FACTORS INFLUENCING PARENTAL DECISIONS ON ADOLESCENT PREGNANCY AMONG RURAL AND URBAN-BASED PARENTS OR GUARDIANS IN IBADAN, NIGERIA

OLAYEMI OLUFUNMILAYO, MATTHEW

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BY

OLAYEMI OLUFUNMILAYO, MATTHEW

B. Ed Health Education (Ibadan)

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ABSTRACT

Adolescent pregnancy is an important public health problem on the increase in Nigeria. Few studies have investigated the circumstances and factors associated with parental decisions taken following an adolescent pregnancy, in spite of the implications of these on the adolescent. This study was designed to assess factors influencing parents'/guardians' decisions on adolescent pregnancy.

A mixed method study involving the use of Key Informant Interviews (KII) and semi-structured interview was conducted. A four-stage sampling technique was used to select 261 and 244 respondents from Omi-Adio (rural) and Apata (urban) communities respectively. KII were conducted with twelve parents; (six each from urban and rural settings) who has had personal experiences of a pregnant adolescent. Descriptive and Chi-square statistics, and logistic regression were used for data analysis and qualitative data was analyzed using thematic analysis. The UK Registrar general's classification of occupation and socioeconomic status was used.

Mean age of respondents from rural and urban communities were 50±9.4 years and 48±10.1 years respectively. Fifty-five percent of urban and 30.1% of rural respondents had tertiary education. More rural (70.3%) than urban respondents (35.4%) were in the low socioeconomic group. More rural (91.9%) than urban dwellers (88.9%) supported keeping an adolescent pregnancy. More urban (93.4%) than rural (76.3%) dwellers were of the view that an adolescent should continue school after delivery ($p<0.05$) while 25% of rural respondents and 18.0% of urban respondents mentioned that a pregnant adolescent be married to the person responsible for the pregnancy ($p<0.05$). Personal experience of adolescent pregnancy occurred in 17.2% and 16.4% of rural and urban respondents respectively. Adolescent pregnancy occurred in children and relations of respondents. Among rural respondents, the pregnant adolescents were either the respondents' younger sibling (51.1%) or child (48.9%). In the urban area the pregnant adolescents were the respondents' younger sibling (75.0%), child (20.0%) or the respondent/ his spouse (5%). More urban (85%) than rural respondents (60%) decided to keep the pregnancy ($p<0.05$). The decision to keep the pregnancy was mainly attributed to religious beliefs among the rural respondents (68%) and health reasons among their urban counterparts (76.5%). Urban

dwellers were 5 times more likely to decide to keep the pregnancy than rural respondents (OR = 5.48, 95%CI = 1.71 - 17.59). Respondents in the high socio-economic group were less likely to decide to keep the pregnancy (OR = 0.20, 95% CI=0.06-0.65). The initial reactions of the key informant interviewees to discovery of pregnancy were disappointment. In the urban area, very few pregnant adolescents were said to have continued schooling till delivery and many of them resumed school thereafter while in the rural area, they all dropped out of school.

Place of residence, socio-economic status and religion were key factors influencing decision to keep adolescent pregnancy with urban dwellers more favourably disposed than rural dwellers. Intervention programmes thus need to target those in rural areas to change their views regarding keeping of adolescent pregnancies and encouraging re-integration of adolescents that get pregnant.

Key words: Adolescent pregnancy, Pregnancy acceptance, Parental Decision.
Word Count: 486

DEDICATION

This work is dedicated to my darling sister, Mrs. Oluwakemi Adekoya.

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CERTIFICATION

I certify that this study was carried out by Olayemi Matthew in the Institute of Child Health, College of Medicine, and University of Ibadan, Nigeria.

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Prof O.O. Omotade

M.B.,B.S. (Ib), F.M.C. Paed (Nig), M.A. Bioethics (CWRU, Ohio), FRCPCH (UK)

Director, Institute of Child Health

College of Medicine,

University of Ibadan, Nigeria.

And co-supervised by me:

……

Dr. Adesola O. Sangowawa

M.B.,BS.(Ib), MPH(Comm. Health), FWACP, FMCPH.

Institute of Child Health,

College of Medicine,

University of Ibadan, Nigeria.

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CHAPTER ONE

INTRODUCTION

1.1. BACKGROUND OF THE STUDY

Adolescents and young persons are an important group in any society. Given their population and characteristics, they are one of a country's most valuable assets. With proper guidance and motivation, they can significantly alter and improve the socio-economic and political situation of the country. The global recognition of the importance of adolescents is an indication of their potential in influencing the course of human history.

Adolescent reproductive and sexual health has become an important issue, mainly due to the medical and social consequences to which they are exposed as a result of early onset of sexual activity (Adekunle, Arowojolu, Adedimeji and Roberts, 2000). In many developing countries (e.g. in sub-Saharan Africa and Latin America) there has been a gradual shift from extended family structures towards nuclear families. With this change in family structure and way of living, the role of members in the hitherto extended family in educating and acting as role models in sexual behaviours practiced by young people is disappearing (WHO, 2004). In Nigeria as with other countries of the world, two key events during adolescence have strongly influenced this development. Declining age of menarche, coupled with an upsurge of interest in pursuing higher education has made the adolescent biologically mature long before matrimony, especially in the south-west part of the country (Isiugo-Abanihe, 1997).

Several studies have demonstrated high rates of early and unprotected sexual activities and pregnancy among African youth (Nichols et al, 1986, Ajayi et al, 1991 and Adekunle et al, 2000.). The risks associated with adolescent pregnancies and child births are enormous. These could include damage to the uterus, fallopian tubes and ovaries, maternal mortality, infertility, pregnancy and delivery complications. Once pregnant, adolescents and their parents are left to take a decision on either keeping or aborting the pregnancy. This decision could be influenced by socio-cultural and economic factors like religion, educational attainment, personal experience, occupation, cultural values, urbanization, marital status, gender (Kaye et al, 2005). Where the decision taken is abortion, adolescent may be faced with the chance of illegal abortion from inadequately trained personnel and facilities/equipment. On the other hand, if the decision is to

keep the pregnancy, the individual/family may be burdened with the care of the pregnancy, safe delivery and care of the new born as well as obstetric complications that could arise.

For this study, the conceptual framework considers proximal factors to decision making as personal experience, ethnicity, occupation, educational attainment, gender, religion, marital status and family types, while distal factors considered included abortion laws, Community/Societal values and rural/urban residency.

1.2. JUSTIFICATION

Less than half (69.7 million) of Nigeria's total population of 162 million are children below the age of 15 years. By 2025, the total population of Nigeria is projected at 237.1 million. (Population Reference Bureau, 2011). A number of studies have demonstrated high rates of early and unprotected sexual activity and unintended pregnancy among African youth (Nichols et al, 1986; Ajayi et al, 1991; Adekunle et al, 2000; Ibrahim and Owoeye 2012). One-quarter or more of adolescents become sexually active by their 15th birthday and they do not have adequate knowledge and access to contraceptive methods (WHO, 2006; Fatusi and Blum, 2008). The incidence of pre-marital sex and pregnancy is on the increase in Nigeria. Literature reveals that about half of the adolescents aged 15-19 years with no formal education in Nigeria have begun child bearing. NDHS, 2003).

The problem of teenage pregnancy in Nigeria is a socially distressing one. Most of the previous researchers on adolescent pregnancy have concentrated on hospital based researches without considering the views and concerns of residents of the community. Since parental decision is of utmost importance in determining the outcome of adolescent pregnancy, it becomes vital to examine the factors affecting parental decision making. This formed the basis for this study.

1.3. OBJECTIVES

General objectives

This study determined attitude of parents/guardians in rural and urban areas to adolescent pregnancy. It also identified socio-cultural factors influencing their decisions on adolescent pregnancy.

Specific Objectives

1. To describe rural/urban differences in attitudes of parents/guardians towards adolescent pregnancy.
2. To determine socio-cultural factors (like marital status, occupation, ethnicity, religion, educational attainment and monthly income) associated with parental decision on adolescent pregnancy.
3. To determine the influence of attitude on decision making towards adolescent pregnancy.

1.4. RESEARCH QUESTIONS

1. What is the attitude of parents/guardians towards adolescent pregnancy?
2. Is there any relationship between socio-cultural factors and parents/guardians decision about adolescent pregnancy?
3. Is there any relationship between attitudes of the study population towards adolescent pregnancy and decision about adolescent pregnancy?

CHAPTER TWO

LITERATURE REVIEW

2.1. The Adolescent

An adolescent is a person usually within the ages of 10 and 19 years (WHO, 2004). The adolescent period is the period between childhood and adulthood which is characterized by physical, cognitive and social changes. There is a shift from childhood dependence to adulthood independence. Less than half (69.7 million) of Nigeria's total population of 162 million are children below the age of 15 years. By 2025, the total population of Nigeria is projected at 237.1 million. (Population Reference Bureau, 2011).

A number of studies have demonstrated high rates of early and unprotected sexual activities and pregnancy among African youth (Nichols et al, 1986; Feyisetan and Pebley, 1989; Ajayi et al, 1991; Briggs, 1998 and Fatusi and Blum, 2008; Ibrahim and Owoeye, 2012). More than 90% of the 14 million births to adolescent girls are in the developing countries, also 30-40% of girls have a baby before the age of 18 years in Nigeria (WHO, 2006). A large proportion of first pregnancies occur in adolescence (WHO, 2006).

Sexual and reproductive health needs and rights of young unmarried people have traditionally been taboo subjects. In many societies, there are controversies and fear surrounding the issue of adolescent sexuality (UNESCO, 2006). This might be a reason for the increase in clandestine sexual activities among adolescents (Vipan and Pratibha, 2011).

Characteristics of adolescents include body changes and concerns over these changes, a sense of being self-conscious, mood swings, a sense of vulnerability, rejection of childhood behaviour, having feeling of emancipation, picking adult role models other than parents, forming same sex relationships, realization of limitations and assuming adult roles. Adolescents learn by a variety of ways, one of which is experimenting and exploratory behaviour, this refers to behaviors that involve potentially negative consequences and that are in some way balanced by perceived positive consequences, for example, smoking, drinking alcohol, self-harm, substance misuse, and unprotected sex (Dieppe et al, 2008). Exploratory behaviors are common and can result in mortality and morbidity, suicide, aggressive behavior, mental health disorders, teenage pregnancy, and sexually transmitted infections. These exploratory behaviours have also been

shown to significantly cause non-adherence in adolescent disease management (Durant et al, 1999).

2.2. Protective Factors Influencing Adolescent Development

Adolescents are exposed to various protective factors in the adolescent, family and society that protect them and keep them healthy (WHO, 2006). Some of these factors include: parental connectedness and presence, responsible older siblings, two parents, fewer siblings, good moral values, religious institutions, access to good role models, access to recreational facilities, good academic performance, good and dedicated teachers, safe and conducive school environment, political stability and youth laws/policies (WHO, 2006).

Family characteristics that have been shown to influence, or be associated with early sexual initiation among adolescents include parental characteristics like family composition, education, level of violence/abuse, economic status; parent–adolescent relationships like connectedness, supervision, communication, autonomy; and attitudes and values of family members like religion, attitudes toward sex (Miller, 1998). Key relationship factors influencing sexual initiation among adolescents include parent-child closeness and connectedness, parents' values about teen sex, and parent-child communication about sex (Sieving et al, 2000). Morrison-Beedy et al (2008) found out that engaging in conversations with adolescents about life goals and dreams may help to maintain a future-oriented perspective and preference of abstinence to premature sexual activity initiation. Also, Cuffee et al (2007) suggests that discussing with adolescents about the risks and benefits of sex and exploring how they think others will feel about them can help encourage them to delay sexual debut. Jaccard et al (2003) and McNeely et al (2002) encouraged parents to convey their expectations on sexual activity and pregnancy to adolescents which could help delay sexual debut. Resnick et al (1997) stated that closeness and connectedness between parents and children are related to teens' virginity status and helps delay first sexual intercourse. Fatusi and Blum (2008) identified medical and developmental outcomes, educational attainment and age to be significantly associated with adolescent sexual initiation. They also reported that higher level of religiosity was associated with lower sexual debut rates in females.

2.3. Risk factors influencing adolescent development

Adolescent risk factors are factors in the adolescent, family and society that predispose them to initiating and adopting health risk behaviours. They include: large family size, overcrowding, poverty, access to weapon, exposure to violence within the family, high rate of teenage pregnancy, high school dropout rates, single parent families, access to tobacco, alcohol and drugs, violence in schools, prejudices from peers, political instability and unrests and high rates of unemployment (Sieving et al, 2000). Dieppe et al (2008) reported that exploratory behaviors cluster in adolescents that are depressed, homeless, young offenders, or those who have other problems that place them at risk. Poverty plays a major role in adolescent pregnancy leading to early motherhood which often compromises an adolescent's educational attainment and economic potential. Delay in the teaching of sex education has also been implicated as a risk factor for adolescent pregnancy (WHO, 2009).

2.4. Sexual initiation among adolescents

Sexuality can be defined as the ways in which people experience and express themselves as sexual beings; the awareness of themselves as males or females; the capacity they have for erotic experiences and responses. (Farlex, 2013). Adolescence is a period when the feelings and sexual desires begin in an individual however it is the activity related to this desire that eventually leads to complications if not properly managed.

In many societies, there is a high rate of sexual activity among adolescents, some of which are coerced or linked to poverty (WHO, 2006). Among Brazilian adolescents in the study of Borges and Nakamura (2009), sexual initiation was seen as a passage to the adult world and has to do with maturity which can be signified by financial autonomy and age so one is sure such adolescent can manage the potential consequences of sexual life like pregnancy. In other words adolescent pregnancy in a working class adolescent is not usually considered a major problem. Frappier et al (2008), in their study among Canadian adolescents found the mean age of first sexual intercourse to be 15 years. Majority of the respondents were already sexually active while a few were not. Over 70% of those yet to be sexually active claimed not to have found the right person and were not ready while about 29% wanted to wait till marriage.

Several studies have shown high rates of early and unprotected sexual activities and pregnancy among African youth (Nichols et al, 1986; Feyisetan and Pebley, 1989; Ajayi et al, 1991; Ibrahim and Owoeye, 2012). The median age at first sexual intercourse according to the Nigerian National Demographic and Health Survey (2008), was 17.7 years for females and 20.6 years for males. More than 90% of the estimated 14 million births to adolescent girls worldwide are in the developing countries, also 30-40% of girls have a baby before the age of 18 years in Nigeria (WHO, 2006). Pre-marital sex and pregnancy is on the increase in Nigeria, literature reveals that half of the unmarried adolescents in Nigeria have been pregnant before, and a large proportion of first pregnancies occur in adolescence (Fatusi and Blum, 2008).

2.5. Age at first pregnancy and marriage

Adolescent child-bearing rates in many countries in Sub-Saharan Africa range from 120-600 per 1000 (Blum and Nelson-Mmari, 2004). Ideally every parent should introduce their children to sexuality education but it is not usually the case. Most adolescents obtain such information from peers, and sometimes this information could be wrong and misleading. Before parents get to realize this, it is usually late. NDHS (2008) reported the median age at marriage for women with no education to be 15.5 years compared with 22.0 years for those with more than secondary education.

In some parts of the world (like South Asia, the Middle East and North Africa), age at marriage has traditionally been low in kinship-based societies and economies (WHO, 2004). Most of the girls married soon after menarche, fertility was high, and consequently many children were born from adolescent mothers. In contrast, in Europe during the 18th and 19th centuries, age at marriage was relatively high, and parents and the society at large strongly discouraged premarital sex (WHO, 2004). If conception occurred, an early marriage was initiated. Such social control by parents and the society declined as economies developed and as the education and training of young people were extended and undermined parental authority (WHO 2004).

In some cultures, an early marriage before the age of 16 years is common for example in the Northern parts of Nigeria among the Muslims of the Hausa and Fulani Tribes. In some communities where the culture forbids a girl from having her first menses in her parent's home (Rehan and Sani, 1986) hence female marriage before or slightly after puberty is common, this

practice was aimed at ensuring that virginity is maintained at the time of marriage. Early marriage is usually associated with early child bearing and the attendant hazards (Agboghoroma and Emuveyan, 1998). The contrary is what obtains in the southern part of Nigeria with majority of people Christians of the Yoruba and Ibo tribes. Before marriage, it is expected that a girl should have either taken her educational pursuits to a reasonable level or completed it or have completed a vocational training. It is uncommon in the some parts of Nigeria for an adolescent to be engaged in a marital union (Fadipe, 1970).

2.6. Contraceptive use among adolescents

Hessini (2004) reported that societal norms condemning pre-marital sex usually acts as a barrier to rational decision-making and resource allocation, hence in many countries health services for adolescents are inadequate and often not youth-friendly. In Nigeria, there is a reluctance to provide adolescents with contraceptives because the culture does not support pre-marital sexual activity. Therefore, with such cultural values coupled with a large adolescent population, the cultural beliefs and attitudes of parents as well as service providers are important regarding contraceptive use among adolescents (Adekunle et al, 2000). Findings from the 2008 National Demographic and Health Survey (NDHS) revealed that among teenage women aged 15-19 years, 45% knew some methods of contraception and such knowledge was lowest among women with no education and lowest wealth quintile (45 and 41%) respectively. However, in another survey among single Nigerian youths aged 18 to 24 years, 97.7% of males and 98.4% of females knew of at least one method of contraception (Araoye and Fakeye, 1998).

The society in most developing countries feels uncomfortable accepting adolescent sexual reproductive health needs and has a misconception that unrestricted access to sexuality education or contraceptive services would promote increased sexual activities; hence most family planning programmes have not done much to reach adolescents and health workers have strong biases against providing them with services (Adekunle et al, 2000). Among sexually experienced youths aged 18 to 24, 72% of males and 81% of females had ever used contraception. Males were more likely (43%) to have used condoms than females (31%) (Araoye and Fakeye, 1998).

About 7% of married teenage girls reported using any method of contraception; less than 5% used a modern method. Fifty three percent of unmarried, sexually active teenage women used any method of contraception; over 29% used a modern method (NDHS, 1999).

