

**SOCIO-CULTURAL FACTORS AND MATERNAL HEALTHCARE
PRACTICES AMONG UNMARRIED YOUNG ADOLESCENTS IN AKWA
IBOM STATE, NIGERIA**

By

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**A Thesis in the Department of Sociology,
Submitted to the Faculty of the Social Sciences
in partial fulfillment of the requirements for the Degree of**

DOCTOR OF PHILOSOPHY

of the

UNIVERSITY OF IBADAN

JANUARY 2020

CERTIFICATION

I certify that this thesis was carried out under my supervision by TurnwaitOtu MICHAEL in partial fulfilment for the award of DOCTOR OF PHILOSOPHY (Demography and Population Studies) in the Department of Sociology, Faculty of the Social Sciences, University of Ibadan, Nigeria.

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DEDICATION

With profound gratitude, I dedicate this thesis to God Almighty who gave the strength and wisdom to present this study as part of my contribution to struggles against early premarital pregnancy and attendant consequences on health of adolescents in Akwa Ibom State, Nigeria.

ACKNOWLEDGEMENTS

I sincerely appreciate the Lord for standing by me throughout the duration of study and for making it possible to successfully complete PhD programme. More so, I appreciate my supervisor, Professor Ezebunwa E. Nwokocha, for his support, concern and encouragement towards the completion of this thesis. He has been my mentor, and I am deeply grateful for all his contributions and coaching. He has greatly made me who I am today, and I say a very big thank you Prof.

I am equally grateful to Professor Uche Isiugo-Abanihe for discovering me when I could not discover myself. He has been a father since I met him during my undergraduate studies in the Niger Delta University, Bayelsa State. I say a very big thank you, daddy. My profound gratitude goes to my Head of Department, Prof. A. A. Aderinto, Dr O.A. Fayehun, Professor Oka Obono, Professor E.E. Okafor, Professor R. A. Okunola, Dr D. Busari, Dr K. K. Salami, Dr U. A. Ojedokun, Dr O. A. Omobowale, Dr S. A. Omolawal, Dr O. Akanle, Dr O. Tade and other members of staff of the Department of Sociology, University of Ibadan whose names are not mentioned, I appreciate you all. I will not fail to appreciate Professor Edet M. Abasiokong, Dr Grace A.T. Scent, Dr A. S. Ekpenyong and Dr Endurance Uzobo of the Niger Delta University for their support. I equally appreciate my PhD Thesis' External Examiner Prof. C.T. Oluwadare and Internal/External Examiner Prof. Grace Adejuwon for their contributions towards the success of this study.

I thank Dr Daniel Ayinmoro for his special support and contribution, not only as a close friend but also as a brother in the Department, Church and beyond. My contact with you has contributed greatly to my academic success. I pray God continually bless you. I deeply appreciate Mr. Saturday Benatei for his love and contribution towards my academic success. Sincerely, you are not only a friend, you are a brother. God bless you. Similarly, I appreciate Dr Stephen Chukwudeh for being there for me. I appreciate you sir. My unreserved appreciation further goes to Pastor 'Kule Afolabi and his dear wife Deaconess 'kule Afolabi and to Deacon Yemi Olajide for their spiritual and moral support. God will continually bless you all. I appreciate Bro. Dotun, Bro. Afolabi and Bro. Philip for their brotherly love. May God keep using us for the propagation of His gospel to mankind.

My deeper gratitude goes to my father, Pastor Michael James Otu, and mother, Deaconess Alice James Otu. Thank you very much for inculcating in me the spirit of hard work and fear of God. Your prayer and love for education have propelled me thus far. I love you. May God continually give you the grace to enjoy the fruit of your labour. I equally appreciate all my siblings, Sis. Glory, Bro. Permanent, Bro. Lincoln, Sis. Victoria, Bro. Advice, Sis. Cando, Sis. Fedi, Bro. Confident, Sis. Bright, and Bro. Knowledge. I appreciate you for your support. Finally, I sincerely appreciate my dear and lovely friend Itoro Jacob for care and support. My contact with you has been a blessing. God bless you.

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ABSTRACT

Poor healthcare practices are a major cause of maternal morbidity and mortality among Unmarried Young Adolescents (UYA), especially in sub-Saharan Africa. Previous studies on maternal healthcare among adolescents largely focused on the biomedical aspects and high prevalence of ever-pregnant adolescents in Southern Nigeria. However, little attention has been given to the socio-demographic and cultural factors influencing maternal healthcare practices among adolescents aged 16 years and below who are at greater risk of pregnancy related complications. This study, therefore, examined maternal healthcare practices among UYA in Akwa Ibom State, Nigeria.

The Subcultural and Rational Choice theories were adopted as framework. An analytical cross-sectional survey design was employed. Purposive sampling was used to select Southern Iman of Akwa Ibom State because of its high prevalence of ever-pregnant UYA (18.0%). Systematic sampling was used to select 20 out of the 30 communities from which households with an ever-pregnant UYA were purposively selected. Cochran's (1977) formula was used to determine the sample size, and a random sampling technique was employed to administer structured questionnaire on 621 respondents. Data were elicited on socio-demographic characteristics, determinants of pregnancy among UYA, antenatal care, delivery care, and postnatal care practices. Thirty-five in-depth interviews were conducted among UYA (10), skilled (5) and unskilled healthcare providers (10) and caregivers (10). Twelve focus group discussions were conducted among UYA (4), community leaders (4) and community members (4), while four life histories were conducted among UYA. Quantitative data were analysed using descriptive and multivariate logistic regression at $p \leq 0.05$; qualitative data were content-analysed.

Respondents' age was 13.9 ± 1.8 years; 77.9% had secondary education and 9.5% were currently pregnant. Pregnancy among UYA was mainly influenced by the desire for sexual experimentation (48.1%), peer pressure (34.1%), financial inadequacy (9.6%) and parental/guardian negligence (5.2%). Antenatal care utilisation from Skilled Healthcare Providers (SHP) was associated with secondary school education (Odds Ratio (OR) = 7.35), wealthiest households (OR = 6.74) and age at childbirth 14-16 (OR = 0.17). Delivery care from SHP was significantly associated with wealthiest households (OR = 6.60), non-catholic church membership (OR = 0.15) and distance to healthcare facilities (OR = 0.53). Postnatal care from SHP was significantly associated with wealthiest households (OR = 2.62) and those whose parents were alive (OR = 2.13). Inadequate sex education exposed adolescents to early sexual experimentation and pregnancy. Drinking large quantities of palm wine during pregnancy to induce lactation was reported by SHP to increase the risk of miscarriage and stillbirths. Low patronage of modern healthcare facilities and forbidden intake of certain foods such as beans, pap and tea during pregnancy influenced maternal morbidity and mortality. The application of harmful substances, such as fluid from a dead spider on the umbilical cord stump exposed new-born of UYA to deadly infections.

Socio-demographic and cultural factors influenced maternal healthcare practices among unmarried young adolescents in Akwa Ibom State. Stakeholders should therefore increase awareness about sex education among young adolescents in order to reduce appreciably the rate of early exposure to sexual intercourse, pregnancy and related health risks.

Keywords: Antenatal care, Childbearing, Maternal morbidity, Postnatal care, Unmarried

young adolescents in Akwa Ibom State
Word count:

495

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The increased involvement in premarital sex by young adolescents aged 16 or less, is now a global trend (World Health Organization, 2018). It has exposed a number of young people to maternal risks. Consequently, academic research of the healthcare practices among young adolescents during various stages of maternity (antenatal, delivery and postnatal periods) is crucial because they are the most vulnerable to reproductive and maternal health issues (United Nations Children's Fund, 2015). A report from the UN DESA - Population Division (2017) showed that the population of adolescent childbirth has declined worldwide but expected to increase globally by 2030 given that the population of adolescent is on the increase. The report indicated that in the year 1990, 65 live births per 1000 women were associated with adolescents. In 2015, the figure reduced to 47 births in every 1000 women delivery. The United Nations Population Fund (UNFPA) (2013) projected that the highest increase in adolescent pregnancy will occur in the West and Central Africa and Eastern and Southern Africa by 2030.

The UNFPA (2015) and Darroch, Woog, Bankole and Ashford (2016) have observed that each year 2 million adolescents who are below the age of 15 and 21 million adolescents who are between the ages of 15 and 19 become pregnant in the less developed countries. A report from the World Health Organisation (2016) revealed that more than 50 per cent of births occurred among adolescents in sub-Saharan Africa

with Nigeria and six other countries accounting for this figure. In Nigeria, while some young adolescent girls are mothers within marital unions, others become mothers out of wedlock. Another World Health Organisation (2016) report showed that there are many young adolescents in Nigeria who are mothers outside marriage. The Nigerian Demographic and Health Survey indicated that the South-south geopolitical zone has the highest number of unmarried adolescent births in Nigeria, with Akwa Ibom State taking the lead (National Population Commission [Nigeria] and ICF International, 2014). The United Nations Population Fund (2013) and the Akwa Ibom State Ministry of Health(2010) also reported that childbearing among young adolescent mothers in Akwa Ibom State is mainly accidental and occurs outside marital unions. This implies an increase in maternal and infant morbidity and mortality rates in an environment characterized by a lack of adequate healthcare facilities and limited access to healthcare services.

Young mothers aged 10-16 are more susceptible to maternal weight gain, pregnancy-induced hypertension, anaemia, truncated education, inadequate family support, low birth weight, stigmatisation, malnutrition, and stillbirths (Isiugo-Abanihe, Olajide, Nwokocha, Fayehun, Okunola and Akingbade, 2014). Children born by young adolescents are also more vulnerable to developmental distortions, morbidity and mortality (United Nations Children's Fund, 2015). More than one-quarter of young adolescent girls in Akwa Ibom State engage in early sexual encounters, have multiple sexual partners and practice unsafe sexual intercourse (NPC [Nigeria] and ICF, 2019). Following the high rate of unprotected sex, adolescents in the area are predisposed to unplanned pregnancy, maternal morbidity or mortality, and early motherhood (Nwokocha and Taiwo, 2012). In addition, their children are more likely to be cared for by a single parent, a relative or grandparents (Vandivere, Yrausquin, Allen, MalmandMcKlindon, 2012).

Although, it is true that some adolescents adopt induced abortion to avoid childbearing, this is more likely to happen among older adolescents than younger adolescents who are either ignorant of the consequences of early premarital sexual activities, or are not bold enough to approach healthcare facilities for abortions (Nwokocha, 2010). As a result, they are more likely to carry their pregnancies to term and become mothers at a very young age. In essence, the healthcare practices of young adolescents during pregnancy, delivery and the postpartum period in Akwa Ibom State

require academic investigation. This is because young adolescent mothers are less likely to seek for healthcare and adopt adequate childcare practices such as breastfeeding, vocalising, smiling and touching of their infants than older mothers (Pinzon and Jones, 2012). They are also less likely to be sensitive to harmful cultural practices (Deutscher, Fewell and Gross, 2006). In view of this, the study investigates the socio-demographic and cultural factors that influence maternal healthcare practices among unmarried young adolescents in Akwa Ibom State of Nigeria, classified among the high-risk groups in maternal health literature.

1.2 Statement of the Problem

Maternal death is four times higher among young adolescents aged 16 or below than women aged 20 or more (World Health Organisation, 2016). Deaths among children of young adolescents are also 50-100 percent higher than deaths among children of older women (WHO, 2017). In Akwa Ibom State, health problems associated with maternal and child mortality, especially among young adolescents and their children include obstetric fistula, malaria, anaemia, sexually transmitted infections, postpartum haemorrhage, pneumonia, toxemia, eclampsia and depression (Akwa Ibom State Ministry of Health, 2010).

About 65 percent of women with obstetric fistula developed it as adolescents (WHO, 2016). Maternal health challenges of young adolescents do not always end at adolescence. They often transit to adulthood, with physical and social consequences on mothers and their children (Carter, Felice, Rosoff, Zabin, Beilenson and Dannenberg, 1994). The problems associated with the maternal health of young adolescents in Akwa Ibom State further include asphyxia, preterm delivery, stillbirths and death. A report from the World Health Organisation (2017) reveals that these challenges are 50 percent higher among babies delivered by adolescents than those delivered by adults aged 20-29 years. The implication is that young adolescents in Akwa Ibom State are more likely to see their babies die than older adolescents or adults. It also indicates that young adolescents are more at risk of maternal related morbidity and mortality than adults.

