24	Effects of substance (alcohol, smoking...) use on sex	1	2	3	4
Experiential sexual topics					
C5	Having sexual feelings	1	2	3	4
C25	Homosexuality	1	2	3	4

Thank you for your time

APPENDIX 3: IN-DEPTH INTERVIEW GUIDES FOR PARENTS

IN-DEPTH INTERVIEW GUIDES

Introduce yourself and the purpose of the study being undertaken.

This study is interested in finding out your experiences talking with your child about their sexuality.

Sexuality refers to issues such as the physical changes that occur in your child as he/she grows, sexual intercourse, getting pregnant/getting someone pregnant, STIs like HIV/AIDS and so on.

A. BACKGROUND CHARACTERISTICS OF PARTICIPANTS

1. Demographics: age, sex, marital status, current occupation, level of education completed, religious affiliation etc.

B. PARENT-ADOLESCENT COMMUNICATION

Tell me whether you have a child or ward who is between 12 and 17 years?

1. Please tell me how close you (knowing them and liking them) are you with your child/children? Explain
2. Tell me whether you are able to converse or talk with your child about social issues?
3. In your opinion do you allow your child to express his/her view about what you talk about with him/her?
4. Is the conversation with your child/children mutual and open?
5. Do you talk about sexual issues with your child? Why?
6. In your opinion do think you are prepared enough to discuss sexual topics with your child? E.g. knowledge?
7. Do you think you have the necessary information to discuss sexual topics with your child? Explain
8. How is the discussion on sexual topics initiated between you and your child?
9. Which sexual topics do you discuss with your child? Name them? Explain why?
10. Which topics do you find difficult to talk with your child? Why?

11. If you have a son and a daughter with whom are you more likely to talk about sexual issues? Why?
12. Can you tell me whether you feel confident discussing sexual matters with your child?
13. Do you think you have the ability to talk about sexual issues with your child/Children? Explain.
14. Do you feeling comfortable discussing sexual issues with your child? Explain
15. Do you think you feel embarrassed discussing sexual topics with your child? Explain
16. Do you think you need help to discuss your adolescent's sexuality with him/her? Explain?
17. Do you think educating children about their sexuality will rather lead them into sex? How?
18. What difficulties do you face as you educate your child about his/her sexuality?
19. Do you think if your parents had educated you on sexuality it would have been easier for you to educate your children on their sexuality?
20. Would you encourage educating adolescents on their sexuality? Why? How? At what age?
21. How can we improve parent-adolescent communication about sexuality?
22. Do you think training parents on how to talk to adolescents about their sexuality will help them to talk to their adolescents about their sexuality easily? How?

ANNEX 4: FGD GUIDES FOR PARENTS

Introduce yourself and the purpose of the study being undertaken.

This study is interested in finding out about the factors that influence parent-adolescent communication about sexuality. Sexuality refers to issues such as physical changes that occur in your child as he/she grows sexual intercourse, getting/getting someone pregnant, sexual intercourse, STIs like HIV/AIDS and so on.

A. BACKGROUND CHARACTERISTICS

1. Demographics: age, sex, marital status, current occupation, level of education completed, religious affiliation etc.

Factors influencing sexual communication between parents and adolescents

Culture constraints

- a. In your culture what are the beliefs about adolescence? Explain.
- b. Does your culture prevent you discussing sexual issues with your child? Explain?
- c. Traditionally, how is sex education done as you are growing up?
- d. How would you describe the level of knowledge adolescents have about sexual issues today? Explain
- e. Do you think educating adolescents about their sexuality would lead them into sex? Explain
- f. If you had a son and daughter which one of them would you are more concerned about educating about sexuality? Explain?
- g. If you had sex education given by your parents would it make it easier for you to talk about sexuality with your child? How?
- h. Culturally, do you think adolescents should be educated on their sexuality? Explain
- i. How could adolescent sexuality be promoted culturally?

Media influence

1. Do you think the media (TV, movies, internet...) have influence on adolescents' sexual life? How? Explain
2. What can be done about media influences on adolescents' sexuality?
3. How can the media be used to improve sex education for adolescents?