Among sexually active single youths, reason for non-use of contraception included fear of complications (46.7% of males and 48.5% of females) and religious belief (12% of males and 21.2% of females). Forty percent of male youths believed that condoms would reduce sexual pleasure (Araoye and Fakeye, 1998). Adekunle et al (2000) revealed that the most important factor associated with none and low use of contraceptives by teenagers in Nigeria was inaccessibility resulting from strong resistance on the part of the government, parents and service providers. A prospective study of family planning clinic clients in Lagos showed that unmarried adolescents rarely utilized the services (Emuveyan and Dixon, 1995). Findings from the study by Warenius et al (2006) revealed that nurses/midwives disapproved of adolescent sexual activity, including masturbation, contraceptive use and abortion, but also had a pragmatic attitude to handling these issues. Meanwhile those with more high level of education and those who had received continuing education on adolescent sexuality and reproduction were more youth-friendly.

2.7. Abortion among adolescents

Unsafe abortion is often the end result of an unwanted pregnancy, which in turn is often the end result of lack of contraceptive use. WHO reported that within the public sector in Vietnam there are 78–83 abortions per 1,000 women of reproductive age and health workers estimate that adolescent abortion constitutes about one-third of these (WHO, 1999). Adewole (1992) in Nigeria showed from a hospital-based study that up to 80% of patients with abortion related complications were adolescents. Similarly, a community-based study of abortion prevalence by Okonofua et al (1996) found that one third of women who obtained an abortion were adolescents. Otoide, (2001) found that one third of Nigerian women obtaining abortions were adolescents. He also revealed that up to 80% of Nigerian patients with abortion related complications were adolescents.

Lack of balanced reproductive health information and inaccessibility of services to adolescents and negative attitudes towards adolescent sexuality are contributing factors to the high abortion

rates in most countries (Klingberg-Allvin et al, 2006). Abortion in Nigeria is illegal unless when performed to save the life of the woman (Okagbue, 1990). Despite this, induced abortion is often performed on grounds other than maternal illness (Agboghoroma and Emuveyan, 1998).

The Federal Ministry of Health (FMOH) in 2003 reported that most of the adolescent pregnancies in Nigeria ended up in induced abortion. Also majority of the patients admitted in hospitals for abortion related complications were adolescents. WHO also found out in 2006 that if there are complications in adolescent abortion, they are more likely to delay seeking care. Okagbue (1990) reported that in 5 hospitals studied, 55% of post-abortion patients were <20yrs old. Abortion which is about the oldest most widely used method of preventing unwanted deliveries has continued to constitute one of the major causes of human suffering and death in Nigeria (Omu et al, 1981; Adewole, 1992 and Otoide, 2001). Performing or seeking an abortion is illegal in Nigeria, except to save a woman's life, yet experts report that more than 600,000 Nigerian women obtain abortions each year (Henshaw, 1998).

2.8. Adolescent pregnancy

Adolescent pregnancy is pregnancy in a girl who is between the ages of 10 and 19years.The term teenage is virtually synonymous with adolescence, the latter emphasizing the physiological maturation that occurs during the teenage period (James et al, 1999). About 10% of births worldwide occur in the adolescent (WHO, 2006). Within Europe teenage birth rates varied widely from 1.5 per 1000 females aged 15–17 years in Switzerland to 16.6 in the UK in 1998. Rates in The Netherlands, France and Germany were 2.2, 3.4 and 5.3 per 1000, respectively (Paranjothy et al, 2008). Austria had an adolescent birth rate of 5.8 per 1000 women aged 15–17 years in 1995, while it was 33.8 adolescent births per 1000 women in the United States (Willibald et al, 2007).

In the United States, it is estimated that about 400,000 teens give birth each year and twice this number of adolescents get pregnant (NCHS, 2006). Unintended pregnancy is an important public health issue because of its association with poor health outcomes for both mother and child. In the United States, about 50% of unintended pregnancies end in induced abortion and those that result in live births are associated with a high risk of complications (Henshaw, 1998). In the United States, approximately one out of every ten girls aged 15-19years becomes pregnant each

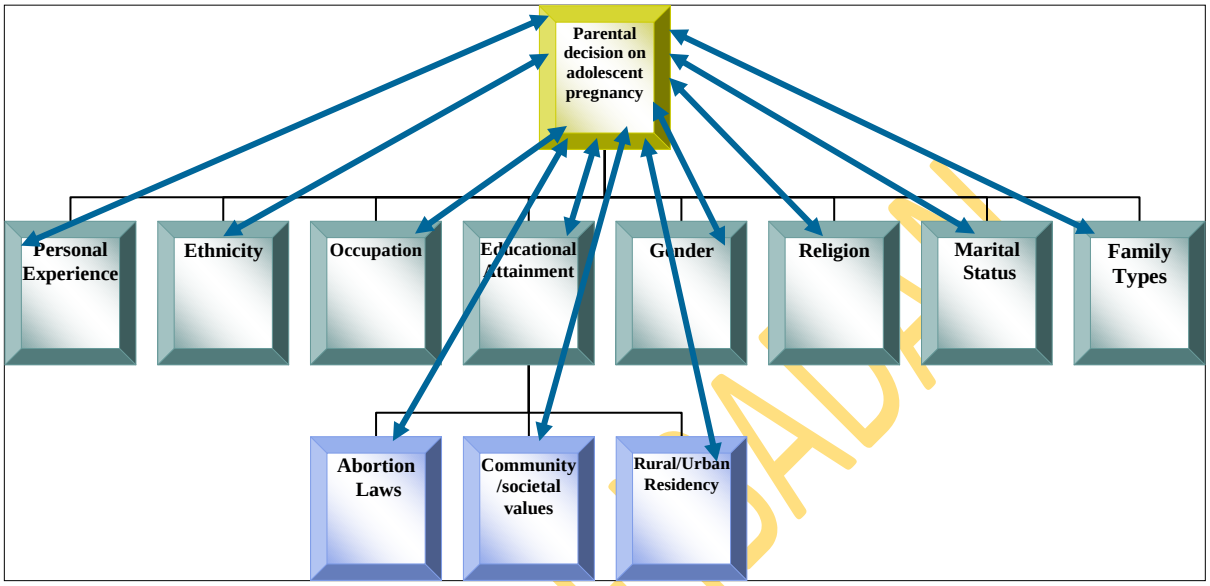
year. Hence, a woman in the USA has a 20-30% chance of becoming pregnant before her 20th birthday (James et al, 1999). The long term health implications for the teenage mother were assessed in a Swedish population based cohort study using record linkage of census data with at least 30 years' follow-up. Compared with mothers aged 20–24 years at first birth, there was a 70% increase in the risk of premature death for mothers aged 17 years and below at first birth, and a 50% increase for those aged 18–19 years (Olausson et al, 2004).

Unwanted pregnancy at an early age (before 20 years) shows a failure to provide a safe environment that supports adolescence with adequate information, education and training. Adolescent pregnancy is a socio-medical problem in both developed and developing countries but most especially in Sub-Saharan Africa. It is more common in Sub-Saharan Africa and there is poor socio-economic infrastructure, in addition to poor knowledge, availability and use of contraceptives (Okpani et al, 1995).

Glover et al (2003) recorded in Accra Ghana that one-third of sexually experienced never married females aged 12-24 years reported having ever been pregnant out of which 70% reported having had or attempted to have an abortion. According to findings from a study conducted at the University of Port-Harcourt Teaching Hospital (UPTH), adolescent pregnancies constituted about 10% of all pregnancies. However 37% of all maternal deaths and 45% of all perinatal deaths occurred among the adolescents (Okpani et al, 1995).

The 2008 National Demographic and Health Survey of females within reproductive age group in Nigeria found the median age at first intercourse to be just over 17 years. Also 23% of adolescents aged 15-19 years had started childbearing that is they have given birth or are currently pregnant with their first child. Adetoro et al (1991) reported that at the University of Ilorin Teaching Hospital, abortion rate was 94.6/1000 deliveries and adolescents made up 74.4% of all induced abortions which accounted for 60.3% of all gynaecological admissions. Most patients (72.5%) were between 15-19 years old. Tinuola in 2006 found that majority of the adolescents studied in Ekiti reported that they had engaged in premarital sex of which 62.5% had experienced premarital pregnancies; age at first sexual intercourse was 17 years.

Figure 1.1: CONCEPTUAL FRAMEWORK OF FACTORS AFFECTING PARENTAL DECISIONS ON ADOLESCENT PREGNANCY



Key:

1. Outcome Variable
2. Proximal Variables
3. Distal Variables

2.9. Problems associated with adolescent pregnancy

Adolescent pregnancy is viewed by most societies as a social and economic problem. In some countries like the UK and the USA, the increase in teenage birth rates is partly due to the society moving away from the traditional family values, described by Kmietowicz as entering a ‘‘socio-sexual transformation’’(Hodnett and Fredericks, 2003). Adolescent pregnancy is a risk factor for complications like pre-term delivery, low birth weight, small for gestational age births, and neonatal and infant mortality. Low birth weight is an important determinant of childhood mortality, especially in developing countries (Hodnett and Fredericks, 2003). In a study by Olukoya et al (1992), 84.7% of the respondents were aware that teenage pregnancy was a major social problem in Nigeria. Adolescence is associated with increased risk of low birth weight, which is generally used by clinicians as a measure for intrauterine growth restriction (IUGR). The social aetiology of IUGR includes psychosocial stress which can result from social isolation, homelessness and violence (Chen et al, 2007).

Concerning harmful habits and behavior, teenagers are more likely to smoke throughout the pregnancy compared with older mothers. Also, the prevalence of poor diet, alcohol and drug misuse is higher among pregnant adolescents which can serve as a negative impact on the pregnancy (Paranjothy et al, 2008). Babies born to teenage mothers are at increased risk of maltreatment or harm, and have higher rates of illness, accidents and injuries as well as cognitive, behavioural and emotional complications. This is due to the emotional immaturity of the adolescent at this stage (Berrington et al, 2005). There is also evidence that teenage pregnancy can lead to poor educational achievement, poverty, and social isolation. Adolescent fathers and mothers are more likely than their peers who are not parents to have poor academic performance. Having a child during the adolescent years could have negative social consequences, especially if the adolescent is unmarried and has to rely on financial support from parents. (Willibald et al, 2007).

In a study among American teenagers, teen parents discussed the loss of friends stating: *“I lost all my friends after I had a baby” and “they don’t do what I do now.”* Teen parents noted the need to either access babysitters or have to *“take my son with me everywhere”* as additional costs of teen births. Several non parenting students commented that a birth during the teen years would preclude participating in sports or activities, limit free time, and deny teens of the *“freedom to*

choose how to spend time". Having a baby during the teen years could limit educational options, restrict study time, and cause significant challenges in mixing school and parenting (Herrman, 2008).

Teenage mothers are more likely to be living in poverty compared with mothers in their thirties, and these teenage mothers are less likely to complete their education and training. Therefore facing restricted job opportunities, potentially reinforcing the cycle of deprivation and teenage pregnancy (Mayhew and Bradshaw, 2005). Most studies on teenage pregnancy focus on the mother and baby. Few researches available indicate that young fathers have low socio-economic status backgrounds, with low levels of education and low earning potentials (Berrington et al, 2005).

Despite the challenges associated with working and teen births, Herman found out from some adolescent respondents that having a teen birth though very challenging could push a person to work harder to be able to support themselves and their baby and could increase the incentive to work in order to provide for the child and his future. This in the long run turns out to be an advantage by making the adolescent more responsible (Herman, 2008).

Men who become fathers in their teens or early twenties are likely to be unemployed, receive benefits and require social housing, after allowing for the poorer backgrounds and lower educational ability that predisposed to young fatherhood (Berrington et al, 2005).

The inability to adequately provide financial support can be damaging to a young father's confidence and sense of self, while accepting parenting responsibilities and being significantly involved with their child is associated with positive benefits for father and child (Glickman, 2004).

Some of the medical complications of adolescent pregnancy on the adolescent mother include: anemia in pregnancy, urinary tract infection, hypertension, preterm labour, low birth weight, a higher analgesia requirement, obstructed labor which could lead to operative assistance during labour, vesico-vaginal fistula, short interval to next pregnancy and sudden infant death syndrome. Anaemia was one of the most common antenatal complications found from the study

of Mahavarkar et al (2008) where teenage mothers were nearly three times more at risk of developing anaemia than older women.

A study of births to women under 25 years of age in the USA found that after adjustment for confounding factors (state of birth, maternal race, marital status, tobacco smoking and alcohol use during pregnancy, and prenatal care status), teenage pregnancy was independently associated with the increased risks of very pre-term delivery, pre-term delivery, very low birth weight, low birth weight, small for gestational age and neonatal mortality (Chen et al, 2007).
Pre-term labour is another major complication noted in the study of Mahavarkar et al (2008), the risk was 2.97 times that of the control group which were adult mothers. Also, teenage mothers were twice at risk of developing pre-eclampsia and its associated problems than their adult counterparts.

James et al, (1999) suggested that competition for nutrients between the foetus and mother could affect pregnancy outcomes in young pregnant girls by interrupting the normal growth process.

2.10. Attitude of health care providers towards adolescent pregnancy

According to Green, Kreuter, Deeds and Patridge, attitude is "a constant feeling that is directed towards an object (be it person, an action or an idea). "Attitudes are to some degree the determinants, components and consequences of behavior" (Adekunle et al, 2000).

According to Rivers et al, health care providers are important in guiding and counseling adolescents on issues of their reproductive health. Young people's sexual behaviour reflects a changing society but health care services have been slow to develop realistic and relevant services for youth.

The World Health Organization (WHO) has identified the problems of adolescents in contraception and abortion services and emphasized the importance of high quality provider–client interaction in order to gain their confidence and assist them to protect their sexual and reproductive health. To further highlight this attitudinal challenge towards adolescent pregnancy, below are excerpts from discussions among nurses: *"The young people who come to us are normally shy, we need to respect their feelings and gradually find out reasons for the pregnancy.*

We can then discuss and advise them about contraception. But their secret should be kept safe" "I think that first we should inform our clients about the risks of having pre-marital sex, then about abortion and its bad effects on their health and later fertility. Pre-marital sex also affects their studies". "Adolescents should have a clear and healthy love, meaning avoiding pre-marital sex if they are not ready to marry. Generally speaking, we cannot blame young people for having sex early because it is the modern trend in society. However, we need to provide adolescents with sexual and reproductive information" (Klingberg-Allvin et al, 2006).

Health care professionals should try and create ways of encouraging and facilitating positive parental involvement in the lives of adolescents, as high levels of connectedness may delay sexual debut as well as protect against a variety of other adverse health outcomes (Resnick et al, 1997).

2.10.1. Attitudes of parents to adolescent sexuality and pregnancy

The attitude of parents to adolescent sexuality is reflected in a study by Izugbara 2008 which reported that attitude of parents to discussing sexuality with adolescents is negative. Even when discussed, most Nigerian parents instill fear and end up giving poor quality information to their wards (Izugbara, 2008). This has been attributed to cultural barriers in parent-child communication on sexuality. Most cultures in developing countries consider children to be innocent and corruptible and in an attempt to protect them, poor quality information is passed unto them (Wallis and VanEvery, 2000).

Davis and Gergen (1994) in their study among Hispanic adolescents reported racial differences in the attitude of parents/adults to adolescent pregnancy issues: blacks generally held significantly more conservative beliefs towards teenage sexual experimentation than whites, two thirds of the blacks and about 60% of the white respondents believed adolescents should be well prepared for sex at this time. Also as regards abortion, after adjustment for socio-demographic characteristics, political orientation and religion, blacks were significantly less favourable towards abortion. Blacks were three times as likely and about six times as likely as whites to agree that an unmarried adolescent should either marry the father or keep the baby. McNeely, (2002) stressed the role of the family as central and influential on adolescent sexual intercourse, contraceptive use, and pregnancy.

Ofuru, (2003) reported from a study among parents in Uyo, Nigeria that only about 21% of parents ever talked about sexuality to their children and in most cases where it was discussed, the discussion was usually initiated by the occurrence of an unpleasant event like an adolescent noticed to be pregnant (Ofuru, 2003).

Parental attitude towards adolescent sexuality and pregnancy as described by Afifi et al (2005) was that of avoidance which was often due to protective reasons. Also adolescents were likely to refrain from talking about sex with their parents because they were embarrassed, uncomfortable and have the fear of tarnishing their parents' image of them. They don't want to be judged or looked down upon and they want to maintain close relationships with their parents. Similarly, some parents feel incompetent and often fear that they will not handle discussion on sexuality and adolescent pregnancy well by either speaking to their wards too early or too late and might misinform them about sex because they lack good communication skills and adequate knowledge (Rosenthal et al, 1999).

Vangelisti (1992) reported parental attitude towards issues regarding sex as domineering and not allowing adolescents express their own views which could promote anxiety and prompt avoidance by adolescents.

Most of the parents interviewed in the study by Frappier et al, (2008) confessed that teachings on sex education at their children's schools was the opportunity they had to discuss sexuality and sexual health with them and the children usually initiated the discussions.

Iyaniwura (2006) in her study on the perspective of adolescent reproductive health behaviour reported that 62.2% of parents were against premarital sex among adolescents. Majority of the parents interviewed (87.1%) would react negatively if they found contraceptives with their adolescents, they feel it would promote promiscuity (41.5%) and predisposes to infertility in the future (24.9%). Of the parents interviewed in the study, 87% of those with children above 12years old had discussed sexuality issues with their wards and the major advice was sexual abstinence and the possibility of an unplanned pregnancy. Only 8.5% had advised them about contraception. Meanwhile 74.1% of them approve that sex education be taught in schools.

The above review demonstrates the enormity of adolescent pregnancy and the many factors that influence its outcome. To a large extent, attitude of other people apart from the adolescents appear to have great influence on the outcome of the pregnancy than the attitude of the adolescents themselves. Hence the need for further studies on factors influencing parental decisions making process towards adolescent pregnancy.

CHAPTER THREE
METHODOLOGY

3.1. Study Area

The study was carried out in Ibadan, Oyo State. Oyo State is one of the 36 states in Nigeria. It was created in 1976 out of the old Western Region. Oyo state has 33 local governments on the whole while Ibadan has 11 local governments which are: Ibadan North, Ibadan South East, Ona-ara, Egbeda, Oluyole, Akinyele, Ibadan North East, Ibadan North West, Ibadan South West, Ido and Lagelu Local Government Areas (LGAs). Each of these local government areas are further divided into wards and settlements. The estimated population of Oyo state is 5,591,589 while that of Ibadan is 2,550,593. Also there are 646,492 male and 605,924 female adolescents in the state (NPC, 2006).