Several studies have focused on adolescents who are 15-19 years of age (Isiugo-Abanihe and Isiugo-Abanihe, 2007; Babafemi and Adeleke, 2012; Ajala, 2014; NPC

[Nigeria] and ICF, 2019). Most biomedical research ignored younger adolescents and the factors that predispose them to early premarital childbearing, even when they are at higher risks of pregnancy and maternal morbidity and mortality (Menacker, Martin, MacDorman and Ventura, 2004). Literature shows that adolescent mothers are more likely to be less educated, stigmatised, and poor, thus lacking adequate prenatal and postnatal cares (Obono and Muhammed, 2010; Mpolampola, Øystein and Kjell, 2015). They are also more likely to suffer from or have children who suffer from diseases that would have been prevented or treated if proper healthcare practices were adopted (UNICEF, 2014).

Studies however have given less attention to maternal healthcare practices of young adolescents at various stages of maternity. Also, little is known about the cultural beliefs and practices that affect maternal health, especially among unmarried young adolescents. Thus, a gap exists not only in reproductive health literature but also in knowledge related to sexual and reproductive health of young people, and a large number of whom are already sexually active particularly in Akwa Ibom State.

1.3 Research Questions

This study sought to provide answers to the following research questions:

- i. What are the factors that determine pre-marital pregnancy among young adolescents in Akwa Ibom State?
- ii. What are the issues in antenatal care among unmarried young adolescents?
- iii. What are the activities associated with child delivery among unmarried young adolescents?
- iv. What are the postnatal healthcare practices among unmarried young adolescents?

1.4 Objectives of the Study

The broad objective of this study was to examine the socio-cultural factors that influence maternal healthcare practices among unmarried young adolescents in Akwa Ibom State. Within the context of this broad objective, the specific objectives included, to:

- i. investigate the factors that determine pre-marital pregnancy among young adolescents in Akwa Ibom State,
- ii. examine antenatal care practices among unmarried young adolescents in the study area,
- iii. identify the activities associated with child delivery among unmarried young adolescents,
- iv. examine postnatal care practices among unmarried young adolescents.

1.5 Justification for the Study

Previous studies particularly ignored the socio-cultural factors that influence maternal healthcare practices of young adolescents at various stages of maternity (Fayehun and Omolulu, 2009; Rai, Singh, Singh and Kumar, 2014; Ekpenyong and Michael, 2016). The present study bridged this gap by providing information on the factors that determine premarital child bearing among young adolescents in Akwa Ibom State, classified among areas with high adolescent pre-marital childbearing. Studies conducted in the past centred on maternal and child health morbidity and mortality mainly from the biomedical aspects. They also concentrated on adolescent and sexual reproductive health as if adolescence is a non-categorizable cohort. Although, earlier studies had ignored the socio-cultural factors that influence maternal healthcare practices of young adolescents and examined adolescence as a seemingly non-categorizable group, they showed linkages between maternity and adolescent reproductive health issues which are important to this study.

This study is expected to enlighten the populace on the need for adequate maternal healthcare practices, especially on issues related to young adolescents. The study has explored and revealed beliefs and cultural practices that inhibit adequate maternal healthcare which are relevant to maternal health programmes. The study has suggested relevant information to the government and non-governmental organisations and to other stake-holders on how to make and implement policies on adolescent motherhood. This may in the long run, reduce maternal- and-child morbidity and mortality; an aspect that is important in the pursuit of the Sustainable Development Goals 3 that focuses on “ensuring healthy lives and promoting the wellbeing for all at all ages”.

Furthermore, this study has suggested areas for further research into reproductive health.

1.6 Scope of the Study

The study was investigated in Akwa Ibom State. The choice of this area is justifiable because prior studies have recorded higher maternal morbidity and mortality rates in this part of Nigeria (Akwa Ibom State Ministry of Health, 2010; NPC [Nigeria] and ICF, 2019). The age limit for young adolescent participants was aged 10-16 years. The age category was considered because the study focused on young adolescents who were either pregnant or have had a live birth. In view of the fact that pregnancy is the outcome of the interaction of girls with boys or men, the latter was included in the qualitative aspect of the study. However, this inclusion was limited to those who were fathers to children born by young adolescent mothers. For a more comprehensive understanding of the study, health workers, traditional birth attendants, caregivers (parents, grandmothers, aunts and/or other relatives), and religious leaders were included in the qualitative aspect of the study.

1.7 Definition of Concepts

There are certain terms that are employed in this study and are defined thus:

Antenatal care – this refers to what is also called prenatal care. It is a kind of care provided to a pregnant woman before delivery. It includes regular check-ups that allow doctors or midwives to check for potential health challenges and encourage healthy lifestyles that will benefit mother and her unborn baby. In this study, it includes the care provided by both trained and untrained midwives.

Delivery care – this refers to an act of providing supports or services to a woman or girl during the process of giving birth. It includes natural expulsion or caesarean extraction of newborn, fetal membrane and placenta.

Healthcare practice – this refers to an established way of maintaining or improving health through prevention, investigation, and treatment of injury, disease, illness, and other mental and physical challenges.

Home delivery – this refers to child delivery that takes place at home or assisted by a traditional birth attendant.

Marriage - this refers to an arrangement in which a society acknowledges the right of a woman and a man to have a joint household and sexual relationship after the payment of bride price and parental consents sought and granted.

Maternal healthcare practices – these refer to activities carried out to improve the health of adolescents or women during pregnancy, delivery, and postpartum. The practice includes family planning, preconception, antenatal, delivery and postnatal care undertaken to ensure a positive experience to reduce maternal morbidity and mortality.

Postnatal care – this refers to maternal activities undertaken at first six weeks of life following delivery, and considered critical to lives of mothers and newborn babies. Significant changes take place within this period and influence the health of mothers and newborns.

Socio-cultural factors – these refer to beliefs, customs and values that influence practices, thoughts and behaviours of people. It includes educational attainment, economic status, family history, religious orientation, child rearing practices and communal prescriptions and proscriptions that influence activities of individuals in society.

Unmarried young adolescents – these refer to adolescents aged 10-16 whose parents have not formally given their consents for sexual conjugation and bride price unpaid.

Young adolescent mothers – these refer to adolescents who gave birth between the ages of 10 and 16 years. However, in this study, young adolescents are categorised into three: early stage (aged 10-13), middle stage (aged 14-16) and both stages (aged 10-16) for some kind of comparison that could further assist in policy intervention.

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

A review of the literature related to maternal healthcare practices among young adolescents is central to the subject of this study. This chapter presents a review of relevant scholarly studies on maternal healthcare practices, and also presents a conceptual and theoretical framework for the explanation of the subject under study. The review of literature addresses key areas in line with the specific objectives of the research.

2.1 The Concept of Health Care

The term health care is defined differently by scholars. The World Health Organization (2013) defines healthcare as an act of upkeep or improvement of the entire body. It involves prevention, analysis, and remedy of ailment, damage, infection, and different mental and bodily impairment in humans. Health care is provided by a number of professionals that provide care individually or in alliance with other health care professionals. The health care professionals include nurses, pharmacists, physicians, dentists, and psychologists, among others. The World Health Organization (2013) noted that health care could be provided at primary, secondary or tertiary level of

health system. According to the United States Department of Labor (2011), the delivery of contemporary health care depends on agencies, or skilled specialists and paraprofessionals who come together as interdisciplinary teams. It identified the professionals in medical care to include dentistry, psychology, nursing, midwifery physiotherapy and allied health, plus many others like community medical experts, assistive personnel and public health practitioners. It indicated that health professionals provide a systematic care to individuals or group of patients in private or public facilities for the purpose of achieving preventive, healing and rehabilitative health.

The World Health Organization (2013) explained that access to health care services varies across nations of the world and solely determined by individuals' ability to afford payment or meet-up stipulated rules that allow access to health care either at private or public facilities. The WHO (2013) relates health care with healthcare structures and defines the later as organizations created to satisfy the desires of targeted populations on health matters. The implication is that nations across the world have rules and regulation that guides the provision of health care and who could access care at a particular period of time. The agency further indicated that in some countries, with conditions attached, health care is provided free to all or some categories of people while in others, people have to pay partly or completely for their health services. It suggests that it is proper for every country to have financing mechanisms that show who sponsors health care services and the extent at which the government of a country participates in the provision of health care services to its populace. It contends that clear policies, dependable statistics and logistics should be maintained and updated to provide satisfactory services to people with the aid of updated technologies.

According to Thomas-MacLean (2014), while there are differences in the level of healthcare at primary, secondary and tertiary, there are also some extents of consensus in services to provide standardised care. To this scholar, variations and consensus in health may likely be influenced by cultural, political, organizational and health care disciplines available at each constituent. However, suggested that the maintenance of adequate health care will depend on availability of functional primary, secondary and tertiary health systems, operating either as private or public care. By implication, Thomas-MacLean (2014) conceives health care as a private or public care that has to do with health.

2.1.1 Types of Health Care

A review of literature has shown a few forms of healthcare, namely: primary, secondary, tertiary and quaternary healthcares. Each type is reviewed below.

i. *Primary Health Care (PHC)*

Primary healthcare refers to the works of health specialists who provide consultation, prevention and treatment of ailment at the grassroots level and are considered the first point of contact to the people on health issues (Thomas-MacLean, 2014; WHO, 2014). The professional care providers at the primary health care include doctors, family health practitioners, independent practitioners, physiotherapists or non-medical doctors like nurses' and physicians' assistants (WHO, 2014). According to Thomas-MacLean (2014), a patient may first visit any of the health care providers at primary level, and highlighted that it is through the primary health care provider that patients should be referred to secondary or tertiary care depending on the health status and ailment of the patients. However, noted that depending on the patients' discretion, some do bypass primary to higher level of health givers.

The World Health Organization (2011) noted that primary health care is essential because it is closer to the people and could provide basic health needed at time period within neighbourhoods and communities. It indicated that a primary health care is a care centre that provides urgent services to people in their environment. It suggested that primary health care is the widest health care that provides services to the widest members of the society at all ages, with different socioeconomic statuses. It provides services to patients with diversity of illnesses, both acute and chronic, and mental and physical challenges. It is a health centre that provides services with or without appointment to patients on a day or days. The agency explained that primary health care centres offer services to people at different locations and are spread across zones or regions.

According to St Sauver, Warner and Yawn (2013), the common illnesses dealt with in primary care include diabetes, hypertension, allergies, depression and anxiety, back ache, thyroid disorder and arthritis. They suggested that the list also consists of basic maternal and child health care services, along with vaccinations and family planning. The World Health Organization (2011) noted that continuity is an important aspect of

primary health care as many people may prefer primary health care for recurring check-ups for preventive care and health education. It suggested that primary health care is a place where majority could get access to recent health information and what role they could play to prevent spread of ill-health and diseases.

According to Simmons (2007), primary health care are noted for providing a series of health care services to patients at community level. It provides direct service to the people and also receives payment monthly, quarterly or annually from the people for the services delivered. It has a number of health workers including nurses and other physicians who participate in service delivery. Thomas-MacLean (2014) opined that with an increasing number of adults in societies, it is essential to standardize primary health care to provide adequate services against chronic non-communicable diseases. They suggested that more especially, in the developing countries, it is very important to situate functional primary health care with capable employees to provide health care services to the masses.

ii. Secondary Health Care

According to the World Health Organization (2011), the secondary healthcare is the second tier of health care provider. It offers healthcare services using a more scientific professionals and health specialists who received patients by referral from the primary tier of healthcare. The specialists that consist of secondary health care, ideally, do not have first contact with patients. They attend to patients whose ailment is beyond the services of primary health care providers. The experts within the secondary health care include dentists, cardiologists, endodontists, urologists, and surgeons. They provide acute care to patients with ailments that are not chronic as well as to patients with some forms of chronic and contaminated illnesses that require a follow-up. They provide emergency services to patients with injury, accidents and sudden illnesses. The secondary health care has skilled attendants that provide in-depth care, childbirth and related medical care services.

Johns Hopkins Medicine (2011) explained that the secondary health care is sometimes referred to as hospital care. It depicts that it is not at all times that a referral must be provided by primary health care providers before a patient can access the secondary health care. It however, noted that sometimes the services meant to be provided at the

secondary health care are sometimes provided by the primary health care provider, depending on country of operation and strictness of rules guiding operations, given that in some countries, private clinics or health providers operate with minimum supervision. It emphasised that a country of operation and rules guiding operations determine greatly the distinction between services rendered by secondary health care and other tiers of health providers.