School sex education

- a. What do you think about educating adolescents in school about their sexuality? Why? explain
- b. Do you think school sex education of adolescents about sexuality has prevented parents from educating their children on their sexuality? How?
- c. Whose responsibility is it to educate adolescents on sexuality (school, parent, health workers, and friends)? Why?
- d. What do you think parents should do in addition of school sex education of adolescents? Explain

Religion

- a. What does your religion say about sex education to adolescents?
- b. Do your religious beliefs affect you educating your child about sexuality?
- c. Does your religion prevent from talking to your child about sexuality? How? Why?
- d. Do you think your child's religious beliefs affect his/her sexual life? Explain How?
- e. Do you think religion should encourage sex education for adolescents? Why? Explain

Peers

- a. Do you think your child's friend/friends can influence him/her sexual behaviour? Explain
- b. What do you think about peers being a source of sex education for adolescents? Why?
- c. Do you think adolescents are more likely to seek information on sexuality from peers instead of parents? Why? Explain

- d. What influence could peer who is not sexually active have on an adolescent's decision to abstain from sexual activity? Explain
- e. *What influence could sexually active peer have on an adolescent's decision to engage in sex? Explain
- f. What should parents do to prevent their adolescents giving in to bad peer pressure?

Individual factors

- a. What makes it difficult for adolescent to communicate with parents on sexuality?
- b. Do you think parents have the knowledge and skills to communicate with adolescents on their sexuality? Explain Why?
- c. How can parents improve communication with adolescents on sexuality? Explain

Gender

- a. What influence communication with one gender than the other about sexuality?
- b. Mother and father who communicates with adolescents more about sexuality? Why?
- c. Do parents communicate more with sons or daughters about sexuality? Why Explain
- d. What can we do to communicate with both boys and girls equally about sexuality?

General


- a. How can parent-child communication on sexuality be improved?
- b. Do you think communication about sexual issues influence adolescents lives on risky (unsafe) sexual behaviour? How? Why?
- c. What is your opinion about training parents in parent-child communication on sexuality? How?
- d. How can health educational programme on sexual and reproductive health for parents of adolescents assist parents to communicate with their children about their sexual issues? Explain

APPENDIX 5: ETHICAL CLEARANCE FOR THE STUDY

NOGUCHI MEMORIAL INSTITUTE FOR MEDICAL RESEARCH
Established 1979 *A Constituent of the College of Health Sciences*
University of Ghana

INSTITUTIONAL REVIEW BOARD

Phone: +233-302-916438 (Direct)
+233-289-522574
Fax: +233-302-502182/513202
E-mail: nirb@noguchi.mimcom.org
Telex No: 2556 UGL GH



Post Office Box LG 581
Legon, Accra
Ghana

My Ref. No: DF.22
Your Ref. No:

4th July, 2012

ETHICAL CLEARANCE

FEDERALWIDE ASSURANCE FWA 00001824 **IRB 00001276**

NMIMR-IRB CPN 097/11-12 **IORG 0000908**

On 4th July, 2012, the Noguchi Memorial Institute for Medical Research (NMIMR) Institutional Review Board (IRB) at a full board meeting reviewed and approved your protocol titled:

TITLE OF PROTOCOL : **Parent Training and Parent-adolescent communication on Sexuality**

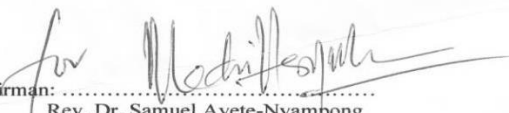
PRINCIPAL INVESTIGATOR : **Elizabeth Aku Baku Kpodotsi (PhD Candidate)**

Please note that a final review report must be submitted to the Board at the completion of the study. Your research records may be audited at any time during or after the implementation.

Any modification of this research project must be submitted to the IRB for review and approval prior to implementation.

Please report all serious adverse events related to this study to NMIMR-IRB within seven days verbally and fourteen days in writing.

This certificate is valid till 3rd July, 2013. You are to submit annual reports for continuing review.

Signature of Chairman: 
.....
Rev. Dr. Samuel Ayete-Nyampong
(NMIMR – IRB, Chairman)

cc: Professor Alexander K. Nyarko
Director, Noguchi Memorial Institute
for Medical Research, University of Ghana, Legon

APPENIX 6: PARENT CONSENT FORM

Title: Parent training and parent-adolescent communication on sexuality in Accra Metropolis, Ghana

Principal Investigator: Elizabeth Aku Baku

Address: School of Public Health, College of Health Sciences, University of Ghana.

General Information about Research

Objective: To assess the effects of training parents on parent-adolescent communication about sexual and reproductive health issues in the Accra Metropolis, Ghana.

The study is to train parents to be able to communicate with their adolescent children between the ages of 12 and 17 years about sexual and reproductive health issues. Your participation in the research is expected to last for six months. Before the beginning of the study you will be asked to answer some questions to find out whether you talk with your adolescent children about a list of sexual and reproductive topics. One of your adolescent children will also be recruited into the study and he/she is expected to answer a list of similar questions on sexual and reproductive health topics. After that, you the parents will be divided into two groups whereby one group of parents will be trained and the other will be not trained. The parents to be trained will be put into small groups and trained. The training of each group will last for six weeks which will consist of a two-hour session per week. The training will take place on Sundays. After training, there will be a waiting period of three months then the two groups of parents will be asked to answer questions again on a list of sexual and reproductive health topics. Your children who answered the questions at the beginning of the study will also answer questions again after the training of the parents.