3.2 Study Site

Ibadan South West Local Government is made up of a land mass of about 244.55km square and population of 283,098 (NPC, 2006). Ibadan South West local government is divided into twelve political wards, it has 82 primary and 26 secondary schools.

Urban: Apata an urban community within the twelfth ward of the Ibadan South West Local Government Area was selected comprising people from various socio-economic strata e.g.:- traders, civil servants, professionals, students, artisans and farmers.

Ido local government is made up of a land mass of about 203.50km square and population of 103,261(NPC, 2006). Ido local government is divided into ten wards; it has 75 primary and 9 secondary schools.

Rural: Omi-Adio a rural community in the ninth ward of Ido local government area was selected comprising people from various walks of life like artisans, traders, civil servants, students and farmers.

Stratification into urban and rural communities was according to the World Bank classification of 1998.

3.3. Study population

Parents i.e. fathers and mothers aged 35-75 who had been residing in the study sites for at least one year and who have had or currently have an adolescent child.

3.4. Inclusion Criteria

Quantitative: Parents within the ages of 35 and 75years with or without previous personal experience on adolescent pregnancy, married or single parents who have or have ever had at least an adolescent and have resided in the study locations for at least a year.

Qualitative: Parents(married or single parents) within the ages of 35 and 75 years with previous personal experience on adolescent pregnancy in which they were involved in decision on outcome of the pregnancy and have resided in the location for at least one year.

3.5 Study Design

It was a comparative mixed method study.

3.6. Sample size determination

Sample size was calculated using the formula for two independent proportions.

$$N = \left\{ \frac{Z\alpha \sqrt{2P_o(1-P_o)} + Z\beta \sqrt{P_1(1-P_1) + P_2(1-P_2)}}{P_1 - P_2} \right\}^2$$ (Rosner, 2000)

Where;

N is the expected sample size.

P_1 is the urban prevalence of adolescent pregnancy obtained from a previous study (Iyaniwura, 2006).

P_2 is the prevalence in rural setting assuming 15% is the difference in prevalence between urban and rural settings.

P_1-P_2 is the expected minimum assumed difference between urban and rural settings.

α is the Type 1 error

β is the power of detecting an absolute difference.

P_1=62.2 % (Iyaniwura C.A., 2006)

P_1-P_2=15%

$P_2 = 62.2\% - 15\%$

$= 47.2\%$

$P_o = \frac{P_1 + P_2}{2} = \frac{62.2 + 47.2}{2} = 54.7\%$

$\alpha = 5\%, Z\alpha = 1.96$

$\beta = 80\%, Z\beta = 0.84$

$$N = \left\{ \frac{1.96\sqrt{2(54.7)(1-54.7)} + 0.84\sqrt{62.2(1-62.2) + 47.2(1-47.2)}}{62.2-47.2} \right\}^2$$

$N = 14.35^2$

$N = 205.88$

The minimum sample size was 206 per group; this was increased to 225 per group to accommodate a non-response rate of 10%.

3.7. Sampling Technique

Multi-stage sampling technique was used.

Stage 1

Ibadan South West Local Government and Ido Local Government Areas in Ibadan were selected by simple random sampling technique using fish bowl method.

Stage 2

A list of all the wards in each of these local government areas was obtained from the local government offices (12 in Ibadan south west and 10 in Ido local government areas) and stratified into rural and urban communities according to the world bank classification of 1998. Apata community was selected as urban community while Omi-Adio was selected as the rural community also by simple random technique.

Stage 3

Simple random sampling was used in selecting settlements to be visited in each community. Aba Alamu in Apata and Oke Alaro and Bode gbo of omi adio communities were used.

Stage 4

In each settlement, all consenting eligible parents were interviewed.

3.8. Research Method

Qualitative and quantitative research methods were utilized.

3.8.1. Qualitative Method

Key informant interviews were conducted with twelve parents who had personal experience of adolescent pregnancy, six interviews were done in the urban setting and six in the rural setting. At the commencement of the study, a meeting was held with the landlords of the two communities where the purpose of the study was discussed and eligibility to participate in the in-depth interview was described. Confidentiality of information provided was emphasized and eligible participants were encouraged to call or send a text message to the principal investigator. Individual appointments were fixed and key informant interviews were conducted using the interview guide. The interviews were conducted to obtain detailed and quality information as regards the factors influencing parental decision about adolescent pregnancy. Written consent for the interview was obtained. The interview was audio-taped and notes were also taken. Interviews were done in English or Yoruba and lasted about thirty minutes each. The interviews were transcribed and those conducted in Yoruba were translated into English after which thematic analysis was done.

3.8.2. Quantitative Method

The questionnaire was designed by the researcher using information from literature and responses from the Key Informant interviews. It was face validated by colleagues and supervisor looking for clarity, ambiguity, relevance to the study and question appropriateness. It was then pre-tested by the researcher on 30 parents who were staffs of the university college hospital Ibadan to ensure validity after which minor changes were made to the questionnaire. The questionnaire was interviewer administered and contained both open and closed ended questions. Interviewers were graduates of the faculty of education, university of Ibadan who were trained on the study protocol.

A modified version of the UK Registrar General's classification of occupations was used in grouping occupational classes (Rose and Pevalin, 2001). The questionnaire was revised accordingly after the pre-test and subsequently administered to consented parents aged 35-75years.

3.9. Consent for the study

Ethical approval was obtained from the University of Ibadan/University College Hospital Ethical Review Committee, University College Hospital, Ibadan. Approval was also obtained from the community leaders of the selected communities. Informed consent was sought, obtained and forms duly signed by all parents before participating in the study.

3.10. Ethical Considerations

The study was not of major harm to the participants and all participants were treated with dignity and respect. Confidentiality of all information obtained was maintained and names were not included in both the instruments and consent forms. Written individual voluntary informed consent was obtained from participant. Only individuals who consented to participate were enrolled into the study. Incentives of sachets of omo detergent soap were provided for participants in compensation for their time. Also, ₦500 cell phone recharge cards were given to the key informants to cover airtime used to contact the principal investigator.

3.11. Data Management

The data obtained from the questionnaire was sorted out, coded serially and entered into an excel spread sheet and analyzed with STATA version 8 statistical software. The module of this programme was also used to validate entries. The data was stored in both hard and soft copies. Initial analysis was done by generation of frequency tables while further analysis was done by cross tabulation to explore statistical relationships between variables. Student's t-test and chi-square test were used to determine association between continuous and categorical variables respectively. Multivariate analysis was by logistic regression.

Factor analysis was performed to determine the attitude variables that best represented the overall attitude among the twelve attitude variables. Factor analysis was done using stata, the principal factor estimate method was used and the factors with the highest communalities were selected and utilized in subsequent analysis. Level of significance was $p<0.05$ with 95% confidence interval.

3.12. Limitations of the study

Some parents were not willing to give some information out as they considered such information personal; also some parents had poor ability to recall past events. With adequate informed consent process, stressing maintenance of confidentiality and adequate interviewing skills these were adequately managed and minimized.

However some extremely sensitive issues were not covered in the scope of this study, issues like how and where abortion of adolescent pregnancies were carried out and death of adolescents following an abortion. Also, there was a probability that some parents were not even aware of some adolescent pregnancies in their children before these pregnancies got terminated via induced abortion.

CHAPTER FOUR

RESULTS

Five hundred and five parents were interviewed, 261(51.7%) of them were rural respondents from Omi-Adio while 244(48.3%) were urban respondents from Aba-Alamu communities.

4.1.1. SECTION A: SOCIO-DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

The mean age of the respondents from the rural area was 49.0± 9.4years which was slightly higher than that of the urban participants, 46.0±10.1years. There were 102 (40.3%) males among the rural dwellers which was not significantly different from the 107 (44.8%) male respondents from the urban area. Among the rural respondents 217 (86.8%) were married, 203 (87%) of the urban respondents were also married. Yoruba was the predominant ethnic group among both rural and urban respondents. Christianity was the major religion in both groups. Over half (54.6%) of the urban respondents had tertiary education compared to 30.1% of the rural respondents. There were 15 (6.2%) professionals among the urban respondents while there was none among the rural respondents.

Significantly more urban based respondents fell within the high salary earners 18 (7.4%) while more rural based respondents fell within the low salary earners 185 (72.3%), $p = <0.0001$. Respondents from the rural areas were more in the low socioeconomic group (70.3%) than those in the urban area (35.4%). Some of the participants migrated between urban and rural dwellings (8.5%) of rural respondents were previously dwelling in the urban area while (17%) of urban respondents were previously living in the rural area.

Table 4.1: SOCIO-DEMOGRAPHIC CHARACTERISTICS OF RURAL AND URBAN BASED RESPONDENTS IN IBADAN, NIGERIA

Variable	*Rural N (%)*	*Urban N (%)*	*Total N (%)*	*Statistics X^2*	*p- value*
Sex N = 492					
Male	102 (40.3)	107 (44.8)	209 (42.5)	1.00	0.318
Female	151 (59.7)	132 (55.2)	283 (57.5)		
Marital Status N = 486					
Married	217 (86.8)	203 (86.8)	420 (86.4)		
Single parent	12 (4.8)	10 (4.3)	22 (4.5)	1.26	0.939
Divorced	3 (1.2)	3 (1.3)	6 (1.2)		
Widowed	18 (7.1)	15 (6.4)	33 (6.8)		
Separated	0 (0.0)	1 (0.4)	1 (0.2)		
Others[#]	2 (0.7)	2 (0.9)	4 (0.8)		
Age Group(Years) N = 505					
=<40	41 (15.7)	74 (30.3)	115 (22.8)		
41-50	116 (44.4)	87 (35.7)	203 (40.2)	16.40	0.003*
51-60	61 (23.4)	54 (22.1)	115 (22.8)		
61-70	27 (10.3)	19 (7.8)	46 (9.1)		
>70	16 (6.1)	10 (4.1)	26 (5.2)		
Ethnic Group N = 503					
Yoruba	228 (87.7)	215 (88.5)	443 (88.1)	6.96	0.484
Igbo	12 (4.6)	11 (4.5)	23 (4.6)		
Others**	20(7.7)	17 (7)	37 (7.4)		
Occupation N = 503					
Professionals	0 (0.0)	15 (6.2)	15(3.0)		
Managerial and lower professionals	26 (10.0)	63 (25.9)	89 (17.7)	67.66	<0.0001*
Non-manual skilled	37 (14.2)	63 (29.9)	100 (19.9)		
Manual-skilled	168 (64.4)	90 (37)	258 (51.3)		
Semi-skilled	13 (5.0)	6 (2.5)	19 (3.8)		
Unskilled	15 (5.8)	6 (2.5)	21 (4.2)		
Unemployed	1 (0.4)	0 (0.0)	1 (0.2)		

Variable	*Rural N (%)*	*Urban N (%)*	*Total N (%)*	*Statistics X^2*	*p- value*
Religion N = 494					
Christianity	189 (74.1)	199 (83.3)	388 (78.5)	7.88	0.019*
Islam	63 (24.7)	40 (16.7)	103 (20.9)		
Traditional	3 (1.2)	0 (0.0)	3 (0.6)		
Education N = 478					
None	15(6.0)	8(3.5)	23(4.8)		
Primary	48(19.3)	11(4.8)	59(12.3)	88.19	<0.0001*
Secondary	105(42.2)	44(19.2)	149(31.2)		
Tertiary	75(30.1)	125(54.6)	200(41.8)		
Post-graduate	6(2.4)	41(17.9)	47(9.8)		
Monthly Income ₦ = 499					
₦5,000 – N40,000	185 (72.3)	114 (46.9)	299 (59.9)	41.05	<0.0001*
₦41,000 – N100,000	70 (27.3)	111 (45.7)	181 (36.3)		
> ₦100,000	1 (0.4)	18 (7.4)	19 (3.8)		
Place Most Resided N = 500					
Rural	237 (91.5)	41 (17.0)	278 (55.6)	280.62	<0.0001*
Urban	22 (8.5)	200 (83.0)	222 (44.4)		
Socio-Economic Status N = 493					
Low	180 (70.3)	84 (35.4)	264 (53.6)	66.13	<0.0001*
Medium	75 (29.3)	136 (57.4)	211 (42.8)		
High	1 (0.4)	17 (7.2)	18 (3.7)		

**Note: ****Others = Kalabari, Ogoni, Hausa, Urhobo, Igbira, Calabar, Awori, Ijaw.

*Statistically significant

Others = Cohabiting

4.1.2. SECTION B: ATTITUDE OF RESPONDENTS TOWARDS ADOLESCENT PREGNANCY

Respondents' attitudes to adolescent pregnancy were largely similar. Over half of the respondents from both rural (56.2%) and urban settings (66.3%) felt that adolescent pregnancy was an outcome of poor home training and was common among adolescents of single parents. More than 90% of the respondents were of the opinion that it was good to discuss sex education with teenagers, although a significantly higher proportion of urban 237(97.1%) than rural 228(87.7%) respondents had this opinion (p=0.001).

Table 4.2: Attitudes of rural and urban based respondents to factors predisposing to adolescent pregnancy in Ibadan, Nigeria

Respondents' attitudes to factors predisposing to adolescent pregnancy		Rural N (%) N = 260	Urban N (%) N = 244	Total N (%) N = 504	Statistics X^2	p-value
Adolescent pregnancy is an outcome of poor home training	Agree	146(56.2)	161(66.3)	307(61.0)	8.70	0.069
	Undecided	16(6.2)	9(3.7)	25(5.0)		
	Disagree	98(37.7)	73(30.0)	171(34.0)		
Adolescent pregnancy is common in adolescents of single parents	Agree	131(50.4)	131(53.7)	262(52.0)	4.11	0.391
	Undecided	33(12.7)	30(12.3)	63(12.5)		
	Disagree	96(36.9)	83(34.0)	179(35.5)		
It is good to discuss sex education with teenagers	Agree	228(87.7)	237(97.1)	465(92.3)		
	Undecided	3(1.2)	1(0.4)	4(0.8)	18.72	0.001*
	Disagree	29(11.2)	6(2.5)	35(7.0)		

*Statistically significant

Regarding their attitudes to what should be done to a pregnant adolescent, Over 85% of them disagreed that a pregnant adolescent be disowned and driven out of home and that a pregnant adolescent should be encouraged to carry the pregnancy to term and deliver her baby. A quarter of rural respondents (25.8%) as opposed to 18% of urban respondents agreed that a pregnant adolescent be married off to the boy/men responsible for the pregnancy, $p=0.001$ out of which a significantly higher proportion of urban than rural respondents (43.9% versus 26.9%) were of the opinion that an unmarried adolescent mother be encouraged to use contraceptives after delivery of the baby, $p<0.0001$. Also, over 85% of the rural respondents disagreed with putting up the baby for adoption, $p = 0.031$.

Table 4.3: Attitudes of rural and urban based respondents towards outcome of adolescent pregnancy in Ibadan, Nigeria

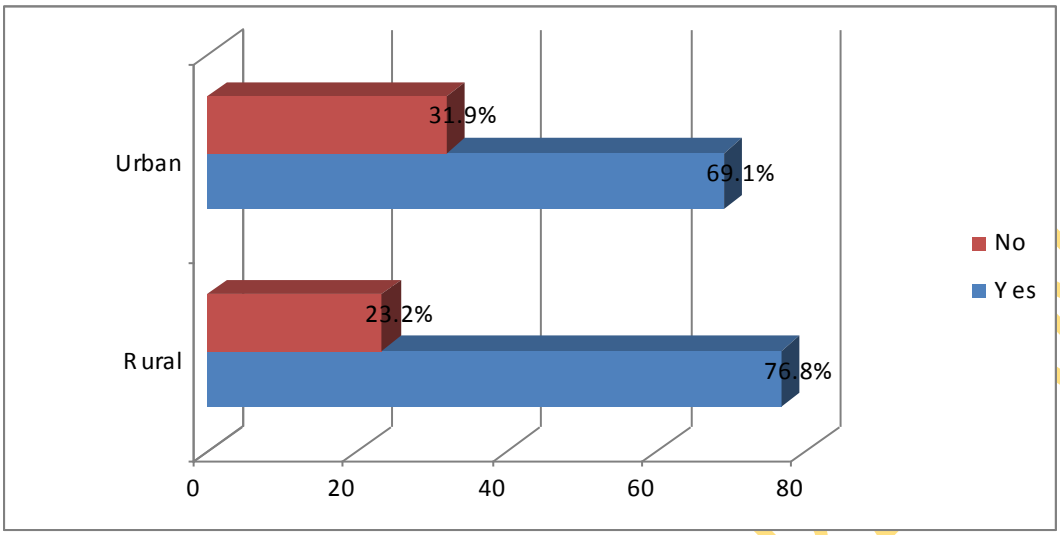
		Rural N (%) N = 260	Urban N (%) N = 244	Total N (%) N = 504	Statistics X^2	p-value
It is good to discuss sex education with teenagers	Agree	228(87.7)	237(97.1)	465(92.3)	18.72	0.001*
	Undecided	3(1.2)	1(0.4)	4(0.8)		
	Disagree	29(11.2)	6(2.5)	35(7.0)		
A pregnant adolescent should be encouraged to have her baby	Agree	239(91.9)	217(88.9)	465(90.5)	6.02	0.198
	Undecided	17(6.5)	15(6.2)	32(6.4)		
	Disagree	4(1.5)	12(4.9)	16(3.2)		
A pregnant adolescent should be married off to the boy	Agree	67(25.8)	44(18.0)	111(22.0)	17.84	0.001*
	Undecided	86(33.1)	55(22.5)	141(28.0)		
	Disagree	107(41.2)	145(59.4)	252(50.0)		
A pregnant adolescent should be disowned and driven out of home	Agree	11(4.2)	13(4.4)	24(4.8)	7.35	0.118
	Undecided	20(7.7)	15(6.2)	35(6.9)		
	Disagree	229(88.1)	216(88.5)	445(88.3)		
Anyone who impregnates an adolescent should be made to take up responsibility for the pregnancy and baby	Agree	136(52.3)	134(54.9)	270(53.6)	20.52	<0.0001*
	Undecided	92(35.4)	59(24.2)	151(30.0)		
	Disagree	32(12.3)	51(20.9)	83(16.5)		
Adolescent pregnancy should be aborted if abortion was legal	Agree	21(8.2)	28(11.5)	49(9.8)	3.91	0.418
	Undecided	51(19.8)	42(17.2)	93(18.6)		
	Disagree	185(72.0)	174(71.3)	359(71.7)		

		Rural N (%) N = 260	Urban N (%) N = 244	Total N (%) N = 504	Statistics X^2	p-value
A pregnant adolescent should be allowed to continue school while pregnant	Agree	19(7.3)	45(18.4)	64(12.7)		
	Undecided	60(23.1)	34(13.9)	94(18.7)	18.26	0.001*
	Disagree	181(69.6)	165(67.6)	346(68.7)		
A pregnant adolescent should be allowed to continue school after delivery	Agree	198(76.2)	228(93.4)	426(84.5)		
	Undecided	44(16.0)	14(5.7)	58(11.5)	30.59	<0.0001
	Disagree	18(6.9)	2(0.8)	20(4.0)		*
An unmarried adolescent mother should be encouraged on contraceptive use after delivery of the baby	Agree	70(26.9)	107(43.9)	177(35.1)		
	Undecided	58(22.3)	28(11.5)	86(17.1)	22.86	<0.0001
	Disagree	132(50.8)	109(44.7)	241(47.8)		*
The baby of a pregnant adolescent should be put up for adoption	Agree	13(5.0)	19(7.8)	32(6.3)		
	Undecided	20(7.7)	22(9.0)	42(8.3)	10.64	0.031*
	Disagree	288(87.4)	203(83.2)	431(85.3)		

*Statistically significant

4.1.3. SECTION C: PERSONAL EXPERIENCES REGARDING ADOLESCENT PREGNANCY

Significantly more rural respondents (76.8%) thought adolescent pregnancy was a problem in their community compared with urban respondents (69.1%). (p = 0.0278)



(Chi ^{2} = 4.84 p = 0.0278)

Figure 4.1: Adolescent pregnancy viewed by respondents as being a problem in their community

In both rural and urban areas common reasons for considering adolescent pregnancy a problem in the community were as follows: there were many pregnant adolescents in the community (32.8%), It affects the girl's education (22.3%), it was a reflection of the level of poverty among parents in the community (21.5%) and it is an indication of the fact that there was inadequate sexuality education for adolescents in the community (13.0%). Other respondents considered adolescent pregnancy a problem because the pregnant adolescent could be pushed to have an abortion and end up with complications 10.5%. Some respondents (1.3%) were bothered because they felt adolescent pregnancy was a reflection of the absence of sex education for adolescents in their community.