A report from the Johns Hopkins Medicinal Drug (2011) indicated that in the U.S.A, it is common to see some secondary health providers restricting their services to patients that have received referral from the primary health care providers in the secondary tier of health care. They do this to discourage people from bypassing the services of the primary health care providers to secondary health care and to ensure that the underneath payment agreement between patients and the private insurance company handling health costs of care is not abridged. However, the Johns Hopkins Medicinal Drug (2011) further indicated that it is possible to find some other patients in the USA who are being attended to for the first time of contact by the secondary health care providers without referral from the primary health care. The implication is that notwithstanding the strictness of rules guiding health care, there are some conditions that constitute an abridged of rules and regulations in the system. It also indicates that for a country such as the United States of America, a country known for advance health services, to encounter some forms of deviations in health care system, depicts that countries like Nigeria and other Africa nations, classified among the less developed, are more likely to experience abridge of rules guiding the separation of secondary health care by other tiers of health care providers. As a matter of fact, this would be more reasonable if the country has a clear written policy showing a line of demarcation between secondary health care and other levels of health care.

The Johns Hopkins Medicinal Drug (2011) noted that in the UK and Canada, it is very rare to find a patient being attended by the secondary level of health care providers without evidence of proof that such a patient has been certified by the primary health care to be attended by the secondary tier of health care. It reported that the rareness of such incidence is not affected by a patient being registered under a private or public health insurance scheme. This implies that the United Kingdom and Canada have a stricter operation and distinction among the tiers of healthcare providers and are adhered by health providers compare to some other countries in the world. Noteworthy

that Johns Hopkins Medicinal Drug (2011) indicated that the allied health experts like respiratory therapists, speech therapists, bodily therapists, occupational therapists, and dieticians usually operate within the secondary health care rendering services to both self- and health-provider- referred patients. The implication is that the health care providers at the secondary health care level are more likely to be advanced in specialty than those at the primary health care level.

iii. Tertiary Health Care

A report from the Emory University (2011) showed that there is a distinction between the tertiary health care providers and other level of health care providers. It shows that the tertiary health care has a more advanced health experts and specialists than primary and secondary health care levels. It indicates that the services of tertiary health care are mainly for patients that are referred from primary and secondary health care providers. It also recorded that the tertiary health care provides a superior medical research and treatment to patients. As in some countries, like Nigeria, the tertiary health care is attached with universities or colleges and is called the University College Hospital or the University Teaching Hospital. Medical experts from the universities or colleges work and provide consultative services in the hospitals. Sometimes, the university medical students perform medical practices in the tertiary health centres. The Emory University (2011) report indicated that examples of services provided by the tertiary health care include neurosurgery, cancers management, plastic surgical treatment, cardiac surgical procedure, advanced neonatology services, remedy for excessive burns, palliative, and other complicated surgical and scientific interventions.

iv. Quaternary Health Care

Alberta Physician (2014) mentioned that in the time period, quaternary healthcare is now and then considered an expansion of tertiary care in connection with superior ranges of drugs that are exceedingly specialised and not broadly accessed. It cited that experimental medicine and a few forms of uncommon surgical or diagnostic strategies are considered quaternary healthcare. It noted that those offering services in this level of health care are generally handiest with specialised experience. They provide services that are limited among other tiers of health care. Emory College (2011) and

Alberta Physician (2014) explained that the term quaternary healthcare is more popular in the UK, and rarely applicable inside the USA.

v. *Domestic and Network Health Care*

According to Christensen and Grönvall (2011), there are several types of health care providers who are not situated within the health facilities but provide services to the people in their homes, community and neighbourhood. They classified this category of health providers among operators within the domestic and network health care level. This includes health care providers whose duties include sensitization programmes, distribution of condoms, and education of masses on preventions against diseases. It also includes health workers that performed home or residential services to patients outside the health facilities. Specifically, in the aspect of network health care, this category includes services offered to assist patients with limbs or mobility challenges that use orthotics, prosthesis or wheelchairs.

Christensen and Grönvall (2011) noted that this category of health care is common in the western countries and provides services to the increasing number of older populations at homes who could not easily or independently transit to health facility for health care. The domestic and network health perform most time the service of old people's relative or network. They assist the elderly persons to undertake sports programmes, meet medical appointment at health facilities. They perform a consolation services to old and lonely people to keep them safe and healthy. The scholars reported that with the increase on health challenges among school students, the domestic and network health care is becoming very essential to youngsters. They indicated that the services of the domestic and network health care provide a framework for the layout of ICT for domestic care, especially with weight problems in kids unexpectedly becoming a primary concern. The health services provided by this group of health workers within schools greatly geared towards educating youngsters in proper food consuming habits, making bodily education obligatory in faculties, and teaching young youth to have wonderful self-photo and bodily examination in order to remain healthy.

2.2 The Concept of Maternal Healthcare Practices

Maternal healthcare practices refer to activities undertaken by women and adolescent girls during periods of pregnancy, delivery and postpartum. The World Health Organization (2015) defines maternal healthcare practices as services that include antenatal care (ANC), delivery care and postnatal care (PNC). It involves healthcare practices of pregnant women/adolescent girls during and after delivery. The services covered include family planning, knowledge on how pregnant women can take care of themselves, and receive regular check-up to improve health of mothers and babies. According to report from the WHO (2015), the goal of every maternal health care practices is to reduce maternal morbidity and mortality among woman and girls.

The World Health Organization (2016) refers to maternal healthcare practices as activities with at least three components, namely; the antenatal/prenatal care, delivery care and postnatal/postpartum care. The agency highlighted the importance of receiving maternal cares from skilled healthcare providers who have been trained on how to identify, prevent and manage maternal risks and complications. The report from the World Health Organization (2016) explained that antenatal care includes health education that allow for a successful transition of pregnancy through labour to delivery among pregnant women and girls. The organization demonstrated that information provided to pregnant women and adolescent girls during antenatal care are essential and suggested that such information must be understood by receivers (pregnant women/adolescents) to prevent complications that may result from ignorant. The World Health Organization (2016) noted that antenatal care component of maternal care enables pregnant women and adolescents to have good knowledge of family planning, child spacing and contraceptive use. It further highlighted that access to maternal health care from skilled care providers allows pregnant women and adolescents to have good knowledge of nutrition against malnutrition and stunted growth in children. The report indicated that appropriate knowledge of antenatal and postnatal cares during maternal healthcare practices promotes lives of mothers and new-born and also safeguard them against preventable diseases and infections.

Kilpatrick and Ecker (2016) and the World Health Organization (2017) report argue that acceptable maternal healthcare services provide high quality obstetric and neonatal care during labour and delivery. They prevent illnesses and diseases in new-borns and mothers, and also prevent premature death resulting from poor maternal healthcare practices. The World Health Organization (2017) noted that maternal healthcare

provided by skilled healthcare providers offer opportunity to monitor unborn babies and mothers. Kilpatrick and Ecker (2016) added that maternal healthcare services from skilled healthcare providers provide way-out to reducing maternal risks and mortality in new-borns, especially within first week of delivery.

Report from the World Health Organization (2015) highlighted that maternal healthcare practices, including antenatal, delivery and postnatal cares provide access to reproductive health care services, gender-based violence prevention, exclusive breastfeeding and neonatal care services. Harris and Bustreo (2016) noted that maternal healthcare is a continuum that runs through various stages of maternity. They opined that appropriate maternal healthcare practices are activities that every pregnant woman and girl must know to achieve safe delivery and health care. They explained that the kind of maternal healthcare adopted by pregnant women and girls has a way of influencing their entire life-course. The World Health Organization (2016) highlighted that poor maternal healthcare affects children from infant to school age. They noted that poor knowledge of maternal healthcare, especially nutrition contributes to a number of deaths among infants and mothers. The World Health Organization (2016) stated that outcomes of poor maternal healthcare include poor pregnancy outcome, preterm delivery, stunted growth in children, low birthweight, and vulnerability to infectious diseases in babies and mothers. The report stated further that appropriate maternal healthcare practices will promote healthy living among mothers and new-borns.

Filippi, Ronsmans, Campbell, Graham, Mills, Borghi, Koblinsky and Osrin (2006) recorded that appropriate maternal health care practices and access to healthcare services from skilled healthcare providers enable children to live normal life without contacting preventable diseases from mother and public. They noted that appropriate maternal healthcare services provide opportunity pregnant women to receive services such as mother-to-child transmission disease prevention. They reported that maternal healthcare practices include medical screening against hepatitis B, HIV, HBV among others. The World Health Organization (2016) noted that maternal health care from experts provide opportunity to women and adolescents to receive proper counselling against smoking, intake of alcohol and other harmful substances during pregnancy.

Kilpatrick and Ecker (2016) posited that inappropriate maternal healthcare practices can expose mothers and unborn babies to health risks. They suggested that to attend universal health coverage, maternal healthcare practices must be given priority and healthcare services must be improved. They explained that quality maternal health care determines patronage from healthcare facilities during maternity. The World Health Organization (2016) highlighted that in some instances, inequality among gender makes women and adolescent girls to choose healthcare against their wishes due to fear of partner and family members. Their study informed that access to appropriate knowledge on reproductive health can improve maternal healthcare practices of women and reduce unwanted pregnancy, child marriage, female genital mutilation and many other harmful practices that are against women and girls.

According to the World Health Organization (2016) health facilities that attend to maternal needs of women/adolescents are basically three levels. The first level, being the primary health care provides less complex health services to babies and mothers, especially at the primary health care centres which are closer to the people. The secondary level includes general hospitals and clinics that provide health care to women/adolescent girls that are at moderate risks. The tertiary level includes teaching hospitals that provide services to severe health needs of women and new-borns. The tertiary level provides maternal services to mothers and neonates who are in need of intensive care, and supposedly operate mainly on referral. The agency noted that to attend effective maternal healthcare, referral must be encouraged in health system to allow for quick and easy access to health facilities and reduce crowd at tertiary level. In order to attend this height, the organization re-emphasized the need for quality health care services at all levels of health care.

Addisse (2003) asserted that a good number of women in the less developed countries do not have access to maternal health care services from the skilled healthcare providers at various stages of maternity. He noted that this has led to a number of deaths among mothers and new-borns. He explained that women and adolescent girls in this part of the world underwent prenatal and delivery stages of maternity without assistance from skilled care providers. Addisse (2003) highlighted that poor maternal healthcare practices increases health risks, and low socio-economic development in ways that affect individuals, families and communities. He asserted that many pregnant women suffer from diseases that could have been detected during antenatal, delivery

and postnatal cares because they did not have access to skilled care providers. The United Nations Population Fund (UNFPA) (2013) particularly stated that improved maternal healthcare practice is key to attending reduction in maternal and infant mortality, and improving health of women and children.

Addisse (2003) asserted that poor maternal health care services result to a number of women testing positive to HIV infections. The non-accessibility of health care from skilled health care providers exposed unborn babies to contacting HIV from mothers. The World Health Organization (2016) suggested the need for workable plan of actions to provide comprehensive maternal health care to women and adolescents who are at various stages of maternity in order to reduce maternal mortality and morbidity and further improve reproductive health of women and adolescents. The World Health Organization's action plan is a continuum of health care services that is not be limited to pregnant women and adolescent girls alone but to all in order to improve health of women and adolescents and further prevent harmful practices.

2.3 The Concept of Adolescence and Young Adolescent Mothers

The young adolescent mothers, as operationalised in this study, are young girls aged 10-16 who have given birth. The World Health Organization (2011) defines adolescence as group of individuals who are aged 10 to 19 years. By their definition, adolescent mothers are girls who are mothers at aged 10-19 because their definition includes adolescence at all stages. The stages of adolescence include, early (10-13), middle (14-16) and late (17-18) adolescence, while young adolescent mothers include early and middle adolescence.

Maduforo and Oluwatoyin (2011) in their study of adolescent pregnancy in Adamawa State of Nigeria noted that adolescence is a critical stage of life, full with developmental challenges, both bodily and emotionally. It is a period of transition from childhood to adulthood. To adolescents, the transition period is usually a time of experimentation. They intend to experiment new things such as sex. According to these scholars, due to sexual encounters among adolescents, sexually transmitted infections and related health challenges are usually associated with this age category given that they are ignorance of contraceptive use and protective sex. Particularly, the World Health Organization (2011) in a comparative study asserted that adolescents

have lower risk of infection compare to under-5 children and low risk of chronic diseases compare to elderly people. The assertion by the World Health Organization indicates that adolescent diseases/infections are different from those of under-5 and elderly people. It also means that the under-5 are more likely to be susceptible to nutritional and environmental illnesses like malnutrition, malaria, diarrhoea, measles, and chickenpox, while the elderly people are more prone to chronic diseases like cancer, dementia, hypertension and diabetes. The diseases that occur among the elderly are usually as a result of advanced age. Hence, research on the under-5, elderly and adolescence are likely to employ different approaches.