Possible Risks and Discomforts

There is no foreseeable physical risk to you and your child. However, you may feel uncomfortable answering some of the questions which may be a bit sensitive.

Possible Benefits

The training will make you more knowledgeable about adolescent sexual and reproductive health matters. You will be able to communicate freely and comfortably with your adolescent children about sexual issues. If the training is successful I will look for funds and train the other group of parents who were not trained. This will also help them to communicate with their adolescent children comfortably and freely.

Confidentiality

We will protect any information about you and your child to the best of our ability. All records will be kept in a cupboard under lock and key. You and child will not be named in any of the study reports. Some staff members like my supervisor will have to look at the research records.

Compensation

If you are selected for the training, you will be given snacks during the training sessions and GHC10.00 for your transportation after every training session. At end of the training you would be given a certificate of participating in the training programme.

Voluntary Participation and Right to Leave the Research

Participation in the research is voluntary and you and child are at liberty to withdraw anytime if you are no longer interested. There is no penalty for withdrawal from the study. However you can only participate in the study if you and you child (both of you) agreed to take part.

Contacts for Additional Information

For any explanation and questions about the research, you can contact me on Mobile number: **0244602358** or Prof. R Adanu, The Acting Dean, School of Public Health, College of Health Sciences, University of Ghana. Mobile number: **0244238556**.

Your rights as a Participant

This research has been reviewed and approved by the Institutional Review Board of Noguchi Memorial Institute for Medical Research (NMIMR-IRB). If you have any questions about your rights as a research participant you can contact the IRB Office between the hours of 8am-5pm through the landline 0302916438 or email addresses: nirb@noguchi.mimcom.org or HBaidoo@noguchi.mimcom.org. You may also contact the chairman, Rev. Dr. Ayete-Nyampong through mobile number 0208152360 when necessary.

VOLUNTEER AGREEMENT

The above document describing the benefits, risks and procedures for the research title: Parents training and parent-adolescent communication on sexuality, has been read and explained to me. I have been given an opportunity to have any questions about the research answered to my satisfaction. I agree to participate as a volunteer.

Date

Name and signature or mark of volunteer

If volunteers cannot read the form themselves, a witness must sign here:

I was present while the benefits, risks and procedures were read to the volunteer. All questions were answered and the '[volunteer has agreed to take part in the research.

Date

Name and signature of witness

I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this research have been explained to the above individual.

Date
Consent

Name Signature of Person Who Obtained

APPENDIX 7: CHILD (STUDENT) ASSENT FORM

Study Title: Parent training and parent-adolescent communication on sexuality in Accra Metropolis, Ghana

Introduction

My name is Elizabeth Aku Baku and I am from the Department of Population, Family and Reproductive Health at School of Public Health, University of Ghana, Legon. I am conducting a research study entitled: Parent training and parent-adolescent communication on sexual and reproductive health topics. I am asking you to take part in this research study because I am trying to learn more about parents talking to adolescent children about sexual and reproductive health topics. This will take six months.

General Information

If you agree to be in this study, you will be asked to complete a questionnaire before and after training of parents.

Possible Benefits

Your participation in this study will result whether parents talk to adolescent children about sexual and reproductive health topics. After training of your parent he/she will be able to talk with you on sexual and reproductive health topics freely and comfortable. I will give you a pen and pencil for completing the questionnaire.

Possible Risks and Discomforts

However, the risks associated are: you may feel uncomfortable answering some of the questions.

Voluntary Participation and Right to Leave the Research

You can stop participating at any time if you feel uncomfortable. No one will be angry with you if you do not want to participate.

Confidentiality

Your information will be kept confidential. No one will be able to know how you responded to the questions and your information will be anonymous.

Contacts for Additional Information

You may ask me any questions about this study. You can call me at any time on mobile phone number: **0244602358** or talk to me the next time you see me.

Please talk about this study with your parents before you decide whether or not to participate. I will also ask permission from your parents before you are enrolled into the study. Even if your parents say “yes” you can still decide not to participate.

VOLUNTARY AGREEMENT

By making a mark or thumb printing below, it means that you understand and know the issues concerning this research study. If you do not want to participate in this study, please do not sign this assent form. You and your parents will be given a copy of this form after you have signed it.