Some respondents didn't consider adolescent pregnancy a problem and some of the reasons cited were that, they were quite busy and couldn't be side tracked by community issues (39.0%), about 33.8% of respondents were of the opinion that the adolescents had good knowledge of sex education, 19.0% of them testified that the adolescents in their community were well behaved while the remaining 8.0% were from a culture that embraced adolescent pregnancy. There was no significant difference in the opinion of rural and urban dwellers. $p = 0.217$

Table 4.4: Reasons for considering or not considering adolescent pregnancy a problem among rural and urban based respondents in Ibadan, Nigeria

	Rural	*Urban*	*Total*	*Statistics*	*p– value*
	N (%)	*N (%)*	*N (%)*	X^2	
Yes it is a problem					
So many pregnant adolescents around	70 (35.2)	49 (29.9)	119 (32.8)		
It affects girl's education	46 (23.1)	35 (21.3)	81 (22.3)		
Poverty from overdependence on	45 (22.6)	33(20.1)	78 (21.5)	7.76	0.101
parents	17 (8.5)	30 (18.3)	47 (13.0)		
Lack of sex education	21 (10.6)	17 (10.4)	38 (10.5)		
So many abortion complications					
No it is not a problem					
We all mind our business	23 (39.0)	30 (39.0)	52 (39.0)		
Good knowledge of sex education	18 (30.5)	28 (36.4)	46 (33.8)	4.45	0.217
We have well Behaved children	10 (17.0)	16 (20.8)	26 (19.1)		
We embrace Adolescent pregnancy	8 (13.6)	3 (3.9)	11 (8.1)		

To the question on what was the usual outcome of adolescent pregnancy in the community overall about 65.0% of respondents mentioned that the pregnancy was left to grow to term. Significantly more rural respondents (68.3%) than urban dwellers (50.6%) reported that the pregnancies were kept and mothers delivered the babies $p<0.0001$. Also more urban respondents (33.2%) than rural ones (29.3%) mentioned that the pregnancy was aborted. Other outcomes reported were that the adolescent was disowned by her parents (1.6%) among rural and (2.6%) among urban respondents. About 1.5% of the respondents failed to respond. As to who determines what is done to the pregnant adolescent, majority of respondents (76.2%) were of the opinion that both the boy's and the girl's parents were the determinants of the outcome. Few respondents considered the girl's parents (2.8%) girl's partner (11.5%) the girl (8.4%) and the society (1.1%) as determinants. More urban respondents (83.1%) considered parents as main determinants compared to rural respondents (69.3%) $p = 0.003$

Majority of the respondents (32.7%) considered an adolescent who gets pregnant as irresponsible. Other respondents were of the opinion that the adolescent was wayward (30.5%), not well trained (18.1%), an outcast (7.6%), not smart (4.9%) and disobedient (4.1%). However, 2.1% of these respondents considered her a good girl because adolescent pregnancy was encouraged and acceptable in their culture as they were northerners. There was no statistically significant difference in the responses of rural and urban dwellers $p = 0.073$.

The opinion of the community members on an adolescents who gets pregnant were as follows: (33.2%) felt she disgraced her parents, some (19.7%) were of the opinion that culturally she was not married, others reported that she was too young for pregnancy (18.4%), an illiterate (12.5%), religiously she was not married (7.2%), others have sex but are smart about it (5.1%), and poverty (4.0%).

Majority of the respondents agreed that sex education should be taught in schools (94.8%) while 5.2% of them disagreed. There was however no significant difference in the responses of rural and urban dwellers $p = 0.140$. Of those who agreed that sex education should be taught in schools, 41.6% felt it should be taught at all levels of schooling. About 30.0% were of the opinion that it should be taught at the secondary school level, 22.9% at the primary and 6.0% at the tertiary levels.

Significantly more respondents agreed to sex education being taught at all levels of schooling from the urban area (48.3%) compared to 35.0% from the rural area p = 0.020.

Table 4.5: Community opinion on issues of adolescent pregnancy and sexuality among rural and urban based respondents in Ibadan, Nigeria

	Rural N (%)	Urban N (%)	Total N (%)	Statistics X^2	P – value
People's view of a pregnant adolescent in this community					
Not Smart	7 (2.8)	17 (7.2)	24 (4.9)		
Irresponsible	82 (32.7)	77 (32.8)	159 (32.7)		
Not well trained	39 (15.5)	49 (20.9)	88 (18.1)	11.55	0.073
Wayward	82 (32.7)	66 (28.1)	148 (30.5)		
Good Child	7 (2.8)	3 (1.3)	10 (2.1)		
Disobedient	10 (4)	10 (4.3)	20 (4.1)		
Outcast	24 (9.6)	13 (5.5)	37 (7.6)		
Reasons for having such views					
Others have sex but are smart about it	8(3.25)	16(7.1)	24(5.1)		
Culturally she is not married	36(14.6)	57(25.1)	93(19.7)		
Religiously she is not married	15(6.10)	19(8.4)	34(7.2)	31.25	<0.0001*
Poverty	4(1.63)	15(6.6)	19(4)		
She disgraced her parents	89(36.2)	68(30)	157(33.2)		
Illiteracy	33(13.4)	26(11.5)	59(12.5)		
She is too young for pregnancy	61(24.8)	26(11.5)	87(18.4)		
Usual outcome of pregnancy					
Keep pregnancy	170 (68.3)	119 (50.6)	289 (59)		
Abort pregnancy	73 (29.3)	78 (33.2)	151 (31.2)	35.78	<0.0001*
Disowned	4 (1.6)	6 (2.6)	10 (2.1)		
Run from home	2 (0.8)	25 (10.6)	27 (5.6)		
Don't know	0 (0.0)	7 (3)	7 (1.5)		

	Rural N (%)	Urban N (%)	Total N (%)	Statistics X^2	P – value
Decision makers of pregnancy outcome					
Parents	166(69.3)	187(83.1)	353(76.2)		
Girl's parents	8(3.4)	5(2.2)	13(2.8)	16.04	0.003*
Partner	37(15.6)	16(7.1)	53(11.5)		
Girl	26(10.9)	13(5.8)	39(8.4)		
Society	1(0.4)	4(1.8)	5(1.1)		
Views on teaching sex education in schools					
No	17(6.6)	9(3.69)	26(5.2)	2.18	0.140
Yes	240(93.4)	235(96.3)	475(94.8)		
Level at which sex education should be taught					
Primary	64(26.3)	46(19.3)	110(22.9)		
Secondary	76(31.3)	66(27.7)	142(29.5)	9.79	0.020*
Tertiary	18(7.4)	11(4.6)	29(6)		
All levels	85(35)	115(48.3)	200(41.6)		

*Statistically significant

Generally both rural and urban respondents felt mothers and fathers had a very active role to play in determining what happened to a pregnant adolescent.

Table 4.6: Roles played by significant others in determining the outcome of adolescent pregnancy

	No Role	*Active Role*	*Very Active Role*
Role of significant others in determining the outcome of pregnancy**	**Rural N (%)**	**Rural N (%)**	**Rural N (%)**
Father	40 (15.4)	117(45.2)	102(39.4)
Mother	3 (1.2)	76(29.2)	181(69.6)
Partner	115(44.2)	80(30.8)	65(25)
Uncle/Aunty	68 (26.2)	161(61.9)	31(11.9)
Religious Leader	62 (23.9)	122(46.9)	76(29.2)
Community Leader	167(64.2)	82(31.5)	11(4.2)

	No Role	*Active Role*	*Very Active Role*
Role of significant others in determining the outcome of pregnancy**	**Urban N (%)**	**Urban N (%)**	**Urban N (%)**
Father	29 (11.9)	104(42.6)	110(45.1)
Mother	3 (1.2)	49(20.1)	192(78.7)
Partner	95 (38.9)	121(49.6)	28(11.48)
Uncle/Aunty	48(19.7)	166(68)	30(12.3)
Religious Leader	52 (21.3)	111(45.5)	81(33.2)
Community Leader	161(66)	68(27.9)	15(6.2)

4.1.4. SECTION D: SOCIO-CULTURAL FACTORS ASSOCIATED WITH PARENTAL ATTITUDES TOWARDS ADOLESCENT PREGNANCY

Majority of the respondents (61.2%) agreed that adolescent pregnancy is an outcome of poor home training while 33.9% disagreed. There was no statistically significant difference among urban and rural dwellers. More males (65.6%) than females (57.6%) agreed with this view and it was statistically significant $p = 0.002$.

Marital status, age, ethnicity and occupation did not significantly affect the views of respondents in this regard. However, 71.3% of middle income earners compared to 57.2% low and 23.3% high income earners agree with this opinion. $p<0.0001$. This was also the pattern when respondents were stratified into socio-economic groups.

Table 4.7: Socio-cultural factors associated with respondents' view that adolescent pregnancy is an outcome of poor home training in Ibadan, Nigeria

Characteristics N (%)	**Adolescent pregnancy is an outcome of poor home training**					
	Agree	***Undecided***	***Disagree***	***Total N***	***Statistics***	***p-value***
	N (%)	***N (%)***	***N (%)***	***(%)***	X^2	
Location						
Rural	147(56.3)	16(6.1)	98(37.6)	261(100.0)	5.78	0.056
Urban	162(66.4)	9(3.7)	73(29.9)	244(100.0)		
Total	**309(61.2)**	**25(5)**	**171(33.9)**	**505(100.0)**		
Sex						
Male	137(65.6)	16(7.7)	56(26.8)	209(100)	12.74	0.002*
Female	163(57.6)	8(2.8)	112(39.6)	283(100)		
Total	**300(61.0)**	**24(4.9)**	**168(34.2)**	**492(100.0)**		
Marital status						
Married	264(62.9)	22(5.2)	134(31.9)	420(100.0)		
Single parent	13(59.1)	1(4.6)	8(36.4)	22(100.0)		
Divorced	4(66.7)	0(0.0)	2(33.3)	6(100.0)		
Widowed	15(45.5)	0(0.0)	18(54.6)	33(100.0)	10.84	0.370
Separated	0(0.0)	0(0.0)	1(100.0)	1(100.0)		
Others	2(50.0)	0(0.0)	2(50.0)	4(100.0)		
Total	**298(61.3)**	**23(4.7)**	**165(34.0)**	**486(100.0)**		
Age group (years)						
=<40	73(63.5)	4(3.5)	38(33.1)	115(100.0)		
41-50	133(65.5)	10(4.9)	60(29.6)	203(100.0)		
51-60	68(59.1)	9(7.8)	38(33.0)	115(100)	12.08	0.148
61-70	24(48.0)	2(4.0)	24(48.0)	50(100.0)		
>70	11(50.0)	0(0.0)	11(50.0)	22(100.0)		
Total	**309(61.2)**	**25(5.0)**	**171(33.9)**	**505(100.0)**		

Characteristics N (%)	**Adolescent pregnancy is an outcome of poor home training**					
	Agree	***Undecided***	***Disagree***	***Total N***	***Statistics***	***p-value***
	N (%)	***N (%)***	***N (%)***	***(%)***	***X^2***	
Ethnic group						
Yoruba	268(60.5)	22(5.0)	153(34.5)	443(100.0)		
Igbo	11(47.8)	1(4.4)	11(47.8)	23(100.0)	6.60	0.158
Others	30(76.9)	2(5.1)	7(18.0)	39(100.0)		
Total	**309(61.2)**	**25(5.0)**	**171(33.9)**	**505(100.0)**		
Occupation						
Professionals	7(46.7)	2(13.3)	6(40.0)	15(100.0)		
Managerial and lower professionals	59(66.3)	3(3.4)	27(30.3)	89(100.0)		
Non-manual skilled	7(57.0)	5(5.0)	38(38.0)	100(100.0)	9.73	0.285
Manual-skilled	161(62.4)	10(3.9)	87(33.7)	258(100.0)		
Semi-skilled	24(57.1)	5(11.9)	13(31.0)	42(100.0)		
Total	**308(61.1)**	**25(5.0)**	**171(33.9)**	**504(100.0)**		
Education						
None	9(39.1)	3(13.0)	11(47.8)	23(100.0)		
Primary	38(64.4)	2(3.4)	19(32.2)	59(100.0)		
Secondary	101(67.8)	4(2.7)	44(29.5)	149(100.0)	11.33	0.184
Tertiary	120(6.0)	10(5.0)	70(35.0)	200(100.0)		
Post-graduate	26(55.3)	2(4.3)	19((40.4)	47(100.0)		
Total	**294(61.5)**	**163(34.1)**	**163(34.1)**	**478(100.0)**		
Monthly income						
₦5,000 – ₦40,000	171(57.2)	12(4.0)	116(38.8)	299(100.0)		
₦41,000 – ₦100,000	129(71.3)	10(5.5)	42(23.2)	181(100.0)		
> ₦100,000	5(26.3)	3(15.8)	11(57.9)	19(100.0)	24.13	<0.0001*
Total	**305(61.1)**	**25(5.0)**	**169(33.9)**	**499(100.0)**		
Socio-Economic status						
Low	140(53.0)	11(4.2)	113(42.8)	264(100.0)		
Medium	150(71.1)	12(5.7)	49(23.2)	211(100.0)		<0.0001*
High	8(44.4)	2(11.1)	8(44.4)	18(100.0)	22.57	
Total	**298(60.5)**	**25(5.1)**	**170(34.5)**	**493(100.0)**		

* statistically significant

A significantly higher proportion of urban dwellers (59.4%) compared to rural dwellers (41.0%) disagreed that a pregnant adolescent should be married off to the boy who impregnated her p <0.0001.

The higher the educational attainment, the more likely the respondent was to disagree with this view p = 0.001.

In addition, 15(79.0%) of those earning above ₦100,000 a month disagreed compared to 87(48.1%) of those earning between ₦41,000 and ₦100,000 and 148(49.5%) of those earning below ₦40,000 a month p = 0.004.

Table 4.8: Socio-cultural factors associated with respondents' view that a pregnant adolescent should be married off to the boy in Ibadan, Nigeria.