Maduforo and Oluwatoyin (2011) explained that adolescent stage of life is a one with a fast increase, and development that consists of bodily, mentally, intellectually, and social modifications. A report from the World Health Organization (2011) indicated that the time of adolescence is the period of growth and development and requires adequate nutrition and energy to withstand the pressure that accompanied it. The agency reported that in a situation where an adolescent has an insufficient intake of food and vitamins, such may experience stunting growth and delay in sexual maturation. The implication is that if an adolescent with a stunting growth becomes pregnant and undergoes childbearing, such may be more susceptible to maternal related risks during pregnancy, delivery and post-delivery periods, notwithstanding that, generally, adolescents are immature to underscore childbearing.

The United Nations Children's Fund (UNICEF) (2005) explained that basic needs of adolescents vary across stages of development, and are partly determined by environmental factors. The agency categorised adolescence into three stages: early adolescence (10-13 years old), middle adolescence (14-16 years old) and late adolescence (17-19 years old). It indicated that each stage of adolescence is accompanied with distinct developmental changes, including biological, social, psychological and behavioural. This depicts that adolescent life is filled with multi-dimensional alterations.

The National Research Council [NRC] (2002) explained that adolescence is the time of changes in youth with biological, psychological, and social transformation. They explained that biologically, it is the period of experiencing sexual, brain, and pubertal development. It is the period of developing sexual interest among adolescents.

Psychologically, it is a period of developing thinking faculty, emotions and feeling among adolescents. And, socially, it is the period of acquiring social roles at home, school and in community of residence. The UNICEF (2005) noted that changes among adolescents do not occur same time across all adolescents, but vary across individuals and gender. By implication, this means that some adolescents may experience biological, social and psychological maturity earlier than others.

Aligning with the United Nations Children's Fund (UNICEF) (2005) definition of adolescence, the United Nations Population Fund (UNFPA) (2013) asserted that adolescents are people who are between ages 10 and 19. As earlier indicated, the World Health Organisation (2011)'s definition of adolescence also key into this definition, that adolescents are people of ages 10 and 19 years. This does not mean that the definition of adolescence is consistent everywhere. Circumstances or environment may prompt different definitions of adolescence. As a matter of fact, some countries and organization conceptualised adolescence differently. For instance, the World Programme of Action for Youth defines adolescence as 'youth'. It considers adolescents as people who are between aged 15 and 24 years (UN Department of Economic and Social Affairs - UN DESA) (2004).

The international Labour Organization (ILO) (2019) and the World Bank (2019) cited same that adolescents include people over 19 years of age. From the later perspective, adolescent mothers are people whose age includes 20 to 24 years. More so, for the fact that adolescence is a stage of transition between childhood and adolescent and includes those who are dependents, it also means that age bracket of adolescence differs across nations and community because in some society, young people over aged 20 years still depend on immediate family for upkeep and instruction (UN Department of Economic and Social Affairs (2004). Notwithstanding this, for a reproductive and maternal health study of this nature, the definitions provided by agencies of population and reproductive health such as the UNICEF and the UNFPA is adhered because they aligned with the objective of study, hence, shape the direction of this research.

The United Nations Children's Fund (UNICEF) (2005) did not just limit its studies of adolescence to classifications; it further discussed features that characterised each adolescent category. For instance, it explains that among early adolescence (aged 10-13), the *biological or physical* changes include sexual maturing which continue until

late adolescence where it is completely matured. By late adolescence, they explained that adolescents must have gotten used to their physical body changes, hence less bordered compare to early and middle stages of adolescence. This implies that maturity of young adolescents (early and middle stages) on sexual issues is far lesser than those of late adolescence. *Cognitively*, the agency indicated that early adolescence operates concrete thinking with lesser reasoning but advances into abstract thinking with a more calculative reasoning during middle and late stages of adolescence.

Emotionally, the United Nations Children's Fund (2005) noted that early adolescence worries more about decision making due to limited knowledge and opportunities, transits into somewhat emotionally stable state during middle stage but advances into a more emotionally stable and sense of identity in late adolescence. *Socially*, peers and sexual interest begin in the early stage, advance briefly in the middle stage, but transit with additional school works and responsibilities in the late stage of adolescence. *Behaviourally*, early adolescence commences experiment with new behaviours such as sexual initiating (kissing, touching, holding, masturbating, pornographic watching and sex chatting), advances into the middle stage with risk taking, such as penetrating and fingering sex, and transits to the late adolescence with self-assessment of risks undertaken. This indicates that premarital sex and maternal health risks are more likely occur among early and middle adolescence given that they are noted for high-risks taken and are more vulnerable physically, cognitively, emotionally, socially and behaviourally.

The National Research Council (2002) reported that there are differences between adolescents by gender with female adolescents experiencing pubertal maturity and changes 12 to 18 months earlier than male adolescents. The report highlighted that the timing of pubertal maturity largely influences developmental changes, sexual initiation and exposure to risk-taking. Mangrulkar, Whitman and Posner (2001) in their adolescent study in the United States showed that during childhood, boys were more vulnerable to negative health outcomes compare to girls. They explained that in childhood, boys have high risk of aggressive behaviour and depression while girls have lower risk of such health outcomes. In adolescence, they found that health related outcomes take a different stance, between girls and boys. They found that among adolescents, girls have higher risk for health outcome than boys.

The UN DESA (2003) explained that with cultural gender imbalance, discrimination against female children, poverty, emotional, sexual, and physical abuses, especially in the less developed countries, female adolescents are more likely to encounter greater health risks compare to male adolescents. Jacobs, Bleeker, and Constantino (2003) in their study of childhood and adolescent development indicated that parental perceptions of female adolescents' capacity can in turn influence the way female adolescents perceive themselves, hence affecting health and behaviour of adolescents negatively. A study by McIntyre (2004) among very young adolescents aged 10-14, showed that female adolescents are more vulnerable to sexual abuses and trafficking than male adolescents. Both studies indicate that unfavourable cultural practices and beliefs, negative perceptions and reactions can substantially contribute to exposure of female adolescents to early premarital sex and maternal health risks.

Maduforo and Oluwatoyin (2011) study of adolescent pregnancy in Adamawa showed that Nigeria refers to adolescent pregnancy as conception that occurs to girls of aged 10-19 years, notwithstanding their marital statuses. They noted that adolescents in average begin first menstrual period at aged 12, however, highlighted that this varies across individuals and locations. They explained that pregnancy among adolescents is usually influenced by social and personal factors that exposed many to early sexual encounters.

2.4 The Concept of Child Delivery

Martin in Concise Colour Medical Dictionary defines child delivery as the ending phase of a pregnancy leading to a child or more children birth by a woman or girl. It is an act of an infant leaving the uterus of a woman or a girl, mostly assisted by a delivery attendant who may be skilled or unskilled care provider. The delivery of a child may take place at home or health facility. The definition by Martin clearly does not limit the term 'child delivery' to being assisted by a birth attendant. This implies that sometimes, delivery of a child is self assisted. That is the pregnant woman or girl delivers her baby without any outsider's assistant. In most cases, this happened when the 'baby came suddenly' and there were no delivery assistants around or in a situation where the woman in labour is skilful in delivery, and could assist herself.

According to Global Factbook (2016), in year 2015 there had been about one hundred and thirty-five million (135million) births globally. The World Health Organization (2016) reported that about 15million birth occurs before 37 weeks of pregnancy yearly in the world. Buck and Platt (2011) in their study noted that 3 to 12 percent births occur after forty-two weeks of pregnancy globally. The implication is that some births take place early than expected, while some others prolong than expected. According to experts, a normal unborn baby uses up to about 37 weeks in the uterus of the mother, but the average duration of pregnancy is 40 weeks (Department of Health and Human Services, 2018). They noted that the calculation of pregnancy duration begins from the last day of a woman's end of menstrual period, and not from the date of conception because conception may take place two weeks later. However, added that some women may not remember accurately the first day of their last menstrual period, hence, a normal pregnancy leads to delivery between 37 and 42 weeks of estimated date of first day of last period. The implication is that a baby delivered before 37 weeks is considered premature, while a baby delivered after 42 weeks is called an overdue baby. In the case of an overdue, such a pregnancy has to be induced into labour for the baby to be delivered.

Within the developed countries, a review of literature indicated that maximum deliveries occur in health facility (Co-operation, Organization for Economic Development, 2009; Olsen, 2012). In the less developed countries, a study noted that most delivery take place at home without assistant from a trained care provider (Fossard and Bailey, 2016). The authors contend that in this part of the world, traditional birth attendants assist most delivery. The implication is that in a country like Nigeria, classified among the less developed countries, child delivery is more likely to be assisted by traditional birth attendants than skilled birth attendants.

Memon and Handa (2013) noted that in the less developed countries, most childbearing usually occurs through vaginal delivery. This indicates that caesarean section is rarely undertaken by women or girls in this part of the world. As a matter of fact, they will hardly make a decision to undertake caesarean section. The Columbia Electronic Encyclopedia (2016) explained that child delivery usually undergoes three phases of labour. The first stage is the shortening and opening of the cervix, the second phase is the removal of the baby and the third phase is the pushing out of the placenta. The first phase usually last longer, it takes 12 to 19 hours, the second phase takes 20

minutes to 2 hours, and the third phase takes 5 to 30 minutes. The first phase usually consists of stomach cramping or back pains that take an estimate of ½ a minute at each occurrence and takes about 10 to 30 minutes when the minutes are sum together.

According to the World Health Organization (2010), as the stomach cramping or pain increases, the more delivery approaches. It explained that at some point of the second phase, pushing with contractions may additionally arise. McDonald, Middleton, Dowswell and Morris (2013) noted that within the third phase of labour, a slight delay before the cut of the umbilical cord is normally advocated to obtained safe delivery. The World Health Organization (2010) mentioned that some strategies can help with labour ache, inclusive of rest strategies, spinal blocks and opioids to relief a delivery mother of much pains.

A report from the World Health Organization (2010) and Hofmeyr, Hannah and Lawrie (2013) showed that during delivery most babies do come out with their head first, before other parts of the body, however, noted that approximately four percent of babies are born with toes or buttock coming out first. They referred to the later as breech. The implication is that it is abnormal or unusual for a baby to born toes or buttock first. It is expected that babies should be born head first. More so, this may have cultural implication in some societies like Nigeria. The World Health Organization (2015) suggested that during labour a woman or girl can still eat food and move about as she wishes, especially at the first stage of labour. It noted that it is not medically appropriate for a woman or girl to push during the first phase of labour. The agency suggested that in the course of a child undergoing head delivery, the use of camera to take photo is not advocated.

Research displays that in 2012, about 23 million deliveries happened with the aid of a surgical procedure known as Caesarean section (Molina *et al*, 2015). Glaring from the literature, caesarean sections may be recommended for twins, breech function or when observed symptoms of distress in a baby (WHO, 2010). A careful assessment shows that this technique of delivery can take longer to heal (WHO, 2010). By implication, a woman who undergoes caesarean sections may take some time to recover from the injury sustained during delivery than a woman who undergoes a vaginal delivery. Evident from the literature, each year complication from pregnancy and childbirths brings approximately 500,000 maternal deaths, 50 million women have bad health

effects and 7 million women have extremely long-term problems following delivery (WHO, 2008). Literature showed that most of these challenges occur within the developing countries (WHO, 2008). The World Health Organization (2008) reported that complications during labour/delivery include postpartum bleeding, obstructed labour, postpartum contamination and eclampsia. A study by Martin *et al* (n.d.) mentioned that complications inside the baby may consist of birth asphyxia

2.4.1 Symptoms and Experience of Labour in Delivery

Callister *et al* (2003) explained that a repetitive uterine contraction is a common sign of labour in both adults and adolescents. They noted that the extent of contraction varies across women and adolescents and are determined by worries or tensions which a woman/adolescent in labour is undergoing. They highlighted that factors such as cultural beliefs and practices, and previous delivery experiences may contribute to worries during labour. They included personal and cultural beliefs and fear of pains and death during labour as instigators of worries. However, added that the care and support which a woman or an adolescent in labour is receiving may go a long way in determining her reactions and signs of labour. Hodnett (2002) noted that the signs and symptoms experienced by women or adolescents during labour or delivery is more likely to be determined by the quality of health care received, the relationship between patient and health givers, and the extent to which the client is allowed to participate in decision making process during labour or delivery. The scholar explained that the determinants of signs and symptoms at delivery may less likely to be the socioeconomic status of the client, age, ethnicity, body size, pains and clinical intervention. However, added that the later factors are essential and should not be ignored because they contributed to safe delivery. The implication is that the socioeconomic factors may not be critically reflecting at time of delivery, but largely contribute in preparing adolescents before time of labour and delivery.