This assent form which describes the benefits, risks and procedures for the research titled: Parents training and parent-adolescent communication on sexual and reproductive health matters has been read and or explained to me. I have been given an opportunity to have any questions about the research answered to my satisfaction. I agree to participate.

Child's Name:.....
Name:.....

Researcher's

Child's Mark/Thumbprint.....

Researcher's Signature:.....

Date:

Date:

APPENDIX 8: LETTER TO ACCESS SCHOOLS FOR THE STUDY**GHANA EDUCATION SERVICE**

In case of reply the number and date
of this letter should be quoted

Ref. No.:GES/AD/ME/16303/

YourRef.No.



Republic of Ghana

METRO EDUCATION OFFICE
POST OFFICE BOX 337
ACCRA

Tel. No.: 030-2632370
030-2676199

Email:metroeducationoffice@gmail.com

September 3, 2012

**THE HEAD OF DEPARTMENT
DEPT OF POPULATION, FAMILY & REPRODUCTIVE HEALTH
SCHOOL OF PUBLIC HEALTH
COLLEGE OF HEALTH SCIENCES
UNIVERSITY OF GHANA
LEGON**

PERMISSION TO CONDUCT RESEARCH IN SELECTED SCHOOLS

I wish to acknowledge receipt of your letter dated 12th July, 2012 and to inform you that permission has been granted to Mrs. Elizabeth Baku Kpodotsi to conduct a research in selected junior high schools in Osu Klottey and Ablekuma South Sub-Metros.

As part of the requirement for award of a degree, Elizabeth will conduct a research to complete her thesis on the topic 'Parent Training and Parent – Adolescent Communication on Sexuality'. Consequently, she will train parents and assess the effects of the training on parent-adolescent communication on sexuality. Specifically, students between the ages of twelve and seventeen and their parents will take part in the research.

The concept of an intervention and a non-intervention groups which will be utilized and the programme is expected to last for three months. Four schools each in the 2 sub-metros will be involved.

By a copy of this letter, Officers-in-charge, Circuit Supervisors and Headteachers are kindly requested to accord Elizabeth the necessary courtesies to enable her achieve success.

Thank you

**ALFRED KOFI OSEI
DIRECTOR OF EDUCATION
ACCRA METROPOLIS**

Cc: The Officers-in-charge, Ablekuma South and OsuKlottey
Headteacher, Ringway Estate Junior High School, Osu
Headteacher, Teacher Mota Junior High School, Osu
Headteacher, Korle Gonno Methodist Junior High School
Headteacher, Sempe '1' Junior High School
Headteacher, St. Mary's R.C. Girls Junior High School,
Headteacher, Ministry of Health Junior High School
Headteacher, Korle Gonno '1' Junior High School
Headteacher, Osu Presby Boys JSS
Headteacher St Peter's Catholic JHS

APPENDIX 9: INVITATION LETTER TO PARENTS TO PARTICIPATE IN THE STUDY

INVITATION TO PARTICIPATE IN A STUDY

Title: Parent training and parent-adolescent communication about sexuality in Accra Metropolis

Principal Investigator: Elizabeth Baku Kpodotsi

Address: School of Public Health, University of Ghana

1. You and your child are invited to participate in a study on parents' talking with their children about sexual and reproductive issues.
2. The study is to train parents to be able to talk to their adolescent children about sexual and reproductive health issues.
3. About 100 adolescent children between the ages of 12 and 17 years in four Junior High Schools in the Osu Clotey Sub-Metropolis and their parents have been selected to take part in the study.
4. Before the beginning of the study you will be asked to answer some questions to find out whether you talk with your adolescent children about a list of sexual and reproductive topics.
5. Your child is also expected to answer a list of similar questions on sexual and reproductive health topics at school.
6. After that, parents will be trained for 2 hours per week at a day and time suitable to you for about 4-6 weeks.
7. After training, there will be a waiting period of three months then you will be asked again to ask questions on a list of sexual and reproductive topics.
8. Your child will also answer questions again after the training of the parents.
9. This is to find out the effects the training has had on parents (has parent talking with their adolescent children have improved or not).
10. You will be given snack and GHC5.00 for your transportation anytime you attend a training session.

Please note that you (one parent only) and your child are to be recruited together, if you would not take part in the study then your child could not take part.

Please if you would like you and your child to take part in the study encircle **Yes** or **No** below:

1. **Yes**

2. **No**

Your mobile number:.....

Please contact me on Mobile number: **0244602358** or Prof. R Adanu, The Acting Dean, School of Public Health, College of Health Sciences, University of Ghana on Mobile number: **0244238556** for any explanation or questions about the study.

NB: Please give this letter back to your child to send to the Head teacher of his/her school.