Characteristics N (%)	**A pregnant adolescent should be married off to the boy**					
	Agree	***Undecided***	***Disagree***	***Total N***	***Statistics***	***p-value***
	N (%)	***N (%)***	***N (%)***	***(%)***	***X^2***	
Occupation						
Professionals	1(6.7)	4(26.7)	10(66.7)	15(100.0)		
Managerial and lower professionals	28(31.5)	20(22.5)	41(46.0)	89(100.0)		
Non-manual skilled	18(18.0)	19(19.0)	63(63.0)	100(100.0)	21.33	0.006*
Manual-skilled	51(19.8)	84(32.6)	123(47.7)	258(100.0)		
Semi-skilled	14(33.3)	13(31.0)	15(35.7)	42(100.0)		
Total	**112(22.2)**	**140(27.8)**	**252(50.0)**	**504(100.0)**		
Education						
None	8(34.8)	7(30.4)	8(34.8)	23(100.0)		
Primary	20(33.9)	20(33.9)	19(32.2)	59(100.0)		
Secondary	30(20.1)	52(34.9)	67(45.0)	149(100.0)	26.63	0.001*
Tertiary	41(20.5)	44(22.0)	115(57.5)	200(100.0)		
Post-graduate	9(19.2)	6(12.8)	32(68.1)	47(100.0)		
Total	**108(22.6)**	**129(27.0)**	**241(50.4)**	**478(100.0)**		
Monthly income						
₦5,000 – ₦40,000	78(26.1)	73(24.4)	148(49.5)	299(100.0)		
₦41,000– ₦100,000	31(17.1)	63(34.8)	87(48.1)	181(100.0)	15.11	0.004*
> ₦100,000	2(10.5)	2(10.5)	15(79)	19(100.0)		
Total	**111(22.2)**	**138(27.7)**	**250(50.1)**	**499(100.0)**		
Socio-Economic status	66(25.0)	68(25.8)	130(49.2)	264(100.0)		
Low	40(19.0)	67(31.8)	104(49.3)	211(100.0)	5.60	0.231
Medium	3(16.7)	3(16.7)	12(66.7)	18(100.0)		
High	**109(22.1)**	**138(28.0)**	**246(49.9)**	**493(100.0)**		
Total						

	A pregnant adolescent should be married off to the boy					
	Agree	***Undecided***	***Disagree***	***Total***	***Statistics***	***p-value***
	N (%)	***N (%)***	***N (%)***	***N (%)***	***X^2***	
Location						
Rural	68(26.1)	86(33.0)	107(41.0)	261(100.0)		
Urban	44(18.0)	55(22.5)	145(59.4)	244(100.0)	17.14	<0.0001*
Total	**505(22.2)**	**141(27.9)**	**252(49.9)**	**505(100.0)**		
Sex						
Male	50(23.9)	65(31.1)	94(45.0)	209(100.0)		
Female	58(20.5)	73(25.8)	152(53.7)	283(100.0)	3.68	0.158
Total	**108(22.0)**	**138(25.1)**	**246(50.0)**	**492(100.0)**		
Marital status						
Married	93(22.1)	119(28.3)	208(49.5)	420(100.0)		
Single parent	8(36.4)	4(18.2)	10(45.5)	22(100.0)		
Divorced	0(0.0)	2(33.3)	4(66.7)	6(100.0)		
Widowed	6(18.2)	8(24.2)	19(57.6)	33(100.0)	8.22	0.608
Separated	0(0.0)	0(0.0)	1(100.0)	1(100.0)		
Others	2(50.0)	1(25.0)	1(25.0)	4(100.0)		
Total	**109(22.4)**	**134(27.6)**	**243(50.0)**	**486(100.0)**		
Age group (years)						
=<40	27(23.5)	25(21.7)	63(54.8)	115(100.0)		
41-50	42(20.7)	68(33.5)	93(45.8)	203(100.0)		
51-60	21(18.3)	34(29.6)	60(52.2)	115(100.0)	13.53	0.095
61-70	18(4.0)	8(16.0)	24(48.0)	50(100.0)		
>70	4(18.2)	6(27.3)	12(54.6)	22(100.0)		
Total	**112(22.2)**	**141(27.9)**	**252(49.9)**	**505(100.0)**		
Ethnic group						
Yoruba	94(21.2)	127(28.7)	222(50.1)	443(100.0)		
Igbo	5(21.7)	2(8.7)	16(69.6)	23(100.0)	8.93	0.063
Others	13(33.3)	12(30.8)	14(35.9)	39(100.0)		
Total	**112(22.2)**	**141(27.9)**	**252(49.9)**	**505(100.0)**		

*Statistically Significant

Majority of the respondents agreed that a pregnant adolescent should continue schooling after delivery, (93.4% of urban dwellers and 76.3% of rural dwellers agreed p <0.0001. Respondents in the professional and managerial occupational groups 100.0% and 95.0% respectively were more likely to agree compared with manual and semi skilled workers (77.1% and 85.7%) respectively P = 0.001. Also, the higher the educational attainment of respondents, the more likely they were to agree with this statement (p=0.048). Higher incomes and socio-economic status were also associated with agreement to this statement.

Table 4.9: Socio-cultural factors associated with respondents' view that a pregnant adolescent should be allowed to continue school after delivery in Ibadan, Nigeria.

Characteristics N (%)	**A pregnant adolescent should be allowed to continue school after delivery pregnant adolescent should be allowed to continue school after delivery**					
	Agree N (%)	***Undecided N (%)***	***Disagree N (%)***	***Total N (%)***	***Statistics X^2***	***p-value***
Location						
Rural	199(76.3)	44(16.9)	18(6.9)	261(100.0)		
Urban	288(93.4)	14(5.7)	2(0.8)	244(100.0)	29.75	<0.0001*
Total	**427(84.6)**	**58(11.5)**	**20(4.0)**	**505(100.0)**		
Sex						
Male	174(83.2)	29(13.9)	6(2.9)	209(100.0)		
Female	241(85.2)	29(10.3)	13(4.6)	283(100.0)	2.32	0.314
Total	**415(84.4)**	**58(11.8)**	**19(3.9)**	**492(100.0)**		
Marital status						
Married	350(83.3)	50(11.9)	20(4.8)	420(100.0)		
Single parent	19(86.4)	3(13.6)	0(0.0)	22(100.0)		
Divorced	6(100.0)	0(0.0)	0(0.0)	6(100.0)		
Widowed	29(87.9)	4(12.1)	0(0.0)	33(100.0)	4.95	0.894
Separated	1(100.0)	0(0.0)	0(0.0)	1(100.0)		
Others	3(75.0)	1(25.0)	0(0.0)	4(100.0)		
Total	**408(84.0)**	**58(11.9)**	**20(4.1)**	**486(100.0)**		
Age group (years)						
=<40	102(88.7)	10(8.7)	3(2.61)	115(100.0)		
41-50	172(84.7)	21(10.34)	10(4.9)	203(100.0)	8.43	0.393
51-60	99(86.1)	13(11.30)	3(2.6)	115(100.0)		
61-70	38(76.0)	9(18.0)	3(6.0)	50(100.0)		
>70	16(72.7)	5(22.7)	1(4.6)	20(100.0)		
Total	**427(84.5)**	**58(11.5)**	**20(4.0)**	**505(100.0)**		

Characteristics N (%)	**A pregnant adolescent should be allowed to continue school after delivery pregnant adolescent should be allowed to continue school after delivery**					
	Agree N (%)	***Undecided N (%)***	***Disagree N (%)***	***Total N (%)***	***Statistics X^2***	***p-value***
Occupation						
Professionals	15(100.0)	0(0.0)	0(0.0)	15(100.0)		
Managerial and lower	85(95.5)	2(2.3)	2(2.3)	89(100.0)		
professionals	91(91.0)	9(9.0)	0(0.0)	100(100.0)	27.42	0.001*
Non-manual skilled	199(77.1)	43(16.7)	16(6.2)	258(100.0)		
Manual-skilled	36(85.7)	4(9.5)	2(4.8)	42(100.0)		
Semi-skilled	**426(84.5)**	**58(11.5)**	**20(4.0)**	**504(100.0)**		
Total						
Education						
None	18(78.3)	3(13.0)	2(8.7)	23(100.0)		
Primary	45(76.3)	8(13.6)	6(10.2)	59(100.0)		
Secondary	118(79.2)	25(16.8)	6(4)	149(100.0)	15.66	0.048*
Tertiary	175(87.5)	20(1.0)	5(2.5)	200(100.0)		
Post-graduate	44(93.6)	2(4.3)	1(2.1)	47(100.0)		
Total	**400(83.7)**	**58(12.1)**	**20(4.2)**	**478(100.0)**		

Characteristics N (%)	**A pregnant adolescent should be allowed to continue school after delivery pregnant adolescent should be allowed to continue school after delivery**					
	Agree N (%)	***Undecided N (%)***	***Disagree N (%)***	***Total N (%)***	***Statistics X^2***	***p-value***
Monthly income						
₦5,000 – ₦40,000	237(79.3)	44(14.7)	18(6.0)	299(100.0)		
₦41,000 – ₦100,000	168(92.8)	11(6.1)	2(1.1)	181(100.0)	18.38	0.001*
> ₦100,000	18(94.7)	1(5.3)	0(0.0)	19(100.0)		
Total	**423(84.8)**	**56(11.2)**	**20(4.0)**	**499(100.0)**		
Socio-Economic status						
Low	204(77.3)	44(16.7)	16(6.1)	264(100.0)		
Medium	196(92.9)	12(5.7)	3(1.4)	211(100.0)	23.67	<0.0001*
High	17(94.4)	1(5.6)	0(0.0)	18(100.0)		
Total	**417(84.6)**	**57(11.6)**	**19(3.9)**	**493(100.0)**		

* Statistically significant

The association between respondents' socio-cultural factors and their opinion that adolescent pregnancy was due to poor home training was presented in table 4.11. Male respondents dwelling in the rural area were more likely to agree with this view compared to female rural dwellers (62.8% compared to 52.3%, p =0.001). Among urban dwellers, there was no significant difference by gender concerning this view 68.2% and 63.6% among male and female respondents respectively (p = 0.506). Marital status, age group, ethnicity and occupation did not affect the opinion of rural and urban respondents. Among rural respondents, higher educational attainment, higher income and higher socio-economic status was associated with more agreement. Among urban dwellers, middle income earners and those in the middle socio-economic group were more likely to agree than others.

The association between respondents socio-cultural factors and their opinion that a pregnant adolescent should be married off to the boy was presented in table 4.12. 40.7% of respondents in the rural area disagreed and 59.8% of respondents in the urban area disagreed. Their views were not affected by gender, marital status, age and ethnicity. Among urban respondents, the higher the respondents in the occupational ladder, the more likely they were to disagree with this view. This wasn't similar among rural respondents. Conversely, having a tertiary education was associated with a tendency to disagree among them but this wasn't so among the urban dwellers. Monthly income and socio-economic status did not significantly affect this among urban dwellers. However within rural dwellers, there was a tendency to agree more among those in the extremes of income and socio-economic status.

Overall 75.9% of the rural respondents compared to 93.3% of the urban respondents agreed that an adolescent should return to school after delivery. Among the urban respondents, those in the higher occupation strata, those with higher education, and those earning more income and in the higher socio-economic status were significantly more likely to agree with this opinion. None of these factors affected the opinion of urban dwellers.

Table 4.10: Socio-cultural factors associated with respondents' view that adolescent pregnancy was an outcome of poor home training among rural and urban residents in Ibadan, Nigeria

Characteristics	*Rural Area*					
	N (%)					
	Agree	*Undecided*	*Disagree*	*Total*	*Statistics*	*p-value*
Sex						
Male	64(62.8)	11(10.8)	27(26.5)	102(100.0)		
Female	79(52.3)	4(2.7)	68(45.0)	151(100.0)	13.55	0.001*
Total	**143(56.5)**	**15(5.9)**	**95(37.6)**	**253(100.0)**		
Marital status						
Married	129(59.5)	14(6.5)	74(34.1)	217(100.0)		
Single parent	5(41.7)	1(8.3)	6(50.0)	12(100.0)		
Divorced	2(66.7)	0(0.0)	2(66.7)	3(100.0)	10.50	0.231
Widowed	7(38.9)	0(0.0)	7(38.9)	18(100.0)		
Separated	2	2	2	2		
Others	0(0.0)	0(0.0)	0(0.0)	2(100.0)		
Total	**143(56.8)**	**15(6.0)**	**143(56.8)**	**252(100.0)**		

Characteristics	*Urban Area*					
	N (%)					
	Agree	*Undecided*	*Disagree*	*Total*	*Statistics*	*p-value*
Sex						
Male	73(68.2)	5(4.7)	29(27.1)	107(100.0)		
Female	84(63.6)	4(3.0)	44(33.3)	132(100.0)	1.37	0.506
Total	**157(65.7)**	**9(3.8)**	**73(30.5)**	**239(100.0)**		
Marital status						
Married	135(66.5)	8(3.9)	60(29.6)	203(100.0)		
Single parent	8(80)	0(0.0)	2(20.0)	10(100.0)		
Divorced	2(66.7)	0(0.0)	1(33.3)	3(100.0)	6.82	0.742
Widowed	8(53.3)	0(0.0)	7(46.7)	15(100.0)		
Separated	0(0.0)	0(0.0)	1(10.0)	1(100.0)		
Others	2(100)	0(0.0)	0(0.0)	2(100.0)		
Total	**155(66.2)**	**8(3.4)**	**71(30.3)**	**234(100.0)**		

Characteristics	*Rural Area*					
	N (%)					
	Agree	*Undecided*	*Disagree*	*Total*	*Statistics*	*p-value*
Age group (years)						
=<40	22(53.7)	2(4.9)	17(41.5)	41(100.0)		
41-50	70(60.3)	7(6)	39(33.6)	116(100.0)		
51-60	34(55.7)	5(8.2)	22(36.1)	61(100.0)	3.91	0.866
61-70	14(48.3)	2(6.9)	13(44.8)	29(100.0)		
>70	7(50.0)	0(0.0)	7(50.0)	14(100.0)		
Total	**147(56.3)**	**16(6.1)**	**98(37.6)**	**261(100.0)**		
Ethnic group						
Yoruba	124(54.4)	15(6.6)	89(39.0)	228(100.0)		
Igbo	7(58.3)	0(0.0)	5(41.7)	12(100.0)	4.61	0.330
Others	16(76.2)	1(4.8)	4(19.1)	21(100.0)		
Total	**147(56.3)**	**16(6.1)**	**98(37.6)**	**261(100.0)**		

Characteristics	*Urban Area*					
	N (%)					
	Agree	*Undecided*	*Disagree*	*Total*	*Statistics*	*p-value*
Age group (years)						
=<40	51(68.9)	2(2.7)	21(28.4)	74(100.0)		
41-50	63(72.4)	3(3.5)	21(24.1)	87(100.0)		
51-60	34(63)	4(7.4)	16(29.6)	54(100.0)	11.04	0.200
61-70	10(47.6)	0(0.0)	11(52.4)	21(100.0)		
>70	4(50.0)	0(0.0)	4(50.0)	8(100.0)		
Total	**162(66.4)**	**9(3.7)**	**73(29.9)**	**244(100.0)**		
Ethnic group						
Yoruba	144(67.0)	7(3.3)	64(29.8)	215(100.0)		
Igbo	4(36.4)	1(9.1)	6(54.5)	11(100.0)	6.29	0.178
Others	14(77.8)	1(5.6)	3(16.7)	18(100.0)		
Total	**162(66.4)**	**9(3.7)**	**73(30.0)**	**244(100.0)**		

Characteristics	*Rural Area*					
	N (%)					
	Agree	*Undecided*	*Disagree*	*Total*	*Statistics*	*p-value*
Occupation						
Professionals	2	2	2	2		
Managerial & lower professionals	14(53.9)	1(3.9)	11(42.3)	26(100.0)		
Non-manual skilled	19(51.4)	4(10.8)	14(37.8)	37(100.0)		
Manual-skilled	100(59.5)	6(3.6)	62(36.9)	168(100.0)	10.50	0.105
Semi-skilled	13(44.8)	5(17.2)	11(37.9)	29(100.0)		
Total	**146(56.2)**	**16(6.2)**	**98(37.7)**	**260(100.0)**		

Characteristics	*Urban Area*					
	N (%)					
	Agree	*Undecided*	*Disagree*	*Total*	*Statistics*	*p-value*
Occupation						
Professionals	7(46.7)	2(13.3)	6(4.0)	15(100.0)		
Managerial & lower professionals	45(71.4)	2(3.2)	16(25.4)	63(100.0)		
Non-manual skilled	38(60.3)	1(1.6)	24(38.1)	63(100.0)		
Manual-skilled	61(67.8)	4(4.4)	25(27.8)	90(100.0)	10.75	0.216
Semi-skilled	11(84.6)	0(0.0)	2(15.4)	13(100.0)		
Total	**162(66.4)**	**9(3.7)**	**73(29.9)**	**244(100.0)**		

Table 4.10 (contd): Socio-cultural factors associated with respondents' view that adolescent pregnancy was an outcome of poor home training among rural and urban residents in Ibadan, Nigeria

Characteristics	*Rural Area*					
	N (%)					
	Agree	*Undecided*	*Disagree*	*Total*	*Statistics*	*p-value*
Education						
None	2(13.3)	3(20.0)	10(66.7)	15(100.0)		
Primary	29(60.4)	2(4.2)	17(35.4)	48(100.0)		
Secondary	67(63.8)	4(3.8)	34(32.4)	105(100.0)	22.77	0.004*
Tertiary	37(49.3)	5(6.7)	33(4.0)	75(100.0)		
Post-graduate	6(100.0)	0(0.0)	0(0.0)	6(100.0)		
Total	**141(56.6)**	**14(5.6)**	**94(37.8)**	**249(100.0)**		
Monthly income						
₦5,000– ₦40,000	96(51.9)	9(4.9)	80(43.2)	185(100.0)		
₦41,000–₦100,000	48(68.6)	7(10.0)	15(21.4)	70(100.0)		
> ₦100,000	0(0.0)	0(0.0)	1(100.0)	1(100.0)	12.77	0.012*
Total	**144(56.3)**	**16(6.3)**	**96(37.5)**	**256(100.0)**		
Socio-Economic status						
Low	92(51.1)	8(4.4)	80(44.4)	180(100.0)		
Medium	49(65.3)	8(10.7)	18(24.0)	75(100.0)	11.80	0.019*
High	1(100.0)	0(0.0)	0(0.0)	1(100.0)		
Total	**142(55.5)**	**16(6.3)**	**98(38.3)**	**256(100.0)**		

Characteristics	*Urban Area*					
	N (%)					
	Agree	*Undecided*	*Disagree*	*Total*	*Statistics*	*p-value*
Education						
None	7(87.5)	0(0.0)	1(12.5)	8(100.0)		
Primary	9(81.8)	0(0.0)	2(18.2)	11(100.0)		
Secondary	34(77.3)	0(0.0)	10(22.7)	44(100.0)	12.07	0.148
Tertiary	83(66.4)	5(4.0)	37(29.6)	125(100.0)		
Post-graduate	20(48.8)	2(4.9)	19(46.3)	41(100.0)		
Total	**153(66.8)**	**7(3.1)**	**69(30.1)**	**229(100.0)**		
Monthly income						
₦5,000– ₦40,000	75(65.8)	3(2.6)	36(31.6)	114(100.0)		
₦41,000–₦100,000	81(73.0)	3(2.7)	27(24.3)	111(100.0)	18.80	0.001*
> ₦100,000	5(27.8)	3(16.7)	10(55.6)	18(100.0)		
Total	**161(66.3)**	**9(3.7)**	**73(30.0)**	**243(100.0)**		
Socio-Economic						
status	48(57.1)	3(3.6)	33(39.3)	84(100.0)		
Low	101(74.3)	4(2.9)	31(22.8)	136(100.0)		
Medium	7(41.2)	2(11.8)	8(47.1)	17(100.0)	13.44	0.009*
High	**156(65.8)**	**9(3.8)**	**72(30.4)**	**237(100.0)**		
Total						

No response = 2

* statistically significant

Table4.11: Socio-cultural factors associated with respondents' view that a pregnant adolescent should be married off to the boy among rural and urban residents in Ibadan, Nigeria