Harms (2014) in the study of back labour indicated that pains during labour are similar to menstrual pains of some adolescents or women. He noted that at the period of labour, it is recommended that adolescents or women stop screaming but adopt moaning and grunting as strategies to relief themselves of pains. His study revealed that moaning can be advocated to reduce pains or ache following stretching. He noted that even ladies who react with little intense during labour are documented to have

adopted moaning or grunting. He explained that back labour is referred to pains that occur during labour within the lower back at some point of delivery. The implication is that nearly all forms of delivery is associated with certain pains or ache, hence may stretch a young adolescent whose body is not fully mature to withstand delivery stresses.

According to Meyer (2007), child delivery may be an intense occasion with strong emotions, surrounded by fantastic poor experiences. He noted that for many women or adolescent, child delivery is usually accompanied with great fear, and indicated that a peculiar and a continual fear of child delivery is called tokophobia. Meyers (2007) explained that during the ending phase of gestation there is usually a boom or abundance of oxytocin, which is a hormone, recognised to instigate feelings of contentment in mothers, and assist in the reduction of tension, calming and protecting adolescent or adult in labour across periods of delivery. Bowen (2010) in his study of oxytocin revealed that at some point of labour, the foetus will stimulate the mother's cervix and vagina. This stimulation performs chief functions by bonding the mother and her newborn baby. The bonding is subsequently identified to influence maternal care behaviour of mother towards her baby. Bowen (2010) noted that during nursing of the baby, an additional oxytocin is also released to keep both mother and child safe. The implication is that oxytocin is crucial in the social bonding of a mother and newborn at period of labour, delivery and post delivery.

Labour and delivery include the sensation of depression. In studies conducted by Zlotnick *et al* (2001) and Chabrolet *et al* (2002), they found that that between 70 to 80 percent of mothers in the U.S. express feelings of disappointment after delivery. They found that the signs and symptoms which pregnant adolescents/women experienced within a couple of minutes or few hours during delivery; deeply reduce or completely disappeared within two weeks after delivery. Their studies revealed that postpartum despair can also occur in some delivery adolescent or mothers. As a matter of fact, they found that about 10 percent of mothers within the United States of America were found with postpartum depression. The studies additionally mentioned that preventive group therapy is essential for remediating postpartum stress and depression.

2.4.2 Experts' Recommendations during Placenta Delivery

Jangsten, Mattsson, Lyckestam and Hellström (2011) study of third phase of labour showed that placenta delivery is the 1/3 phase of labour, and refers to it as involution stage. The delivery of a placenta serves as a physiological separation of foetus from a uterus. They indicated that an average time expected to spend after an infant is delivered and total expulsion of the placenta is 10 to 12 minutes, however explained that it depends on the condition of delivery. Weeks (2008) in his study of retained placenta found that in nearly all vaginal delivery, 30 percent of the births usually take more than 30 minutes to deliver the placenta, especially on cases where the placenta is retained. This implies that in some women or adolescent childbirths, the delivery of the placenta may take fewer minute of about 10-12 minutes, while in others it may be more than 30 minutes depending on conditions surrounding the delivery.

Ball (2009) study of administration of the third phase of labour in the less developed countries indicated that the placenta can be expelled carefully without clinical complication. He noted that energetic control is necessary in the management of placenta delivery. He explained that to effectively manage the placenta delivery, uterotonic drugs may be given to the mother in less than a minute after delivery. When this is done, the uterine should be massaged every 15 minutes for two hours. According to the International Confederation of Midwives (2004) and Mathai and Hill (2007), a proper management of placenta is essential to prevent postpartum hemorrhage which may accompany vaginal delivery.

A study by McDonald, Middleton, Dowswell and Morris (2013) of effect of timing of the umbilical cord cutting suggested that it is necessary to wait for at least a minute after delivery before the umbilical cord is clamp to improve delivery outcome. They found that in some delivery centres, the clamping of the umbilical cord may be delayed for five minutes or more. They recommended that it is proper to delay the cutting of the umbilical cord after delivery because it prevents complications. They suggested that the clamping of the cord should be delayed, also indicated that the delay will contribute to painless cutting of the cord given that cord does not have nerves.

2.4.3 Experts' Recommendations Immediately after Delivery

Mathai, Gulmezoglu and Hill (2007) study of prevention of postpartum haemorrhage noted that the period following delivery or immediately after delivery is referred to as

postpartum period. This occurs the very moment a child is born until six weeks of birth. During this period, a woman that has just delivered is noted to regained herself and initial shape of her uterus prior to pregnancy. It is the time in which the baby is adjusting to a life outside his/her mother's body. The World Health Organisation (2013) stated that the stage of postpartum is very important to health of mother and infant, yet many usually ignored this period, resulting to high cases of death of mothers and newborns. The Postpartum Assessment (2014) suggested that the delivery mother should be carefully examined at this stage, if she has any episiotomy or tearing, such should be professionally stitched and the uterine assessed for contraction. In addition, it recommended that examination of the mother should be made to check for blood pressure, vaginal bleeding, heart rate, temperature and fundal height.

The Postpartum Assessment (2014) suggested that there should be proper record of mothers' urine for the first six hours after delivery. It further suggested that the uterus should be contracted to curtail excessive blood gush for days following delivery. Mayo clinic staff (2014) noted that it will take a gradual transition for the vaginal discharge of the mother to return to initial state prior to delivery. It explained that discharge may occur for weeks, beginning with the discharge of bright red, as time goes changes to pink, brown and lastly to yellow or white. The implication is that vaginal discharge may be worse on adolescents who have undergone child delivery given that they are premature to deliver and experience early childbearing.

Saloojee (2008) and Crenshaw (2007) study of mother and newborn contact suggested that it is detrimental to health of newborns if they are separated from mothers after delivery. They recommended that a newborn should be placed on the mother's chest or breast after delivery for the first 1 to 2 hours. This would allow the baby and the mother to have a closed skin-to-skin contact which is essential because it keeps the baby warm and permits the baby to gradually adjust to temperature outside of the mother's body. They explained that it is wrong to adhere to past observations commonly found within and outside some hospital deliveries. They noted that in the past it was a common routine that a newborn be separated from the mother immediately after delivery to allow the mother enjoys fresh air and rest for some times, with the beliefs that the mother must have undergone stresses. According to their studies' findings, some babies were kept in a separate room away from the mother's room and only brought to the mother to feed, which is wrong. They noted clearly that

it is medically wrong to separate the newborn from mother immediately after delivery. They also argued that it is now part of postpartum care that the baby must have skin-to-skin contact with the mother, except on the ground that is not possible to do so probably due to serious complication or condition of birth.

Evident in literature, scholars revealed that the clamouring for a skin-to-skin contact between mother and her baby began to take effect around year 2000 following the findings from an animal studies that showed that a skin-to-skin contact between the newly born animals and mothers promotes neurobehaviours which were helpful to the survival of the infants (Saloojee, 2008; Crenshaw, 2007; Moore, Anderson, Bergnam and Dowswell, 2012). According to these scholars, subsequently, the practice was introduced on human and findings showed that it was beneficial to both mother and infant to practice skin-to-skin contact immediately after delivery. Moore, Anderson, Bergnam and Dowswell (2012) review study of skin-to-skin mother and child contact showed that in the year 2011, medical research found that it is useful to practice skin-to-skin care, also called Kangaroo care immediately after delivery. They noted that the practice contributes to improved breastfeeding, reduction in infant crying and maintaining of cardio-respiratory stability. The implication is that a non practice of kangaroo care may contribute to increase morbidity or mortality to newborns.

A 2007 Cochrane review of studies by Moore, Anderson and Bergman (2007) found that skin-to-skin contact between a mother and her newborn promotes breastfeeding and regulates the temperature of the baby. In other words, it makes the baby relatively feel as if he or she is still in the mother's womb. In a publication released by Philips (2014), the practice of kangaroo care was endorsed by many organisations that works on areas related to maternal and infant care. According to Philips (2014), the American Academy of Paediatrics is one of the major organisations that have endorsed kangaroo care. The implication is that an adolescent who is assisted by a traditional birth attendant during delivery and for the fact that the birth attendant may not be practising kangaroo care is exposed preventable maternal risks.

The WHO (2014) recommended that there should be closed bodily contact of the skin of the mother and that of the child to improve infant care and must be practiced immediately after delivery. The agency encouraged that other routine practices may be suspended or be done alone the kangaroo care. It emphasised that a slight separation of

the baby from the mother could lead to a disturb bonding. It argued that child delivery is not complete until a successful practice of skin-to-skin mother and child care is adopted, following a safe transition from placental to mammary nutrition. It advised that a consistent skin-to-skin should be maintained for the first day of delivery, and peradventure, there was any interruption of kangaroo care immediately after delivery, it should be performed prior to a baby having his/her first breastfeeding.

A report from the National Collaborating Centre for Women's and Children's Health (2014) also indicated that routine practices such as bathing, measuring and weighing of baby should be postponed for at least the first hour after delivery to allow a proper and adequate bodily closed contact between a newly born mother and her infant. The implication is that routine practices such as bathing, weighing and measuring of height of a newborn can interrupt a peaceful execution of kangaroo care, especially on a fragile adolescent and her baby.

2.4.4 Child Delivery Practice and Instruction

National Institute for Health and Care Excellence (2014) indicated that there a number of health care professionals who are experts in child delivery. It identified the obstetricians, family physicians and midwives. It explained that in a case of delivery and care, the three professionals are likely to arrive at same conclusion of care, especially on the case of a minor risky delivery. This indicates that the three professionals can provide a safe delivery and can also manage delivery related complications, especially the low risk maternal complications.

An effective management of delivery is connected with several interrelated factors. One of such is the inconclusive debate that argues that a woman or adolescent who is in labour is free to eat and that it would not be harmful to her, while others disagreed to this assumption. For an example, in a study by Tranmer, Hodnett, Hannah, and Stevens (2005) on oral carbohydrate intake during labour argued that eating while in labour is not harmful to a woman/adolescent and does not contribute to a negative outcome. In a study by O'Sullivan and Scrutton (2003) on NPO during labour, the argument got stronger with an indication that eating while in labour is not recommended because it can cause harmful effects to the mother and her unborn baby. They explained that such eating may lead to aspiration or choking during emergency delivery. They buttressed

their argument with the fact that during labour, the esophagus is more likely to relax, and the uterus more likely to move upward following pressure due to labour. They noted that eating during labour is not recommended because it may be hazardous to maternal health, especially in the case of emergency caesarean.

Contrastingly, Singata, Tranmer and Gyte (2013) studies review on food intake during labour argued that there is nothing wrong in allowing a woman or adolescent who is in labour to eat or drink what pleases her. They explained that if she does not eat, it does not mean that her stomach is empty, and that it does not also means that the content of her stomach is not acidic. However, argued that in as much as the woman or adolescent is not going to undergo surgery, then it is acceptable to eat while in labour. They concluded that with a good obstetrical anaesthesia, there is no harm associated with eating or drinking in labour. This indicates that although there is no consensus on the debate of eating or drinking during labour, an analysis of the argument shows that in as much as the delivery is likely to surgical operation, then eating may be risky.

Basevi and Lavender (2001) study of perineal shaving indicated that in the past, though still in practice in some parts of the world, the act of vaginal shaving before labour or delivery was a common practice. They found that it was a common belief that shaving private part off hairs will allow for easy episiotomy (the surgical cutting of the vagina entrance to enlarge for easy passage of baby). They found that such shaving was believed to reduce chances of a woman/girl contacting infection during delivery. More so, they found that the practice was associated with the myth that it will also permit a free instrumental delivery. However, they argued that shaving has no direct positive impact on delivery. They opined that shaving during labour/delivery may even expose the woman/adolescent to negative effects such as infections, redness, and superficial scratches from the razor.

Another is an attempt to save mother from infection with the use of the antiseptic chlorhexidine solution inside the vagina. Lumbiganon, Thinkhamrop, Thinkhamrop and Tolosa (2014) Cochrane Reviews found that there is no proof of benefit with chlorhexidine during delivery. Haas, Morgan and Contreras (2014) review of systematic studies found that the use of providone-iodine in caesarean section has reduced risk. Brown, Paranjothy and Thomas (2013) study of low risk women found that an active management of labour includes having an idea of a common examination

of a woman's cervix. They suggested that in a situation where the cervix is not dilating, it is essential to provide women with oxytocin to assist in the process. They highlighted the need for a proper management of labour because it goes a long way in reducing the number of women exposed to caesarean delivery, especially among those who undertook against their wish for safety purposes. They however, found that it might not change the number of women/girls with vaginal births. The implication is that there is a dire need for assistance during delivery to be provided by trained personnel, especially among young adolescents' delivery given to risks associated with their pregnancies. This will contribute largely to reduction in maternal morbidity and mortality among this age category.