Characteristics	*Rural Area*					
	N (%)					
	Agree	*Undecided*	*Disagree*	*Total*	*Statistics*	*p-value*
Sex						
Male	28(27.5)	38(37.3)	36(35.3)	102(100.0)		
Female	38(25.2)	46(30.5)	67(44.4)	151(100.0)	2.20	0.333
Total	**66(26.1)**	**84(33.2)**	**103(40.7)**	**253(100.0)**		
Marital status						
Married	58(26.7)	71(32.7)	88(40.6)	217(100.0)		
Single parent	4(33.3)	3(25.0)	5(41.7)	12(100.0)		
Divorced	0(0.0)	2(66.7)	1(33.3)	3(100.0)		
Widowed	4(22.2)	5(27.8)	9(50.0)	18(100.0)	4.06	0.851
Separated	2	2	2	2		
Others	1(50.0)	0(0.0)	1(50.0)	2(100.0)		
Total	**67(26.6)**	**81(32.1)**	**104(41.3)**	**252(100.0)**		
Age group (years)						
=<40	10(24.4)	10(24.4)	21(51.2)	41(100.0)		
41-50	29(25.0)	45(38.8)	42(36.2)	116(100.0)		
51-60	15(24.6)	23(37.7)	23(37.7)	61(100.0)	9.15	0.330
61-70	10(34.5)	6(20.7)	13(44.8)	29(100.0)		
>70	4(28.6)	2(14.3)	8(57.1)	14(100.0)		
Total	**68(26.1)**	**86(33.0)**	**107(41.0)**	**261(100.0)**		

	Urban Area					
	N (%)					
Characteristics	***Agree***	***Undecided***	***Disagree***	***Total***	***Statistics***	***p-value***
Sex						
Male	22(20.6)	27(25.2)	58(54.2)	107(100.0)		
Female	20(15.2)	27(20.5)	85(64.4)	132(100.0)	2.61	0.272
Total	**42(17.6)**	**54(22.6)**	**143(59.8)**	**239(100.0)**		
Marital status						
Married	35(17.2)	48(23.7)	120(59.1)	203(100.0)		
Single parent	4(40.0)	1(10.0)	5(50.0)	10(100.0)		
Divorced	0(0.0)	0(0.0)	3(100.0)	3(100.0)		
Widowed	2(13.3)	3(20.0)	10(66.7)	15(100.0)	9.80	0.458
Separated	0(0.0)	0(0.0)	1(100.0)	1(100.0)		
Others	1(50.0)	1(50.0)	0(0.0)	2(100.0)		
Total	**42(18.0)**	**53(22.7)**	**139(59.4)**	**234(100.0)**		
Age group (years)						
=<40	17(23.0)	15(20.3)	42(56.8)	74(100.0)		
41-50	13(14.9)	23(26.4)	51(58.6)	87(100.0)		
51-60	6(11.1)	11(20.4)	37(68.5)	54(100.0)	15.29	0.054
61-70	8(38.1)	2(9.5)	11(52.4)	21(100.0)		
>70	0(0.0)	4(50.0)	4(50.0)	8(100.0)		
Total	**44(18.0)**	**55(22.5)**	**145(59.4)**	**244(100.0)**		

Characteristics	*Rural Area N (%)*					
	Agree	*Undecided*	*Disagree*	*Total*	*Statistics*	*p-value*
Ethnic group						
Yoruba	55(24.1)	76(33.3)	97(42.5)	228(100.0)		
Igbo	4(33.3)	2(16.7)	6(50.0)	12(100.0)		
Others	9(42.9)	8(38.1)	4(19.1)	21(100.0)	6.83	0.145
Total	**68(26.1)**	**86(33.0)**	**107(4.0)**	**261(100.0)**		
Occupation						
Professionals	2	2	2	2		
Managerial & lower professionals	7(26.9)	7(26.9)	12(46.2)	26(100.0)		
Non-manual skilled	10(27.0)	7(18.9)	20(54.1)	37(100.0)		
Manual-skilled	38(22.6)	62(36.9)	68(40.5)	168(100.0)	11.75	0.068
Semi-skilled	13(44.8)	9(31.0)	7(24.1)	29(100.0)		
Total	**68(26.2)**	**85(32.7)**	**107(41.2)**	**260(100.0)**		

Characteristics	*Urban Area N (%)*					
	Agree	*Undecided*	*Disagree*	*Total*	*Statistics*	*p-value*
Ethnic group						
Yoruba	39(18.1)	51(23.7)	125(58.1)	215(100.0)		
Igbo	1(9.1)	0(0.0)	10(90.9)	11(100.0)	5.22	0.266
Others	4(9.1)	4(22.2)	10(55.6)	18(100.0)		
Total	**44(18.0)**	**55(22.5)**	**145(59.4)**	**244(100.0)**		
Occupation						
Professionals	1(6.7)	4(26.7)	10(66.7)	15(100.0)		
Managerial&lowerprofessionals	21(33.3)	13(20.6)	29(46.0)	63(100.0)		
Non-manual skilled	8(12.7)	12(19.1)	43(68.3)	63(100.0)	15.67	0.047*
Manual-skilled	13(14.4)	22(24.4)	55(61.1)	90(100.0)		
Semi-skilled	1(7.69)	4(30.8)	8(61.5)	13(100.0)		
Total	**44(18.0)**	**55(22.5)**	**145(59.4)**	**244(100.0)**		

Characteristics	*Rural Area*					
	N (%)					
	Agree	*Undecided*	*Disagree*	*Total*	*Statistics*	*p-value*
Education						
None	8(53.3)	4(26.7)	3(20.0)	15(100.0)		
Primary	18(37.5)	17(35.4)	13(27.1)	48(100.0)		
Secondary	24(22.8)	40(38.1)	41(39.1)	105(100.0)	23.37	0.003*
Tertiary	15(20.0)	15(20.0)	45(60.0)	75(100.0)		
Post-graduate	2(33.3)	2(33.3)	2(33.3)	6(100.0)		
Total	**67(26.9)**	**78(31.3)**	**104(41.8)**	**249(100.0)**		
Monthly income						
₦5,000– ₦40,000	53(28.6)	48(26.0)	84(45.4)	185(100.0)		
₦41,000–₦100,000	13(18.6)	36(51.4)	21(30.0)	70(100.0)		
> ₦100,000	1(100.0)	0(0.0)	0(0.0)	1(100.0)	17.79	0.001*
Total	**67(26.2)**	**84(32.8)**	**105(41.0)**	**256(100.0)**		
Socio-Economic status						
Low	50(27.8)	47(26.1)	83(46.1)	180(100.0)		
Medium	14(18.7)	38(50.7)	23(30.7)	75(100.0)	17.34	0.002*
High	1(100.0)	0(0.0)	0(0.0)	1(100.0)		
Total	**65(25.4)**	**85(33.2)**	**106(41.4)**	**256(100.0)**		

			Urban Area			
			N (%)			
Characteristics	***Agree***	***Undecided***	***Disagree***	***Total***	***Statistics***	***p-value***
Education						
None	0(0.0)	3(37.5)	5(62.5)	8(100.0)		
Primary	2(18.2)	3(27.3)	6(54.6)	11(100.0)		
Secondary	6(13.6)	12(27.3)	26(59.1)	44(100.0)	8.46	0.390
Tertiary	26(20.8)	29(23.2)	70(56.0)	125(100.0)		
Post-graduate	7(17.1)	4(9.8)	30(73.2)	41(100.0)		
Total	**41(17.9)**	**51(22.3)**	**137(59.8)**	**229(100.0)**		
Monthly income						
₦5,000– ₦40,000	25(21.9)	25(21.9)	64(56.2)	114(100.0)		
₦41,000–₦100,000	18(16.5)	27(24.0)	66(59.5)	111(100.0)	5.86	0.210
> ₦100,000	1(5.6.0)	2(11.1)	15(83.3)	18(100.0)		
Total	**44(18.1)**	**54(22.2)**	**145(59.7)**	**243(100.0)**		
Socio-Economic status						
Low	16(19.0)	21(25.0)	47(56.0)	84(100.0)		
Medium	26(19.1)	29(21.3)	81(59.6)	136(100.0)	1.48	0.831
High	2(11.8)	3(17.7)	12(70.6)	17(100.0)		
Total	**44(18.6)**	**53(22.4)**	**140(59.0)**	**237(100.0)**		

No response = 2

* statistically significant

Table 4.12: Socio-cultural factors associated with respondents' view that a pregnant adolescent should be allowed to continue school after delivery among rural and urban residents in Ibadan, Nigeria

Characteristics	*Rural Area*					
	N (%)					
	Agree	*Undecide*	*Disagree*	*Total*	*Statistics*	*p-value*
Sex						
Male	74(72.6)	23(22.6)	5(4.9)	102(100.0)		
Female	118(78.2)	21(13.9)	12(8.0)	151(100.0)	3.71	0.157
Total	**192(75.9)**	**44(17.4)**	**17(6.7)**	**253(100.0)**		
Marital status						
Married	163(75.1)	36(16.6)	18(8.3)	217(100.0)		
Single parent	9(75.0)	3(25.0)	0(0.0)	12(100.0)		
Divorced	3(100.0)	0(0.0)	0(0.0)	3(100.0)	5.79	0.671
Widowed	14(77.8)	4(22.2)	0(0.0)	18(100.0)		
Separated	2	2	2	2		
Others	1(50.0)	1(50.0)	0(0.0)	2(100.0)		
Total	**190(75.4)**	**44(17.5)**	**18(7.1)**	**252(100.0)**		
Age group (years)						
=<40	35(85.4)	5(12.2)	1(2.4)	41(100.0)		
41-50	88(75.9)	18(15.5)	10(8.6)	116(100.0)		
51-60	49(80.3)	9(14.8)	3(4.9)	61(100.0)	8.07	0.385
61-70	18(62.1)	8(27.6)	3(10.3)	29(100.0)		
>70	9(64.3)	4(28.6)	1(7.1)	14(100.0)		
Total	**199(76.3)**	**44(16.9)**	**18(6.9)**	**261(100.0)**		
Ethnic group						
Yoruba	170(74.6)	42(18.4)	16(7.0)	228(100.0)		
Igbo	10(83.3)	1(8.3)	1(8.3)	12(100.0)	3.57	0.467
Others	19(90.5)	1(4.8)	1(4.8)	21(100.0)		
Total	**199(76.3)**	**44(16.9)**	**18(6.9)**	**261(100.0)**		

Characteristics	*Urban Area*					
	N (%)					
	Agree	*Undecided*	*Disagree*	*Total*	*Statistics*	*p-value*
Sex						
Male	100(93.5)	6(5.6)	1(0.9)	107(100.0)		
Female	123(93.2)	8(6.1)	1(0.8)	132(100.0)	0.04	0.979
Total	**223(93.3)**	**14(5.9)**	**2(0.8)**	**239(100.0)**		
Marital status						
Married	187(92.1)	14(6.9)	2(1.0)	203(100.0)		
Single parent	10(100.0)	0(0.0)	0(0.0)	10(100.0)		
Divorced	3(100.0)	0(0.0)	0(0.0)	3(100.0)		
Widowed	15(100.0)	0(0.0)	0(0.0)	15(100.0)	2.62	0.989
Separated	1(100.0)	0(0.0)	0(0.0)	1(100.0)		
Others	2(100.0)	0(0.0)	0(0.0)	2(100.0)		
Total	**218(93.2)**	**14(6)**	**2(0.9)**	**234(100.0)**		
Age group (years)						
=<40	67(90.5)	5(6.8)	2(2.7)	74(100.0)		
41-50	84(96.6)	3(3.6)	0(0.0)	87(100.0.0)		
51-60	50(92.6)	4(7.4)	0(0.0)	54(100.0)	6.66	0.574
61-70	20(95.2)	1(4.8)	0(0.0)	21(100.0)		
>70	7(87.50)	1(12.5)	0(0.0)	8(100.0)		
Total	**228(93.4)**	**14(5.7)**	**2(0.8)**	**244(100.0)**		
Ethnic group						
Yoruba	199(92.6)	14(6.5)	2(0.9)	215(100.0)		
Igbo	11(100.0)	0(0.0)	0(0.0)	11(100.0)	2.31	0.679
Others	18(100.0)	0(0.0)	0(0.0)	18(100.0)		
Total	**228(93.4)**	**14(5.7)**	**2(0.8)**	**244(100.0)**		

Table 4.12: Socio-cultural factors associated with respondents' view that a pregnant adolescent should be allowed to continue school after delivery among rural and urban residents in Ibadan, Nigeria

Characteristics	*Rural Area N (%)*					
	Agree	*Undecided*	*Disagree*	*Total*	*Statistics*	*p-value*
Occupation						
Professional	2	2	2	2		
Managerial & lower professionals	25(96.2)	1(3.9)	0(0.0)	26(100.0)		
Non-manual skilled	31(83.8)	6(16.2)	0(0.0)	37(100.0)		
Manual-skilled	118(70.2)	34(20.2)	16(9.5)	168(100.0)	13.06	0.042*
Semi-skilled	24(82.8)	3(10.3)	2(6.9)	29(100.0)		
Total	**198(76.2)**	**44(16.9)**	**18(6.9)**	**260(100.0)**		
Education						
None	10(66.7)	3(20.0)	2(13.3)	15(100.0)		
Primary	34(70.8)	8(16.7)	6(12.5)	48(100.0)		
Secondary	78(74.3)	21(20.0)	6(5.7)	105(100.0)	6.22	0.022*
Tertiary	59(78.7)	12(1.0)	4(5.3)	75(100.0)		
Post-graduate	6(100.0)	0(0.0)	0(0.0)	6(100.0)		
Total	**187(75.1)**	**44(17.7)**	**18(7.2)**	**249(100.0)**		
Monthly income						
₦5,000– ₦40,000	131(70.9)	37(20.0)	17(9.2)	185(100.0)		
₦41,000–₦100,000	63(90.0)	6(8.6)	1(1.4)	70(100.0)	11.07	0.026*
> ₦100,000	1(100.0)	0(0.0)	0(0.0)	1(100.0)		
Total	**195(76.2)**	**43(16.8)**	**18(7.3)**	**256(100.0)**		
Socio-Economic status						
Low	126(70)	38(21.1)	16(8.9)	180(100.0)		
Medium	67(89.3)	6(8.0)	2(2.7)	75(100.0)		
High	1(100.0)	0(0.0)	0(0.0)	1(100.0)	11.14	0.025*
Total	**194(75.8)**	**44(17.2)**	**18(7.0)**	**256(100.0)**		

Characteristics	*Urban Area*					
	N (%)					
	Agree	*Undecided*	*Disagree*	*Total*	*Statistics*	*p-value*
Occupation						
Professionals	15(100.0)	0(0.0)	0(0.0)	15(100.0)		
Managerial&lower professionals	60(95.2)	1(1.6)	2(3.2)	63(100.0)		
Non-manual skilled	60(95.2)	3(4.8)	0(0.0)	63(100.0)	11.77	0.162
Manual-skilled	81(90.0)	9(10.0)	0(0.0)	90(100.0)		
Semi-skilled	12(92.3)	1(7.7)	0(0.0)	13(100.0)		
Total	**228(93.4)**	**14(5.7)**	**2(0.8)**	**244(100.0)**		
Education						
None	8(100.0)	0(0.0)	0(0.0)	8(100.0)		
Primary	11(100.0)	0(0.0)	0(0.0)	11(100.0)		
Secondary	40(90.9)	4(9.1)	0(0.0)	44(100.0)	3.75	0.879
Tertiary	116(92.8)	8(6.4)	1(0.8)	125(100.0)		
Post-graduate	38(92.7)	2(4.9)	1(2.4)	41(100.0)		
Total	**213(93.0)**	**14(6.1)**	**2(0.9)**	**229(100.0)**		
Monthly income						
₦5,000– ₦40,000	106(93.0)	7(6.1)	1(0.9)	114(100.0)		
₦41,000–₦100,000	105(94.6)	5(4.5)	1(0.9)	111(100.0)	0.46	0.977
> ₦100,000	17(94.4)	1(5.6)	0(0.0)	18(100.0)		
Total	**228(93.8)**	**13(5.4)**	**2(0.8)**	**243(100.0)**		
Socio-Economic status						
Low	78(92.9)	6(7.1)	0(0.0)	84(100.0)		
Medium	129(94.9)	6(4.4)	1(0.7)	136(100.0)		
High	16(94.1)	1(5.9)	0(0.0)	17(100.0)	1.48	0.831
Total	**223(94.1)**	**13(5.5)**	**1(0.4)**	**237(100.0)**		

No response = 2

* statistically significant

4.1.5. SECTION E: SOCIO-CULTURAL FACTORS ASSOCIATED WITH DECISION TAKEN REGARDING ADOLESCENT PREGNANCY

Overall, 85 (16.8%) had personal experiences of adolescent pregnancy, though a slightly higher proportion of rural 45 (17.2%) than urban 40 (16.4%) respondents had personal experience of adolescent pregnancy in which they had been involved in the decision on the outcome of the pregnancy. In the rural area, the respondents' own child was involved in 48.9% and a sibling of the respondent in 51.1%. In the urban area, only 20.0% occurred in the respondents' own child, 75.0% was in a sibling and in 5.0%, the respondents or their spouses had been pregnant as an adolescent.

Table 4.13: Respondents' personal experience of adolescent pregnancy among rural and urban residents in Ibadan, Nigeria

Personal experience of an adolescent pregnancy	*Rural Area N (%)*	*Urban Area N (%)*	*Total N (%)*	*Statistics* X^2	p-value
Personal experience of adolescent pregnancy					
Yes	45(17.2)	40(16.4)	85(16.8)	0.06	0.799
No	216(82.8)	204(83.6)	420(83.2)		
Total	**261(100.0)**	**244(100.0)**	**505(100.0)**		
If yes, specify relationship of adolescent to you					
Own child	22(48.9)	8(20.0)	30(35.3)	9.20	0.010*
Sibling	23(51.1)	30(75.0)	53(62.4)		
Self/Spouse	0(0.0)	2(5.0)	2(2.4)		
Total	**45(100.0)**	**40(100.0)**	**85(100.0)**		

Overall, 61 (71.8%) of adolescent pregnancies were reportedly carried to term while 24 (28.2%) were aborted. Adolescent pregnancy was reported to have been aborted more among rural compared to urban dwellers (40.0% and 15.0% respectively) and this was statistically significant p = 0.011

Some of the reasons proffered for the reported outcome of these pregnancies were as follows:- kept for religious reasons 20.0% and kept in accordance with parental instructions (18.8%). Pregnancy being kept for religious reasons was more common among rural dwellers (37.8%) compared to urban dwellers (20.0%). Conversely the most common reason for keeping pregnancy among urban dwellers was for health concerns (32.5%) while only 8.9% of rural dwellers gave this same reason p <0.0001

Table 4.14: Decision taken as regards adolescent pregnancy among rural and urban residents in Ibadan, Nigeria

Decisions	*Rural Area N (%)*	*Urban Area N (%)*	*Statistics* X^2	p-value
Pregnancy carried to term	**27 (60.0)**	**34 (85.0)**	6.53	
Pregnancy aborted	**18 (40.0)**	**6 (15.0)**		0.011*
Reason for keeping pregnancy	4(23.5)	13(76.5)		
Kept pregnancy for health reasons	17(68.0)	9(34.6)		
Kept pregnancy for religious reasons	5(31.3)	11(68.8)	12.62	0.027*
Parents insisted	1(50.0)	1(50.0)		
Kept pregnancy for cultural reasons	**27(44.3)**	**34(55.7)**		
Total				
Reason for aborting pregnancy				
Aborted to avoid complications	3(37.5)	5(62.5)		
Aborted because it was unwanted	15(93.8)	1(6.3)	9.22	0.010*
Total	**18(75.0)**	**6(25.0)**		

*Statistically significant

About 72% of all adolescent pregnancies were reportedly kept which was independent of the attitude of respondents towards adolescent pregnancy being an outcome of poor home training, the pregnant adolescent being married off to the boy nor that she should continue school after delivery.

Table 4. 15: Influence of attitude on decision making regarding adolescent pregnancy among rural and urban residents in Ibadan, Nigeria

		Kept preg N (%) N= 61	*Aborted preg N (%) N = 24*	*Total N (%) N = 85*	*Statistics X^2*	*P-value*
Adolescent pregnancy is an outcome of poor home training	Agree	37(69.8)	16(30.2)	53(100.0)		
	Undecided	4(57.1)	3(42.9)	7(100.0)	1.68	0.433
	Disagree	20(80.0)	5(20.0)	25(100.0)		
A pregnant adolescent should be married off to the boy	Agree	16(84.2)	3(15.8)	19(100.0)		
	Undecided	26(68.4)	12(31.6)	38(100.0)	1.87	0.392
	Disagree	19(67.9)	9(32.1)	28(100.0)		
A pregnant adolescent should be allowed to continue school after delivery	Agree	54(71.8)	22(28.2)	76(100.0)	0.21	0.902
	Undecided	4(80.0)	1(20.0)	5(100.0)		
	Disagree	3(75.0)	1(25.0)	4(100.0)		

Concerning socio-economic factors associated with decision making regarding adolescent pregnancy, none of these factors (age, ethnicity, educational attainment, monthly income and socio-economic status) significantly affected the decision of respondents concerning adolescent pregnancy. However, those in the middle income group were less likely to keep the pregnancy compared to the extremes of monthly earnings that were more likely to keep the pregnancy. This same pattern was observed with the socio-economic group where the high socio-economic group was more likely to abort the pregnancy (38.3% vs 15.8%).

Table 4.16: Association between socio-economic factors and decision taken regarding a pregnant adolescent among rural and urban residents in Ibadan, Nigeria

	Kept Preg N (%)	*Aborted preg N (%)*	*Total N (%)*	*Statistics X^2*	*P-value*
Sex					
Male	30(75.0)	10(25.0)	40(100.0)		
Female	30(71.4)	12(28.6)	42(100.0)	0.13	0.715
Total	**60(73.2)**	**22(26.83)**	**82(100.0)**		
Age group (years)					
=<40	9(64.3)	5(35.7)	14(100.0)		
41-50	29(70.7)	12(29.3)	41(100.0)		
51-60	13(72.2)	5(27.78)	18(100.0)	1.75	0.781
61-70	8(88.9)	1(11.1)	9(100.0)		
>70	2(66.7)	1(33.3)	3(100.0)		
Total	**61(71.8)**	**24(28.2)**	**85(100.0)**		
Ethnic group					
Yoruba	51(71.8)	20(28.2)	71(100.0)		
Others**	10(71.4)	4(28.6)	14(100.0)	0.01	0.976
Total	**61(71.8)**	**24(28.2)**	**85(100.0)**		
Education					
None	5(83.3)	1(16.7)	6(100.0)		
Primary	10(83.3)	2(16.7)	12(100.0)		
Secondary	17(65.4)	9(34.6)	26(100.0)	1.73	0.630
Tertiary	29(70.7)	12(29.3)	41(100.0)		
Total	**61(71.8)**	**24(28.2)**	**85(100.0)**		
Monthly income					
₦5,000– ₦40,000	37(80.4)	9(19.6)	46(100.0)		
₦41,000–₦100,000	21(58.3)	15(41.7)	36(100.0)	6.09	0.048*
> ₦100,000	3(100.0)	0(0.0)	3(100.0)		
Total	**61(71.8)**	**24(28.2)**	**85(100.0)**		

	Kept Preg *N (%)*	*Aborted preg* *N (%)*	*Total* *N (%)*	*Statistics* X^2	*P-value*
Socio-Economic status					
Low	32(84.2)	6(15.8)	38(100.0)		
High	29(61.7)	18(38.3)	47(100.0)	5.25	0.022*
Total	**61(71.7)**	**24(28.2)**	**85(100.0)**		

**Note: ****Others = Igbo, Kalabari, Ogoni, Hausa, Urhobo, Igbira, Calabar, Awori, Ijaw.

Respondents in the high socio-economic group had 80% less likely to keep pregnancy compared to those in the lower socio-economic groups.

Urban respondents were over five times more likely to decide to keep pregnancy compared to rural ones.

Table 4.17. Multivariate Analysis with decision to keep pregnancy as dependent variable.

Variables	*Odds Ratio*	*95% Confidence interval*	*p- value*
Socio-economic status			
High	0.20	0.06- 0.65	0.007
Low	1.00		
Residence			
Urban	5.48	1.71-17.59	0.004
Rural	1.00		

This model was selected because of collinearity between income and socio-economic status.

4.1.6. SECTION F: RESULT OF KEY-INFORMANT INTERVIEWS

Description of Key-Informant interview participants

Twelve Key Informant interviews were conducted with parents who had a personal experience on teenage pregnancy, six parents residing in the urban and rural area were interviewed respectively. The ages of these parents ranged from 35 to 75years, nine of them were currently married while three were widowed and all of them had at least primary education and at most a post graduate degree. Most of the parents were self employed while some were government employed. Each of these interviews lasted approximately 20minutes. The interviews were audio-taped, subsequently transcribed and analyzed using thematic analysis. The interviews were conducted in English in the urban area and in the local language Yoruba in the rural area, notes were taken during each of the sessions.

SEXUALITY AND ADOLESCENT PREGNANCY

Rural

There was a high level of awareness of adolescent pregnancy and sexuality among the rural dwellers. Most of the information they had was obtained from friends and elders. Some information was also obtained from community and religious leaders.

Most of the parents interviewed did not agree that sexuality education should be taught in schools because they believed it would expose the adolescents to illicit sexual activities for this same reason they had refrained from discussing sexuality issues with their adolescents.

One parents remarked *"Discussing sex with the children would be like encouraging them to go and have sex".*

Another said, *"One day my 12year old daughter asked me 'how do women get pregnant', I just shouted at her and told her that was a 'bad' talk and she should never talk like that again".*

Urban

There was good knowledge of adolescent pregnancy and sexuality among the urban dwellers. Most of the information they had was obtained from friends, media (print and electronic) and parents. Some information was also obtained from teachers and religious leaders.

Most of the parents interviewed had a good knowledge of sexuality education and they agreed that it should be taught in schools right from primary level. Majority of them had never discussed sexuality issues with their adolescents.

An informant remarked,*" I just don't feel comfortable discussing things like that with my children so I avoid it as much as possible".*

Another parent said *"The few times I have discussed sex education with my children, they were the ones that asked a leading question which I then elaborated upon".*

DECISION MAKING

Rural

Majority of the parents interviewed said they experienced a feeling of disappointment, anger initially when they discovered their adolescents were pregnant but latter accepted it while a few said it was alright and they were happy about it from the onset.

One of them remarked as follows:

"A child is a gift from God, why should I be unhappy about it when some are looking for it"?

Seventeen percent of these parents aborted the pregnancy because it was unwanted while majority of them insisted the pregnancy was kept as one respondent put it:

"We barely have money enough to eat, how will I cope with the care of an unwanted pregnancy, delivery and care of the baby? I just had to abort it, God will forgive me".

Another said*, "Islam is against abortion, a child is a gift from God and any child that gets pregnant is ready for motherhood so should be allowed to marry. That was exactly what I did".*

Overall, respondents were of the opinion that there were more disadvantages associated with adolescent pregnancy than advantages.

One of the parents remarked *"The only benefit is that a child is a gift from God. There are lots of draw backs, the girl could have to stop school or even die from bleeding".*

Urban

All the parents interviewed expressed a feeling of anger, disappointment and failure as a parent initially when they discovered their adolescents were pregnant but eventually accepted the pregnancy. About a quarter of these parents decided adolescent should abort the pregnancy because it was unwanted while majority of them insisted the pregnancy was kept. A few of the pregnant adolescents continued school till delivery while about a quater of them resumed school following delivery.

One of the parents remarked, *"I just put religion and moral values aside to abort the pregnancy because I didn't want to jeopardize her future and am happy she didn't stop school for one day".* Another said, *"My religion (Christianity) didn't allow me abort the pregnancy and moreover I believe any child who feels she is old enough to eat what elders eat should be ready to bear the consequences".*

Overall, the respondents believed that there were more disadvantages of adolescent pregnancy than advantages.

"The only benefit is that the adolescent already has a grown up child when her mates are yet to start having theirs. There are lots of draw backs - poor health for the girl, delivery complications, vesico-vaginal fistula, sepsis, even death".

RESPONDENTS' OPINION ON RURAL/URBAN DIFFERENCES IN ATTITUDE TO ADOLESCENT PREGNANCY

Rural

Few of the parents interviewed believe that there were differences in opinion among urban and rural dwellers. They felt that availability of better health care services gave urban dwellers access to safer pregnancy care which may affect their decision on adolescent pregnancy. This they felt made urban dwellers keep adolescent pregnancy more than rural dwellers. A large proportion of them said there were no differences between attitudes of rural and urban dwellers towards adolescent pregnancy.

One of the parents remarked *"Urban dwellers are not better than rural dwellers in any way, the same way the king was born, the servant too was born".*

Urban

Majority of the parents interviewed have the belief that there are differences in opinion among urban and rural dwellers. They felt that better exposure, technological advancement and better health care services give urban dwellers access to safer abortion and pregnancy care which in turn affects their decision making process on adolescent pregnancy. They felt that these made them abort more than the rural dwellers.

One parent remarked" *Urban dwellers are more enlightened than rural dwellers. They could easily terminate a pregnancy perfectly in the hospital without complications but rural dwellers depend on crude methods which attracts lots of complications even death".*

CHAPTER FIVE

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1. DISCUSSION

5.1.1. Socio-demographic characteristics

From this study, the mean age of the respondents from the rural area was 49.0 ± 9.4 years which is slightly higher than the mean age of the urban participants 46.0± 10.1 years. Furthermore, majority of the respondents (86.4%) were married with just 1.2% divorced and they were predominantly Christians in both groups. However, there were more Christians in the urban group than the rural group while Islam was more practiced among the rural group than the urban group. The above findings on age were similar to that of Briggs (1998) on Parents' viewpoint on reproductive health and contraceptive practice among sexually active adolescents in the Port Harcourt local government area of Rivers State, Nigeria. Also similar was our findings on religion. However, findings on marital status contrast that of Briggs who found 64.9% of his respondents to be married while 8.1% of them were divorced. This could be due to the fact that the studies were conducted in different geopolitical zones of the country.

5.1.2. Personal experience on adolescent pregnancy

Significantly more rural respondents (76.8%) agreed that adolescent pregnancy was a problem in their community compared to urban respondents (69.1%). This is different from what was demonstrated by Tinuola (2006) who found 531(59.9%) and 153(51.4%) from his urban and rural adolescent respondents respectively. However, Tinuola's findings supports the fact that rural dwellers are more likely to consider adolescent pregnancy a problem. Olukoya in his study among secondary school teachers in 1992 found 84.7% of his respondents agreeing to the fact that adolescent pregnancy was a problem this is not too similar to the high agreement rate in this study.

With regards to reasons given for considering adolescent pregnancy a problem, majority of the respondents reported that it affects the girl's education while some were of the opinion that it accounts for several abortion complications within the community. This is consistent with what Briggs (1998) reported from his study among parents who also felt that adolescent pregnancy was a major problem because it affected the girl's education and also led to various health and non health complications in the life of the adolescent.

Personal experience of adolescent pregnancy was reported more in the rural (17.2%) area than the urban (16.4%). This is slightly lower than the findings of Tinuola (2006) who found 29.1% and 38.3% from his urban and rural adolescent respondents respectively, the findings however supports the predominance of adolescent pregnancy in the rural area.

Majority of the respondents (71.8%) who had personal experience of adolescent pregnancy reported that the pregnancies were carried to term, this is higher than the findings of Horn (1983) which reported that 59% of the adolescents studied carried the pregnancy to term. Some of the respondents in this our study of circumstances surrounding parental decision about adolescent pregnancy among rural and urban residents in Oyo State (28.2%) reported the pregnancies were aborted. Though this percentage appears low, the burden of abortions can be appreciated from the findings of Adetoro (1991) who found that 74.4% of all patients admitted at the University of Ilorin Teaching Hospital for septic illegal abortion were adolescents. Similarly, Glover (2003) from his study on adolescents in Ghana reported 70.0% ended up with induced abortion while Ramirez (1991) reported 66.0%.

In Nigeria, induced abortion remains an illegal procedure except when carried out to save the life of the mother. It is possible that due to the illegality of an induced abortion some of the parents in this study did not give the fact about the outcome of their adolescent's pregnancies. Also, there is the probability of parents not being aware of most of the adolescent pregnancies before they got terminated via induced abortion and this could account for the inconsistencies.

5.1.3. ATTITUDE OF RESPONDENTS TOWARDS ADOLESCENT PREGNANCY

Majority of the respondents (94.81%) agreed that sexuality education should be taught in schools. This is consistent with Briggs' findings that revealed 93.2% of respondents agreeing to teachings on sexuality education in schools. However, this finding contrasts with the findings of Olukoya and Iyaniwura who found 71.6% and 74.1% respectively. Iyaniwura conducted her study in a sub-urban town and had most of her respondents with socio-demographic characteristics slightly different from those in this study. This could account for the inconsistency.

Over half of the respondents agreed that adolescent pregnancy was common among offspring of single parents; which is consistent with other studies reporting that adolescents with one or both parents absent are at higher risk of adolescent pregnancy. (Bonell 2006, Teitler 1999 and Willibald et al 2007). Bonell's study was among British pregnant adolescents and it was reported that one fifth of them were from lone parent families which was similar to Teitler who conducted his among American pregnant adolescents. Willibald however conducted his study among already delivered adolescents in Austria; he reported 60.0% of his respondents grew up with one or no parent.

Over 90.0% of the participants agreed that it was good for parents to discuss sex education with their teenagers. This finding contrasts that of Briggs that found just 12.2% of parents agreeing to sex education discussion among adolescents. However, more participants in the rural (11.0%) disagreed to the statement compared to just 2.0% in the urban areas. This could be due to the fact that moral values are held in high esteem in the rural areas and most Nigerian cultures cherish virginity before marriage. It is believed that discussing sex education with teenagers would further expose them to illicit sexual encounters. This could also reflect a changing attitude among the community over time since Briggs study was conducted in 1998 while this study was in 2009.

Over 90.0% of the respondents agreed to the issue of encouraging a pregnant adolescent have her baby both in the rural and urban regions. This finding is consistent with the findings of (Tinuola, 2006). Unlike this study however, Tinuola found significantly more rural (95.0%) than urban (79.7%) who hold this opinion.

In response to the question on whether a pregnant adolescent should be married off to the boy, half of the respondents disagreed. However, more of the respondents in the urban region disagreed compared to the respondents in the rural region.
This is similar to the findings of Furstenberg (1976) which found only twenty percent of adolescent mothers in Baltimore agreeing to this.

As to encouraging an unmarried adolescent mother on contraceptive use after delivery of her baby, almost half (47.0%) of the respondents disagreed. This is consistent with what was discovered by Olukoya (45.0%) and Iyaniwura (46.8%). This finding is more than that found by

Briggs and Adekunle that found 21.0% and 30.7% respectively. More urban dwellers agreed (43.85%) than rural dwellers (27.0%). However, it contrasts with the findings of Furstenberg (1976) that found 88% of his adolescent mother respondents agreeing to contraceptive use after delivery.

5.1.4. SOCIO-CULTURAL FACTORS ASSOCIATED WITH PARENTAL ATTITUDE TO ADOLESCENT PREGNANCY

About 6.5% of the respondents agreed on putting up the baby for adoption as also demonstrated by Custer (1993) in his study among Americans that found 5.0% agreement. This stresses the fact that our culture doesn't embrace adoption. However, more urban (8.0%) respondents agreed than rural (5.0%). This could be due to the fact that there is better exposure to the western way of life in the urban than rural area. The rural dwellers are usually more traditional in their way of life and our tradition doesn't embrace adoption.

About 72% of pregnancies were kept and this was independent of attitude as determined by the key variable in this study. Being in the lower socio-economic class and dwelling in the urban area were independently associated with the decision to keep pregnancy.

Factors such as type of school attended and religion of the adolescent has been shown to be important in western countries where it is usually not the parent alone that take this decision (Adamczyk, 2009).

5.2. CONCLUSION

In this study, parents'/guardians' attitude towards the course of adolescent pregnancy is positive. There were also rural/urban differences in the reported prevalence of adolescent pregnancy as well as in the attitude of parents towards adolescent pregnancy. Generally, urban dwellers have more positive attitude than rural dwellers.

Socio-economic status and dwelling were found to influence parental decision making towards adolescent pregnancy.

Attitude towards continuing education after delivery is positive. Attitudes towards sex education, marrying the pregnant adolescent off, continuing school and concerning the use of contraceptive were found to affect decision making towards adolescent pregnancy.

5.3. RECOMMENDATIONS

Provision of adequate social recreational infrastructures for the adolescents in the rural areas as well as social amenities will go a long way to engage them in good quality activities.