2.4.5 Labour Induction and Optional Caesarean

In many instances, child delivery may take the form of induced labour or elective caesarean. The United States of America (2012) explained that in caesarean section, the newborn baby is usually removed through a surgical opening of the abdomen. In this case, the birth is not done through the vaginal opening. In some part of the world, especially the western countries, some caesarean sections are voluntarily chosen by women who do not want to deliver through vaginal opening. For instance, a study by the United States of America (2012) indicated that in year 1996 to 2006 alone, the number of births undertaken through caesarean section was in a multiple of 50 percent. The report noted that the caesarean section occupies aboutthirty-two percent of all delivery taken place in the United States and Canada.

The report from the United States (2012) explained that induced labour and elective caesarean that take place before 39 weeks of pregnancy can be detrimental to mother and her unborn baby. As a matter of fact, the report indicated that there is no positive benefit to mother or baby if the mother is induced into labour or undergoes elective caesarean before 39 weeks of gestation. To prevent unnecessary involvement in induced labour and elective caesarean, the United States (2012) guidelines warn against all forms of illegal or non-medically recommended induced labour or elective caesarean before 39 weeks of pregnancy. Hamilton, Martin and Ventura (2009) in their study revealed that within the United States alone, between year 1990 and 2006, the rate of induced labour was more than double. While reporting, they noted that the rate of induced labour in the United was 22 percent.

Mozurkewich, Chilimigras, Berman and Perni (2011) systematic review of methods of induction of labour highlighted that there are some conditions that may instigate the use of induced labour to keep mother and her unborn baby safe. They identified conditions such as chronic hypertension, eclampsia, premature rupture of membrane, post term pregnancy among others. According to them, these conditions can prompt a medical practitioner to opt for an induced labour to save the life of mother and child. They also added that it is not all times that caesarean section is harmful to health of mother and child, they contended that some conditions may prompt the use of caesarean delivery option to save life of a mother and her baby. They indentified some conditions that may warrant the use of caesarean section, indicating its usefulness to both mother and newborn. The conditions that may instigate the adoption of caesarean section according to them include fetal abnormality, multiple gestations, and breech position. To them if these conditions are attended to via vaginal delivery, they may be harmful to mother and her unborn child, hence, the need to employ caesarean delivery.

Mozurkewich *et al*, (2011) highlighted that with the use of synthetic prostaglandins such as misoprostol, the ripening of the cervix can be achieved. The American Congress of Obstetricians and Gynaecologists (ACOG, 2012) study of obstetrics data collections indicated that before the option of caesarean delivery is concluded, there are certain conditions that must be considered and ensured that they are fully met before undertaking the exercise. They recommended that an obstetrician or physician wishing to undertake such actions must examine and be sure that the gestation is up to 39 weeks or more. They must also examine the situation of the cervix and the fetal status. The congress recommended that in the case of elective caesarean, these conditions also must be met to save mother and newborn.

The ACOG (2012)'s guidelines showed that the conditions that may prompt the decision for induction include abruptio placentae, gestation diabetes, chorioamnionitis and chronic kidney disease. The guidelines supposed that in some situation, the distance from place of residence, social and psychological conditions may be factored into consideration in deciding to choose caesarean delivery, however noted that in all situation, it must be sure that the gestation age of 39 weeks or more has reached and the cervix and fetal lung is examined by testing to fit the intending caesarean section. The guidelines indicated that there is no clear difference between the contraindications

of labour and that of the spontaneous vaginal delivery, especially on the aspect of placenta previa, umbilical cord prolapsed and active genital herpes.

2.4.6 Pain Control in Child Delivery (Non-Pharmaceutical)

Graves (2012)'s birthing book showed that the need for inspirational calmness and confidants during childbearing. It revealed that during delivery, some women or adolescents may choose not to take analgesic medicinal drug throughout delivery. As a result, mental coaching is useful to inspire and counsel women and adolescents on the need for any medication and its usefulness. Jones, Othman, Dowswell, Alfirevic, Gates, Newburn, Jordan, Lavender and Neilson (2012) systematic review of pain management in labour found that when women or adolescents are in labour the use of options other than drugs may be helpful. They identified the use of relaxation techniques and massaging as essential labour management. They further indicated that the use of dipping in liquid like water and acupuncture may equally reduce pains had by women or adolescent girls during labour. According to their review, it was found that acupuncture and relaxation can reduce the number of caesarean deliveries a woman or adolescents may undergo.

Immersion in Water During Labour and Delivery (2014) study showed that immersion in water can relieve a woman or adolescent who is in labour, especially at the first phase of labour and can also shorten the duration of labour. It further noted that it can decrease the need for anesthesia during delivery. It however indicated that despite these benefits, the safety and efficacy of immersion is yet to be established, how its usefulness to maternal health remained uncertain. This implies that there is a need for a more intensive research on this aspect of maternal care for a proper conclusion to be reached. This will in the long run help to avoid unnecessary utilization of maternal care methods that might be harmful to mothers and newborn babies.

Hodnett, Gates, Hofmeyr, and Sakala (2013) systematic review of support for women during delivery highlighted that some women during labour or delivery wished to have people around them that can provide continuous support to them until delivery. They found that such support could lead to safe delivery and non-utilization of caesarean or operative vaginal delivery. They found that with such care and support, the delivery may be safe and require no use of medication or drug. They explained that the people

which the patient in labour may wish to have around may differ across individuals, but more likely to include their partner, relatives, associates, nurses and midwives. They found that such care is beneficial to both mother and her newborn and can improve the condition of the infant.

Derry, Straube, Moore, Hancock and Collins (2012) systematic review of intracutaneous or subcutaneous sterile water injection showed that an infusion of sterile water into the skin of a woman or an adolescent who is in labour can help to reduce pains during labour. According to these scholars, the water could be inserted into or just below the skin, however, further noted that the efficacy of sterile water injection is yet uncertain despite speculation. This implies that there is a need for evidence-based research to support or disapprove this assumption in maternal healthcare practices.

2.4.7 Pain Control in Child Delivery (Pharmaceutical)

Thorp and Breedlove (1996) systematic review of epidural analgesia in labour indicated that there are different drugs that could be administered to a woman or adolescent in labour. They revealed that nearly all the drugs may have side effects depending on the usage. They found that in certain nations, especially in the Europe, health professionals do advocate for nitrous oxide and entonox. The nitrous oxide is an inhaled substance. They also found that in the United Kingdom, some midwives are using the drug without prescription by medical professionals. They suggested that an opioid which include fentanyl may be used, however if given too near the period of delivery, may cause danger of respiration despair inside the newborn. They identified anesthetics epidurals and spinal anaesthesia as some of the well-known substances for pain control in labour. To them, anesthetics epidural is well noted for safety during labour. It is noted to reduce pain, but associated with prolonged labour and high cost.

Alehagen, Wijma, Lundberg and Wijma (2005) study of pain and stress hormones during delivery indicated that with the use of anesthetics epidural, an adolescent or adult will experience less pain and stress during labour. They found that it helps to control the hormones and reduce pains and discomfort during delivery. They however, noted that after taking the substance and its period of functioning elapses, the pains may return. An earlier study by Loftus, Hill and Cohen (1995) suggested that when

taking epidural medicine, care should be taken because it can transit across the placenta and penetrate the bloodstream of the unborn baby, thereby causing harmful effects in maternal health. In a study by Anim-Somuah, Smyth and Jones (2011) on epidural or analgesia in labour, they found that there is no statistical influence of epidural analgesia on the infant in the case of caesarean section. The implication is that there is a need for a careful medical examination and justification for use of epidural analgesia in vaginal delivery to avoid its effects on the unborn baby.

2.4.7 Argumentation in Child Delivery, Episiotomy and Multiple Births

Argumentation - Augmentation is the system of facilitating an additional labour. Wei, Luo, Xu and Fraser (2009) in their study of effects of oxytocin augmentation in labour stated that oxytocin is employed to fasten vaginal delivery among those with slow flow of labour. Rohwer, Kondowe and Young (2013) study of antispasmodics for labour noted that antispasmodics is yet to receive medical recommendation as an augmentation of labour, but can shorten labour during delivery. They noted that as at the period of their study, there was yet an evidence to show that antispasmodics have direct negative effects on mother or her baby.

Episiotomy - Episiotomy is the vaginal tears that occur during delivery. Carroli and Mignini (2009) study of episiotomy for vaginal delivery explained that during childbirth, the midwife or obstetrician may cut the woman or adolescent vaginal opening extending to the anal to allow head of the baby to pass through easily. They noted that this happened more often if the baby is moving out quickly. They however, noted that while the tears are undertaken, the midwives or birth attendants are usually conscious of creating cuts that could be healed and not a cut that would be complex to repair.

To fully examine the positive and negative effects of practising routine episiotomy or restrictive episiotomy, Carroli and Mignini (2009) study found that it is more beneficial to practice routine episiotomy than restrictive episiotomy. They noted that in the case of a routine episiotomy, the mother may have external injury that may heal up in seven days but encounter fewer traumas and internal injuries. They also found that restrictive episiotomy causes internal injuries and more traumas to the mother during delivery. However, they found that there was no remarkable difference between the

two practices in the aspects of pains and urinary incontinence. The implication is that every country needs to carefully examine both methods before enacting policy on any. However, to avoid a misleading policy that may cause harm to the people, the international experts' recommendations may be domesticated to improve health of mothers and newborns during delivery.

Multiple Births – A 2012 Cochrane review indicated that in a multiple birth of twin or more, the delivery practice may take deferent approach. It revealed that in some cases the mother may deliver the twin through vaginal birth if both came with head first. In another instance, one of the twin may come head first and being delivered by vaginal opening, while the other that did not come with head first is being delivered with the aid of forceps. The 2012 Cochrane review noted that in another instance, both may be delivered by caesarean section, especially in the case of a conjoined twin, while in another instance one of the twin can be delivered by vaginal birth and the other by caesarean birth. The review enables us to understand that there is no one way of delivery twin. However, noted that conditions may determine the adoption of any method of twin delivery, and in choosing a method the health of mother and newborns should be factored into consideration to reduce maternal morbidity and mortality.

2.4.8 FetalMonitoring in Pregnancy/Childbearing

According to Galan (2016), fetal monitoring is an act of observing how the unborn baby is kicking. It is essential to undertake foetal monitoring of an unborn baby to know how he or she is doing in the womb. This enables the doctor to know the state of the baby, especially the heart rate or heartbeat. This monitoring is most likely to take place during the last stage of pregnancy, called third trimester, however may also be done during labour and delivery. If the baby is low-risk, it may be done at routine during antenatal check-up. Galan (2016) identified three method of fetus monitoring of heart rate. These include the external and internal fetal monitoring, and are explained below.

External fetal heart rate monitoring, according to Galan (2016) is a method of monitoring that is without direct contact with the fetus in the mother's womb. He classified the external monitoring of heart rate into two, namely auscultation and electronic fetal monitoring (EFM). The auscultation is administered using a device

called transducer. Transducer is a small, hand-sized device that has wires. In administering this, the doctor will place the transducer on the abdomen of the mother to monitor the heartbeat of her unborn baby. The wires are connected to the fetal heart rate monitor. This permits the doctor to monitor the heartbeat of the baby. If the baby is having a low heartbeat or abnormal heartbeat such a pregnancy can be considered a low-risk pregnancy and needs to be placed on routine monitoring to prevent maternal risks. The scholar explained that auscultation can be used routinely during pregnancy, labour and delivery with no recorded harmful effects on the mother and her unborn baby.

The electronic fetal monitoring (EFM) is the second method of monitoring under the external heart rate monitoring category. Galan (2016) noted that in the case of EFM, the doctor is measuring two things at a time: heartbeat and contraction of the foetus. The EFM has two belts which are wrapped to the woman's or adolescent's abdomen. One of the belts measures the foetus heartbeat while another measure the baby's contraction. The electronic fetal monitoring is used mainly at the first half hour of labour if the mother and foetus do not have prior complications that may warrant it. The use of electronic fetal monitoring is more technical and requires that the mother remains still as sudden movement can alter accurate results. It is not also used at wish without limitation when compared to auscultation. Galan (2016) explained that electronic fetal monitoring is not meant to be used routinely. He documented that EFM can restrict mother movement which may make vaginal delivery to be difficult because movement during labour makes delivery easier. He noted that women or adolescents who are monitored with the aid of EFM may likely be assisted with forceps or vacuum during vaginal delivery or may undergo caesarean delivery. The implication is that there may be no need for EFM utilization if there is no health condition that warrants its use, an adolescent or adult in labour can do with auscultation, especially those who wish to underscore vaginal delivery.

Internal fetal heart rate monitoring, according to Galan (2016) is a monitoring method that is recommended if the physician cannot obtain needed results after using the electronic fetal monitoring (EFM) to observe fetal heartbeat or contraction. He noted that the internal fetal monitoring can only be used if the mother's water is broken. This is because it requires an attachment of electrode to the foetus through the mother's cervical opening. This means that the attached would be to the part of the baby's body

that is closest to the cervical opening. The method may require the insertion of catheter into the adolescent or mother's uterus to monitor her contractions. This method usually cause discomfort to many women and may cause injury to the foetus at the part of the body that is attached to the electrode. The implication is that a doctor needs to be very calculative and certain that there is a proven reason to adopt internal fetal monitoring before doing so, especially when attending to young adolescents who are more vulnerable to maternal health risks.

2.4.8 Complications in Pregnancy/Childbearing

Van Lerberghe and De Brouwere (2001) study of maternal mortality found that without an intervention, there is an estimated death of 1500 out of every 100, 000 births in the world. The World Health Organization (2008) reported that in a year, nearly 500,000 deaths are recorded among pregnant women in the world. The agency found that in each year, during pregnancy, a good number of women, amounting to seven million do encounter complications, and fifty million have hazardous birth consequences. The implication is that women are exposed to risks following pregnancy, labour and delivery, especially in an environment where access to modern medical attention is limited like in the case of most countries in Africa.

Van Lerberghe and De Brouwere (2001) study of mortality showed that modern medicines have played crucial role in reduction of maternal mortality and complications in the universe. They exemplified developed countries like the United States and Sweden to evidence low mortality resulting from advance technology in maternal health care practices. They found that in the year 2001, the two countries (the United States and Sweden) which they mentioned had about 10 deaths in each 100, 000 births. The implication is that maternal related death rate may have drastically reduced in the developed countries of the world; maternal mortality in the less developed countries is still high.

Although, maternal death rate may have largely dropped in the more developed countries of the world, some of these countries still record complications during pregnancy and delivery, mainly as a result of mothers' health care practices. For an instance, Levi, Kohn and Johnson (2011) study of healthy women and health babies in the United States, found that one-third of American births encountered complications

during pregnancy, labour or delivery. They associated complications encountered by American women to health care practices of mothers. The implication is that despite improvement in health care services, especially from the part of government and professionals, the mothers need to maintain healthy practices to avoid maternal complications.

A study by Main, Oshiro, Chagolla and Bingham (2010) in California revealed some facts about preterm delivery. At first, a preterm delivery is the type of childbirth that occurs before 39 weeks of pregnancy or gestation. That is, it is a delivery that occurs before the expected period of delivery. Main and his colleagues found that preterm delivery was accompanied with high mortality when compared to full-term delivery. They found that delivery at 37 weeks gestation was 2.5 times more likely to result to death than delivery at 40 weeks gestation. They found that pre-term delivery was highly associated with infant death, even after delivery compare to birth that happened between 39- and 41-weeks gestation. They noted that full-term delivery is associated with no adverse effect to mother and her baby and encourage women or adolescents to practice full-term delivery. This was relied on the fact that there were some women who wished to induce labour in order to deliver before the expected full gestation period of 39-41 weeks, given to personal likes or circumstances surrounding periods of pregnancy.

Bates, Rouse, Mann and Chapman (2010) study of neonatal outcomes found that newborn children delivered before 39 weeks pregnancy were more likely to encounter complications than those delivered between 30 and 40 weeks. As a matter of fact, they found that those neonates who were delivered before full-term were 2.5 times exposed to complications compare to those with full-term delivery. They identified some of the complications faced by the babies born before 39 weeks gestation to include respiratory distress, jaundice and low blood sugar.

A review by Main *et al* (2010) showed that pre-labour caesarean exposes neonates to mortality associated with respiratory complication. They found that deaths related to respiration were 14 times higher among newborn babies delivered at 37 weeks gestation compare to those delivered at 40 weeks gestation. They found that the situation got better with increase weeks of gestation closer to full-term period. As a matter of fact, they found that pre-labour caesarean at 38 weeks were 8.2 times higher

than those born at 40 weeks gestation. Their study found that there was no element of reduced neonatal mortality to birth occurring prior to full-term period when compare to birth occurring within period of full-term delivery. They found that neonatal morbidity was higher across babies born out of non-medically elective delivery prior to 39 weeks of pregnancy. The implication is that neonatal death is more likely to occur among preterm delivery and higher when such is not medically supported. For the fact that a non-medically induced preterm delivery is not recommended for adult women, the situation of such among adolescents who are more susceptible to maternal health risks will likely be worse and as such should be strongly discouraged.

The World Health Organization (2008) noted that the second stage of labour in women or children may be delayed as a result of factors such as malpresentation, that is the fetus did not come head first, that is he or she comes with the limbs, buttock or any other part of the body first. On normal circumstances, a foetus is expected to come head first during delivery. The agency mentioned that the delay in the second stage of labour may be caused by poor uterine contraction strength. In a situation where the mother's uterine is unable to contract as expected, this may contribute to delay in labour. The WHO (2008) indicated that cephalo-pelvic disproportion and shoulder dystocia, among others, also contribute to delay in the second phase of labour and need to be medically handled by experts to avoid genitovaginal fistula and maternal related mortality.

The World Health Organization (2008) mentioned that another complication that may disrupt successful delivery of a baby is the case of obstructed labour. The agency explained that obstructed labour occurs in a situation whereby the foetus is unable to exit the pelvis due to blockage. It noted that sometimes the non exit of the foetus may occur despite uterus normal contraction for some women. A persistent obstructed labour may be harmful to mother and her unborn baby, hence needed to be monitored against during labour and delivery, especially in the case of young adolescents who are more susceptible to maternal risks.

Buppasiri, Lumbiganon, Thinkhamrop and Thinkhamrop (2014) study of perineal tear during vaginal delivery showed that vaginal birth may be surrounded by tears of episiotomies. They found that episiotomy was a common feature associated with vaginal delivery. They explained that the internal tissue tearing and nerve injury which

affected the pelvic often lead to problems in women after delivery. They identified some of the problems that may be associated with the vaginal tearing to include incontinence of stool or urine. That is, they find difficulty in passing out faeces and urine as normal as they were prior to vaginal birth. They also identified sexual dysfunction as another consequence of episiotomy that may remain with the women until menopause. Their study showed that 15 percent of women were incontinent, some in stool while others in urine. They noted that the problems associated with women who had tears during vaginal delivery may not stop as menopause approaches but increase in effects after during menopause. They further found that vaginal birth is important, but may cause non hysterectomy related prolapsed in the future.

Buppasiriet *al* (2014) explained that there are risk factors associated with vaginal delivery despite importance. They found that some of the risk factors include infant weigh being more than nine pounds, use of forceps or vacuum to assist delivery which characterised some vaginal delivery. They noted that vacuum or forceps may cause injury to the newborn infant. The consequence is that if not well handle, it can result to damage of vain or sensitive parts of the baby's body. Buppasiri and colleagues found that another risk factor associated with vaginal delivery is the need to repair the tears that may have occurred during delivery. Their study revealed that the use of antibiotic is essential to prevent infections that may occur as a result of the tears.

Buppasiri, Lumbiganon, Thinkhamrop and Thinkhamrop (2014) warned against obesity among pregnant women because they found that pelvis girdle pain was closely associated with obesity. They explained that most incidents of pelvis girdle pain take place before delivery. They identified the third trimester of gestation as likely period of occurrence. They found that infection is a major risk factor that influence maternal related morbidity and mortality, especially in the less developed countries of the world and suggested that the treatment of puerperal fever will go a long way in saving lives during maternity. They further mentioned that haemorrhage is another major influence of maternal death in the world, especially among the less developed countries. They explained that maternal haemorrhage, which is heavy loss of blood during delivery leads to insufficient perfusion of vital organs and hypovolemic shock. According to their findings, if immediate medical attention is not provided to ameliorate the situation, it can lead to death within short period of time. They suggested that in such cases, blood transfusion is necessary to save life of mother.

Say, Inoue, Mills and Suzuki (2008) study of maternal mortality showed that there are variations between developed and less developed countries in records of maternal mortality rates, with the less developed countries receiving worse records. They found that in the United States and Europe, maternal mortality rate is 9 in 100,000 live births, and in the sub-Saharan Africa, it is 900 in 100,000 live births. The implication is that maternal death is very high in the sub-Saharan Africa compare to the developed countries of the world, and women who are in labour or delivery in the sub-Saharan Africa has high tendency of losing life compare to their counterparts in United States and Europe. This situation may likely be worse in sub-Saharan Africa if situated among young adolescents, given that they are more susceptible to maternal mortality and morbidity associated with early childbearing.

In a joint research by the World Health Organization, UNICEF, United Nation Population Fund and World Bank (2007), it was found that in each year, more than half a million women/adolescents encounter maternal mortality during pregnancy or delivery. The study identified sub-Saharan Africa, where Nigeria is located as an area characterised by high mortality in the world. The implication is that there are needs to tackle high maternal mortality in sub-Saharan Africa to save lives of millions, women and children, who die each year from maternal related risks.

In an earlier study by Warwick and Williams (1973) on teenage pregnancy, it was found that when a baby is very big during birth, it may be a risk factor for foetal injury because it may not allow for easy delivery. The resultant effects were more likely to be vaginal tears to allow for free vaginal delivery. The authors found that maternal obesity was dangerous to adolescent because it negatively affects normal contraction during labour/delivery. As a matter of fact, they identified non-professional birth attendant and instrumental delivery as some factors affecting safe delivery among adolescents and adult women. They also found that most times foetal birth injuries may not result to long term harm but resolved because of the body healing nature of infants. However, they noted that some injuries may be lasting, resulting to paralysis. They found Erb's palsy and Klumpke's paralysis as examples. They also explained that the exemplified paralysees were connected to brachial plexus injury of foetal during labour/delivery.

2.4.9 Neonatal Infections and Mortality in Delivery

Neonates are newborns who are not more than 4 weeks of life. The World Health Organization (2013) stated that neonates are at risk of infection within the first month of life. They explain that neonates are at risk of infections from some organism including Group B streptococcus. Group B streptococcus is also called GBS or group B strep. It is a bacterium infection that is found in nearly 1 out of every 4 pregnant women. The World Health Organization (2013) reported that risk factors that make cause a neonate exposure to GBS infection include delivery before 37 weeks of pregnancy. The reason is that the baby is likely to be premature. An account of an elderly sibling having GBS indicated that a neonate is at risk of also having it. The agency further mentioned that rupture of membrane or prolong labour is another risk factor of GBS infection in neonates.

The World Health Organization (2013) explained that when a pregnant woman has sexually transmitted infection and she did not treat it until delivery; such is more likely to be transferred to her newborn or causes an infection in the neonate. It explained that infections of neonates are highly congenital and perinatal. As a matter of fact, it noted that 30 percent of perinatal mortality is associated with untreated syphilis. The implication is that, if a pregnant adolescent or woman has an untreated infection, she is at risk of infecting her newborn baby. This depicts that there are needs for antenatal check-ups by a trained professional for early identification of infections, prevention and treatment to avoid transmission of diseases to neonates.

Noteworthy that neonatal mortality refers to deaths that occur before an infant is up to 4 weeks or 28 days of delivery. The World Health Organization (2013) stated that neonatal mortality is about 1 percent in the western countries but worse in the less developed nations. The agency found that some of the key factors influencing neonatal mortality include poor nutrition and lack of access to quality health care. It identified cost of care and distance as some other factors depriving many from accessing adequate health care. It found that early childbearing and high blood pressure also cause neonatal mortality. As a matter of fact, factors such as gestational diabetes and prior experience of caesarean delivery should not be left out from the list of neonatal deaths' risk factors, the World Health Organization (2013) reported.

Handel, Swaab, De Vries, and Jongmans, (2007) study of neonatal encephalopathy and intrapartum asphyxia found that intrapartum asphyxia is a medical condition that

causes serious damage to the brain of a neonate. It restricts the successful flow of oxygen to newborn from mother during labour. As a result, it damages vital tissues in the body of the neonate, especially the brain, and may lead to death if not properly handle. The authors opined that complications in mother prior to labour could be an influencing factor of this abnormality in neonates. However, they noted that stress and trauma may play important role, but should not be misled because other symptoms may interplay in the process. They suggested that adequate monitoring during labour and delivery is essential to avert negativity, however added that monitoring devices may complicate issues if wrongly interpreted, hence the need for proper monitoring by experts. They further explained that the damaging effect of intrapartum asphyxia may be lasting, especially in the case of encephalopathy. This implies that there is a need for trained professional to check pregnant adolescents or women during antenatal care to avert preventable complications that may affect mothers and neonates during labour, delivery or post-delivery periods.