Improving the educational and socio economic status of rural dwellers by the Government is recommended since findings from this study suggest that improved education is associated with better attitude towards adolescent pregnancy.

The Government should endeavour through poverty alleviation programmes to improve earnings and general socio-economic status as this has been associated with improved attitude towards adolescent pregnancy from this study.

Health facilities especially in the rural areas should be improved to cater for the high burden of adolescent pregnancy found in this study. Creation of adolescent friendly centers in all health facilities will offer better acceptance to adolescents in meeting their sexual health needs.

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APPENDIX I

IRB Research approval number: UI/EC/09/0012

This approval will elapse on: 15/02/2010

INFORMED CONSENT FORM

FACTORS INFLUENCING PARENTAL DECISIONS ON ADOLESCENT PREGNANCY AMONG RURAL AND URBAN-BASED PARENTS OR GUARDIANS IN IBADAN, NIGERIA

Investigator: This research is being conducted by Mrs. Matthew Olayemi of the Institute of Child Health, College of Medicine, University of Ibadan, Ibadan, Oyo State, Nigeria.

Purpose of research

This study is aimed at determining attitude of parents/guardians in rural and urban areas in Ibadan, Oyo state towards adolescent pregnancy and socio-cultural factors influencing their decisions about adolescent pregnancy.

It is towards partial fulfillment of the Master of Public Health (MPH) degree in Child and Adolescent Health, from the College of Medicine, University of Ibadan. The findings will help in understanding the various factors determining parental decision making on issues that bother on adolescent pregnancy in their wards, ways of preventing adolescent pregnancy and its proper management.

Procedure

The study would involve you either filling a structured questionnaire or responding to an interview by trained interviewers. You are free to decline any interviewer who is familiar to you. In total, we expect to enroll 450 participants into the study and interview 12 Key-Informants.

Expected duration of research and participant's involvement

It will take about ten minutes to complete the questionnaire and thirty minutes for the interview which is the expected period of your involvement.

Risks and Benefits

It is not likely that you would be exposed to any risk by participating in this study.

You are not likely to have any direct benefit by participating in this study but it is hoped that your participation would generally help improve parental decision making on adolescent pregnancy.

Confidentiality

Your name would not appear on the forms neither would it be used in connection with the results obtained from this study. Also no one other than the people directly involved would have access to any information you give us.

Voluntariness and alternative to participation

Your participation in this study is absolutely voluntary and you are free to decline if you so wish. Also you can withdraw your participation at any time during the study. If you have any questions, you can contact the Chairman HREC University of Ibadan, Prof. C.A. Adebamowo IAMRAT Building, College of Medicine, University of Ibadan, Prof. Omotade, Dr. Sangowawa or Mrs. Matthew Institute of Child Health, College of Medicine, University of Ibadan.

Due Inducement

You will not receive any financial or material compensation for participating in this research.

Statement of person obtaining consent

I have fully explained this research to…….. (Participant's Initials) and have given sufficient information to make an informed decision.

Date…… Signature ……..

Statement of person giving consent

I have had the description of the research translated to me in language I understand. I understand that my participation is voluntary. I know enough about the purpose, methods, risks and benefits to judge that I want to take part in it. I understand that I may freely stop being part of the study at any time. I have received a copy of the consent form to keep for myself.

Date ……. Signature …….

APPENDIX II

QUESTIONNAIRE

FACTORS INFLUENCING PARENTAL DECISIONS ON ADOLESCENT PREGNANCY AMONG RURAL AND URBAN-BASED PARENTS OR GUARDIANS IN IBADAN, NIGERIA

Mark x in the boxes provided.

IRB Research approval No: UI/EC/09/0012

Interviewer code number = ……

Date = ……

Serial Number = ……

Rural = 1 Urban =2

Section A: Socio-demographic information.

1. Sex (a) Male =1 (b) Female =2
2. Marital status (a) Married = 1 (b) Single parent = 2 (c) Divorced =3 (d) Widowed = 4 (e) Separated = 5 (f) Others = 6
3. Age last birthday (in years) =
4. Date of birth (dd/mm/yy) =
5. Ethnic group: Yoruba =1 Igbo = 2 Kalabari = 3 Ogoni = 4 Hausa = 5 Urhobo = 6 Igbira = 7 Calabar = 8 Awori = 9 Ijaw = 10.
6. State of origin: Ekiti = 1 Ogun = 2 Osun = 3 Ondo = 4 Oyo = 5 Imo = 6 Rivers = 7 Abia = 8 Kwara = 9 Kano = 10 Kaduna = 11 Lagos =12 Edo = 13 Anambra =14 Akwa-Ibom = 15 Enugu = 16 Bayelsa =17.
7. Occupation: Professional = 1 Managerial lower professional = 2 Non-manual skilled = 3 Manual skilled =4 Semi-skilled = 5 Unskilled = 6.
8. Religion (a) Christianity =1 (b) Islam =2 (c) Traditional =3 (d) Others = 4
9. Highest grade of schooling completed (a) None = 1 (b) Primary = 2 (c) Secondary = 3 (d) Tertiary = 4 (e) Post-graduate = 5
10. Monthly income (a) ₦ 5,000-N 40,000 =1 (b) ₦41, 000-N100, 000 = 2 (c) Above ₦100, 000 = 3
11. Where do you live presently (a) Rural =1 (b) Urban = 2
12. Where have you lived most of your life (a) Rural = 1 (b) Urban = 2
13. Housing condition

(a) Live in personal house (a) Yes = 1 (b) No = 0

(b) Live in rented house (a) Yes =1 (b) No = 0

(c) Have electricity (a) Yes = 1 (b) No = 0

(d) Do not have electricity (a) Yes = 1 (b) No = 0

(e) Have portable water (a) Yes = 1 (b) No = 0

(f) Source of this water (a) Well = 1 (b) Bore Hole = 2 (c) Stream = 3 (d) Water corporation = 4

(g) Do not have portable water (a) Yes =1 (b) No = 0

14. Socio-economic status (a) Low =1 (b) Middle = 2 (c) High = 3

15. How many children do you have = ……

16. How many out of them are girls = ……

17. How many out of them are boys = ……

Section B : Attitude towards Adolescent Pregnancy

A-Agree SA- Strongly Agree U-Undecided D-Disagree SD-Strongly disagree

	SD	D	U	A	SA
18. Adolescent pregnancy is an outcome of poor home training	1	2	0	3	4
19. Adolescent pregnancy is common in adolescents of single parents	1	2	0	3	4
20. It is good to discuss sex education with teenagers.	1	2	0	3	4
21. A pregnant adolescent should be encouraged to have the baby.	1	2	0	3	4
22. A pregnant adolescent should be married off to the boy.	1	2	0	3	4
23. A pregnant adolescent should be disowned and driven out of home.	1	2	0	3	4
24. Anyone who impregnates an adolescent should be made to take up responsibility of the pregnancy and baby.	1	2	0	3	4
25. Adolescent pregnancies should be aborted if abortion was legal.	1	2	0	3	4
26. A pregnant adolescent should be allowed to continue school while pregnant.	1	2	0	3	4
27. A pregnant adolescent should be allowed to continue school after delivery.	1	2	0	3	4

28. An unmarried adolescent mother should be encouraged on contraceptive use after delivering the baby.	1	2	0	3	4
29. The baby should be put up for adoption.	1	2	0	3	4

Section C: Socio-Cultural Factors influencing Decision Making

30. Is adolescent pregnancy a problem in this community? a) Yes = 1 (b) No = 0

31. Give reasons for the above: ……

Reason No: Good knowledge of sex education = 1 Everyone minds his business = 2 Our adolescents are well behaved = 3 My culture supports adolescent pregnancy = 4.

Reason Yes: It disrupts the girl's education = 1 Several pregnant adolescents are around = 2 There are several abortion and delivery complications = 3 Poor information on sex education = 4 Poverty from overdependence on parents = 5.

32. What usually happens to adolescents who get pregnant in this community? (a) Keep pregnancy = 1 (b) Abort Pregnancy = 2 (c) Disown adolescent = 3 (d) Run from home = 4 (e) Don't know = 5

33. Who determines what is done to the girl/boy? ……

Parents = 1 Girl's Parent = 2 Partner's Parent = 3 Partner = 4 Girl = 5 Environment/Society = 6.

34. What role do the following people play in determining what happens to the adolescent?

	Very active	Active	No role
a. Father	2	1	0
b. Mother	2	1	0
c. Spouse	2	1	0
d. Uncle/Aunty	2	1	0
e. Religious leader	2	1	0
f. Community leader	2	1	0

35. How do the inhabitants of this community view an adolescent who gets pregnant? ……...

Not smart = 1 Irresponsible = 2 Not well trained = 3 Wayward = 4 A normal and good child = 5 Disobedient = 6 Outcast = 7.

36. Why do you think they have these perceived views? ……

Others too have sex but are more careful = 1 Culturally she is not married = 2 Religiously she is not married = 3 Poverty = 4 She disgraced her parents = 5 Illiteracy = 6 Too young to be pregnant = 7 Supposed to be in school = 8.

37. Was your daughter pregnant as an adolescent? (a) Yes = 1 (b) No = 0

38. Did any of your sons impregnate an adolescent? (a) Yes = 1 (b) No = 0

39. Do you have any relations with the issue of adolescent pregnancy? (a) Yes = 1 (b) No = 0

40. Who? ……

Own child = 1 Relation's child = 2 Friend's child = 3 Sibling = 4 Friend = 5 Self/Spouse = 6.

41. What was the outcome of the pregnancy? (a) Kept it = 1 (b) Aborted it = 2 (c) Miscarriage = 3

42. Why? ……

Kept for health reasons = 1 Kept for religious reasons = 2 Aborted to avoid complications of pregnancy and delivery = 3 Aborted because it was unwanted = 4 kept for parental instructions = 5 Kept for cultural reasons = 6 Pregnancy came down = 7 Kept for lack of finances for abortion = 8.

43. Should sex education be discussed in schools? (a) Yes =1 (b) No = 0

44. At what level should this be done? (a) Primary =1 (b) Secondary = 2 (c) Tertiary = 3 (d) All level = 4.

45. How important is religion to you? (a) Not important = 1 (b) Important = 2 (c) Very important = 3.

46. Does religion have any role to play in determining parental decision on adolescent pregnancy? (a) Yes = 1 (b) No = 0

47. Explain ……

Religion sharpens character = 1 Religion is against abortion = 2 Religion is against pre marital sex = 3 Religion is against indecent dressing = 4.

48. Does moral value and cultural norms have a role to play in determining parental decision on adolescent pregnancy? (a) Yes = 1 (b) No = 0

49. Explain ……

Culture sharpens character = 1 Culture promotes good dressing = 2 Culture values virginity = 3 Culture is against abortion = 4

Section D: Rural/Urban Differences

50. Do you feel there are differences in views of parents residing in the urban/rural areas towards adolescent pregnancy? (a) Yes = 1 (b) No = 0

51. What differences do you think exist? ……

Urban parents makes sure she continues school = 1 Urban parents have more facilities hence abort more = 2 Rural parents supports adolescent pregnancy = 3 Urban parents are better informed on adolescent pregnancy = 4 Financial differences = 5 Recreational facilities more in the urban than rural areas = 6 Rural parents uphold moral values better = 7.

52. Is an illiterate woman's pregnant adolescent more likely to drop out of school than the educated woman's own? (a) Yes = 1 (b) No = 0

53. Will lack of adequate health care services and facilities in the rural area have negative impact on decisions about adolescent pregnancy? (a) Yes = 1 (b) No = 0

Thank you very much.

APPENDIX III

KEY INFORMANT INTERVIEW GUIDE

STUDY TITLE: FACTORS INFLUENCING PARENTAL DECISIONS ON ADOLESCENT PREGNANCY AMONG RURAL AND URBAN-BASED PARENTS OR GUARDIANS IN IBADAN, NIGERIA

Introduction

Thank you for participating in this interview. I am Matthew Olayemi, a masters' student of the Institute of Child Health, College of Medicine, and University of Ibadan, Nigeria. I am carrying out a research on the determinants of attitude of parents/guardians in rural and urban areas in Ibadan, Oyo state towards adolescent pregnancy and socio-cultural factors influencing their decisions about adolescent pregnancy.

Please feel free to express your views. All of your comments both positive and negative are very important. Notes of the discussion will be taken and it will be audio-taped so that we don't loose any of your comments. A report will be prepared from the transcript and every effort will be made to keep the information you provide confidential.

Community

1. How can you describe your community to someone not familiar to it? Who lives in your community? How do they earn a living? What is their ethnic background? How long have you lived in this community?
2. What values are important to you as a member of this community? Probe- can you please explain further?

Sexuality and Adolescent Pregnancy

3. What do you understand by Adolescent Pregnancy? When you hear the word "Sexuality" what comes to your mind? Probe- Can you tell me more?
4. Did you get any information about adolescent pregnancy as a teenager? What information did you get? What was the source of your information? How did this affect your sex life? Did you have any knowledge of contraceptive at that time? Probe- What knowledge did you have? Can you tell me more?

5. What personal experience of Adolescent pregnancy do you have? Did you impregnate an adolescent or got pregnant as an adolescent? How about your children? Probe- can you tell me more?
6. When you hear sex education, what comes to your mind? Do you feel it should be taught in schools? Did you ever discuss sexuality issues with your children? Give reasons and what was discussed.

Decision Making

7. When your daughter/son got pregnant, what was your initial reaction? How did you discover the pregnancy? How did you handle pressure from friends and family? Did thoughts of an abortion ever cross your mind?
8. What role did religion play in your decision making process? Did moral values and cultural norms affect your decision in any way? What did you eventually decide about the pregnancy (Keep or abort)? Probe- Can you tell me more?
9. How did you cope with the care of the pregnancy and baby? Was there any assistance from the partner's side (financial, material e.t.c.)? Did you approve of contraceptives afterwards? Did the pregnancy affect his/her schooling? Probe – How?
10. Do you think there are differences in the opinions of parents residing in urban areas and those residing in rural areas towards issues of adolescent pregnancy? What differences do you think exist? Probe – Can you tell me more?
11. In your opinion, are there any benefits of adolescent pregnancy? What are its draw backs? Probe - What more can you tell me?

THANK YOU FOR PARTICIPATING!

APPENDIX IV

LIST OF WARDS IN THE IBADAN SOUTH WEST LOCAL GOVERNMENT.

Ward 1: Beere, Oritamerin, Oja-Oba, Alekuso and Odiolowo.

Ward 2: Oja-Oba and Idi Arere.

Ward 3: Gege, Isale Osi, Akuro and Apanpa.

Ward 4: Idi Arere, Ibuko, Gbodu, Popoyemoja and Akuro.

Ward 5: Gege, Agbeni, Foko Asaka, Maya and Akuro.

Ward 6: Foko, Maya, Amule and Akuro.

Ward 7: Foko, Amule, Ile saki, Amunigun, Agbokojo and Ogunpa.

Ward 8: N.T.C./Iyaganku, Oke-Bola and Ogunpa/Gbagi.

Ward 9: Molete, Challenge, Anfani, College Crescent, Aiyegbusi, Imalefalafia, Ayankola and Ososami.

Ward 10: Oke-Ado, Liberty Road, Joyce B and Ososami.

Ward 11: Ring Road, Oluyole Estate, Challenge, Old Passport office, Orita New Adeoyo and Town Planning.

Ward 12: Odo-Ona, Apata, Gbekuba, Idi-Isin Railway Station, Jericho, Akinyemi way and Oke-Ayo.

APPENDIX V

LIST OF HEADQUATERS OF WARDS IN THE IDO LOCAL GOVERNMENT.

Ward 1: Ilaju

Ward 2: Akufo

Ward 3: Akinware

Ward 4: Apete

Ward 5: Idi-Iya

Ward 6: Erinwusi

Ward 7: Elenusonso

Ward 8: Ido

Ward 9: Omi-Adio

Ward 10: Onidoko

APPENDIX V1

ETHICS APPROVAL

INSTITUTE FOR ADVANCED MEDICAL RESEARCH AND TRAINING (IMRAT)
COLLEGE OF MEDICINE, UNIVERSITY OF IBADAN, IBADAN, NIGERIA.
Telefax: 234-2-2410088/3310, 3120, 3114, 3594, Fax: 234-2-2413545,
07028383980, 07028383039. E-mail: imratcomui@yahoo.com
DIRECTOR: **Prof. C. A. Adebamowo** *BMChB Hons (Jos), FWACS, FACS, Dsc (Harvard)*

UI/UCH EC Registration Number: **NHREC/05/01/2008a**

NOTICE OF EXPEDITED REVIEW AND APPROVAL

Re: Circumstances Surrounding Parental Decision About Adolescent Pregnancy among Rural and Urban Residents in Oyo State.

UI/UCH Ethics Committee assigned number: UI/EC/09/0012

Name of Principal Investigator: Clayemi O. Mathew

Address of Principal Investigator: Institute of Child health,
College of Medicine,
University of Ibadan, Ibadan

Date of receipt of valid application: 04/02/2009

Date of meeting when final determination of research was made: **N/A**

This is to inform you that the research described in the submitted protocol, the consent forms, and other participant information materials have been reviewed and *given expedited approval by the UI/UCH Ethics Committee.*

This approval dates from 16/02/2009 to 15/02/2010. If there is delay in starting the research, please inform the UI/UCH Ethics Committee so that the dates of approval can be adjusted accordingly. Note that no participant accrual or activity related to this research may be conducted outside of these dates. *All informed consent forms used in this study must carry the* UI/UCH EC *assigned number and duration of* UI/UCH EC *approval of the study.* In multiyear research, endeavour to submit your annual report to the UI/UCH EC early in order to obtain renewal of your approval and avoid disruption of your research.

The National Code for Health Research Ethics requires you to comply with all institutional guidelines, rules and regulations and with the tenets of the Code including ensuring that all adverse events are reported promptly to the UI/UCH EC. *No changes are permitted in the research without prior approval by the* UI/UCH EC *except in circumstances outlined in the Code. The* UI/UCH EC *reserves the right to conduct compliance visit to your research site without previous notification.*

UI/UCH EC
16 FEB 2009
APPROVED
COLLEGE OF MEDICINE, U.I.

Dr. A. A. Akinpelumi,
Chairman, Medical Advisory Committee,
University College Hospital, Ibadan, Nigeria
E-mail: uuc[illegible]rc@yahoo.com