2.5 Overview of Global and Regional Adolescent Population

The United Nations Population Fund (2013) estimated that 18 per cent of the world population are adolescents. In number, this accounts for 1.2 billion people worldwide. The agency sub-divided adolescents into two groups solely for this purpose, and found that adolescents aged 10-14 and 15-19 are nearly equally distributed. It showed that by gender distribution, there are over 580 million adolescent girls. This is very close to nearly half of the population of adolescents worldwide. This means that male adolescents are slightly more than female adolescents in the world. The report of the agency gave much attention to female adolescents of age 10 to 17 because of their predispositions to maternal health risks, abuses and harmful cultural practices. It recorded that adolescent girls aged 10-17 years account for nearly 14 per cent of adolescent female population aged 10-19 years.

The projection of the United Nations Population Fund (2013) showed that by 2030, the population of adolescents worldwide would be 1.3 billion notwithstanding the assumption that childbearing among adolescents will reduce within the time period. The projection showed that by year 2030, female adolescent aged 10-17 would be 500 million and the adolescent girls aged 10-19 would increase to nearly 615 million. By this time, the population of adolescent girls would account for 15 per cent of all

women population worldwide. At the same time period, the percentage of all adolescents would decrease from 18 per cent to 15 per cent.

The United Nations Population Fund (2013) study found that 55 per cent of adolescent worldwide lived in Asia and the Pacific. Sixteen per cent of adolescent worldwide lived in sub-Saharan Africa. It noted that the distribution of adolescent population across sub-Saharan Africa is nearly equal among the Eastern and Southern Africa, and the West and Central Africa. The agency's findings showed that by year 2030, the population of adolescent in Asia and the Pacific will reduce to 48 per cent while that of the sub-Saharan Africa will increase to 23 per cent. This indicates that adolescent fertility will drop among countries in Asia and the Pacific while that of the sub-Saharan Africa will keep increasing. It also implies that within this period many adolescents in the sub-Saharan Africa would be exposed to maternal related risks in as much as their fertility behaviour remained uncontrolled.

Similarly, the UNFPA (2013) report showed that by 2030, female adolescents aged 10-17 would further increase in sub-Saharan Africa, a region where unmet needs for contraceptive is very high and maternal health care practices poorly undertaken. Within the same time period, the projection showed that by 2030, the population of adolescents in sub-Saharan Africa will increase by 51 per cent. That is, it will increase from 75 million which it was in the year 2010 to 113 million in the year 2030. It however, marked that among the less developed countries of the world, adolescent population will equally rise from 18 percent which it was in year 2010 to 26 per cent in year 2030. In the case of sub-Saharan countries, this implication is that in every 4 adolescent girls in the world, 1 will live in sub-Saharan Africa.

The report from the United Nations Population Fund (2013) indicated that if the current trend persists, by year 2030, the world would add to its population 26 million female adolescents and majority of the girls would live in Asia and the Pacific and sub-Saharan Africa. It also mentioned that adolescent girls in these three regions, especially those of sub-Saharan Africa would be exposed greatly to early pregnancy, maternal morbidity and mortality compare to those of other regions of the world. The report showed that by 2030, the number of countries in the world with a population over 5 million female adolescents will rise from 16 which it was in 2010 to 18 by 2030. The projection showed that in sub-Saharan Africa, the countries that have over 5

million female adolescents will increase from 3 to 6 countries and globally, those countries with over 2.5 million adolescent girls will rise from 32 to 44 countries. This indicates that the population of adolescent girls in the world promises to increase rapidly between now and 2030 despite any intervention because most adolescents that will make this life quota are already born. By implication, fertility control intervention would be useful in preventing further increase of adolescent girls' population beyond year 2030.

According to the UNFPA (2013), the highest national increase of female adolescent population would occur in sub-Saharan Africa, because the top five countries that would experience this increase are all in sub-Saharan Africa. These countries are Nigeria, United Republic of Tanzania, Democratic Republic of the Congo, Uganda and Kenya. As a matter of fact, the projection showed that Nigeria will lead in the ranking with 9.2 million adolescent girls. This will be followed by the United Republic of Tanzania with 3.7 million, Democratic Republic of the Congo with 3.3 million, Uganda with 2.5 million and Kenya with 2.3 million. The ranking showed that Kenya will have the least increase of adolescent girls among the top five countries mentioned in sub-Saharan Africa. The projection further revealed that eight out of nine countries in the world that would experience over 70 per cent increase of adolescent girl populations are situated in sub-Saharan Africa. The eight countries by order of ranking include Niger (101%), Zambia (99%), Malawi (93%), United Republic of Tanzania (90%), Rwanda (78%), Mali (75%), Uganda (75%) and Burkina Faso (74%).

The United Nations Population Fund (2013) found that in year 2010, the six countries of the world that have 49 per cent of female adolescents worldwide were Pakistan, China, Nigeria, India, Indonesia and the United States. It noted that by then India and China alone accounted for over one-third of the world female adolescent population, with India having 20 percent and China 16 percent. The report projected that by 2030 India will continue to uphold its highest record of female adolescents with a very slight decline from 93 million in year 2010 to 95 million in 2030. Contrarily, the projection showed that China will undergo rapid decline from 72 million in year 2010 to 55 million in 2030. As a matter of fact, the report showed that China will only have 11 per cent of the world population of adolescent girls by 2030. According to the report, while East Asia, the Pacific, the South Asia and Africa will still have the highest number of adolescents worldwide, the leading continent will be Africa.

2.5.1 Overview of Global Adolescent Pregnancy/Childbearing

A report from the UN DESA - Population Division (2017) showed that the population of adolescent childbirth has decline worldwide but expected to increase globally by 2030 given that the population of adolescent is getting higher. It indicated that in the year 1990, 65 live births per 1000 women were associated with adolescents. In 2015, the figure reduced to 47 births in every 1000 women delivery. UNFPA (2013) projected that the highest increase of adolescent pregnancy in the year 2030 will occur in the West and Central Africa and Eastern and Southern Africa. The UNFPA (2015) and Darroch, Woog, Bankole and Ashford (2016) showed that each year 2 million adolescents who are below the age of 15 years and 21 million adolescents who are between the age of 15 and 19 years become pregnant in the less developed countries. This depicts that the less developed nations contribute largely to adolescent childbearing in the world.

Neal *et al* (2015) and UNFPA (2013) highlighted that an estimated 16 million adolescents who are between aged 15 and 19 and those who are less than aged 16 years undergo child delivery every year in the less developed countries. UN DESA, Statistics Division (2017) showed that there are variations across regions on adolescent childbearing. It indicated that in the West African countries, adolescent childbearing is as high as 115 per 1000 births. In Latin America and Caribbean, 64 per 1000 births; in South-Eastern Asia, 45 per 1000 births; and, in Eastern Asia, 7 per 1000 births. This depicts that adolescent childbearing occurs in both developed and less developed nations, but are more common among the less advanced countries.

The UNFPA (2015) found that adolescent pregnancies are common in the less developed countries because of low education, poverty and unemployment, among other factors. The World Health Organization (2018) noted that in some cases pregnancy among adolescents are planned or wanted because in some countries, young adolescents are compelled to go into marriage and bear children. A report from the UNICEF (2013) showed that 15 million adolescent girls enter into marriage before 18 years of age every year and 90 per cent of births among adolescents aged 15-19 occurs within marriage each year. This implies that many female adolescents with pregnancy or children are in marital union and reside in the less developed countries.

Notwithstanding, study by Darrochet *al* (2016) revealed that not all pregnancy or childbirth of adolescent in the less developed countries are planned or wanted. They noted that some of the childbearing occur as a result of lack of access to modern contraceptive. They found that 23 million adolescent girls of ages 15-19 years do not have access to modern contraceptive in the less developed countries. Consequently, they estimated that half of all pregnancies occurrence among adolescents aged 15-19 in the less developed nations are unplanned.

The UNICEF (2001) and Treffers (2003) reported that globally, adolescent pregnancy in is very high in the sub-Saharan Africa. They estimated that pregnancy among adolescents in sub-Saharan Africa is 143 per 1000 women. They expanded their studies to South Korea. In South Korea, they found that pregnancy among adolescents is 2.9 per 1,000 women. This showed clearly that there is a very high occurrence of pregnancy among adolescents in the sub-Saharan Africa, indicating the need for urgent attention and academic investigation. Similarly, the World Health Organization (2011) estimated 16 million adolescents of ages 15-19 underscore child delivery every year, accounting for 11 percent of all births in the world. The agency found that 95 per cent of these deliveries take place among the less developed countries. It indicated that adolescent childbirths in the low-income countries are 5 times higher than adolescent births in the high-income countries.

The report from the World Health Organization (2011) showed that sub-Saharan Africa has more than half a percent of childbearing among adolescents in the world. It noted that China has 2 percent of childbirths to adolescent girls, Latin America and Caribbean has 18 percent while sub-Saharan Africa has over 50 percent. This implies that if fertility is reduced among adolescents in sub-Saharan Africa, there will be a drastic drop in the proportion of childbirths of adolescent girls in the world. The WHO (2011) found that seven countries in the world account for half a percent of adolescent childbearing, and the countries include the Democratic Republic of the Congo, Bangladesh, Nigeria, Ethiopia, Brazil and the United States.

2.5.2 Trends and Tendencies of Adolescent Pregnancy/Childbearing by Regions

A report from the Guttmacher Institute (2015) showed that in a survey of 35 developed countries in 2011, 61 in every 1,000 adolescents aged 15-19 were pregnant in

Romania, making the country to have the highest rate of adolescent pregnancy among the developed countries studied. The report showed that in year 2010, after excluding countries of the former Soviet Bloc, the United States had the highest record of adolescent pregnancy in the developed world with 57 pregnancies in every 1000 adolescents. The survey identified New Zealand as the next country with the highest adolescent pregnancy, with 51 per 1000 adolescents in year 2010. The Guttmacher Institute (2015) noted that in Europe after excluding the former Soviet Bloc, England, Wales and Scotland top among countries on adolescent pregnancy issues. The pregnancy record included 47 per 1000 adolescent girls in England and Wales and 46 per 1000 in Scotland.

The Guttmacher Institute (2015) showed that among the 21 countries of the world with liberal abortion laws in year 2008 to 2011, the country with the least rate of adolescent pregnancy was Switzerland with 8 per 1000 adolescent girls in 2011. This was followed by the Netherlands (14 per 1000 in 2008) and Slovenia (14 per 1000 in 2009). This indicates that countries with liberal abortion laws seem to have lower adolescent pregnancy rate compare to countries with intolerant abortion laws.

The trend data on adolescent pregnancy reported by Guttmacher Institute (2015) showed that adolescent pregnancy has declined in the developed countries starting from the mid-1990s with rapid decline happening in Estonia, Slovenia and Hungary. The report found that adolescent pregnancy rate increased only in Belgium and Sweden, however noted that even within these two countries, pregnancy rate is as low as 21 per 1000 in Belgium (year 2009) and 29 per 1000 in Sweden (year 2010). This implies that despite increase of adolescent pregnancy rate in Belgium and Sweden, pregnancy rates in the two countries are not as high as that of most nations in the less developed countries.

The UNFPA (2013) found that among women of age 20-24 years sampled, one in every five gave birth before 18 years of age given a total of 19 percent. The study showed that 3 percent of them gave birth before their 15th birthday. The agency identified variations across regions and specifically identified sub-Saharan Africa as an area with the highest occurrence of childbearing in the world. It noted that the West and Central Africa has 28 percent and Eastern and Southern Africa has 25 per cent of adolescent childbearing compare to 4 per cent among Eastern Europe and Central Asia.

The study showed that among women aged 20-24, twenty percent of them have had a live birth before aged 18 and are common among 40 countries of the world. Women aged 20-24 in fifteen countries out of the 40 nations had over 30 per cent childbirths of adolescent aged before 18 years. Fourteen countries out of 20 countries identified were found in sub-Saharan Africa. The fourteen countries by highest to the least ranking include Niger (51%), Chad (48%), Mali (46%), Guinea (44%), Mozambique (42%), Sierra Leone (38%), Liberia (38%), Central African Republic (38%), Madagascar (36%), Gabon (35%), Malawi (35%), Zambia (34%), Uganda (33%) and Cameroon (30%). This shows that Niger has the highest proportion of adolescent childbirths in sub-Saharan Africa, accounting for 51 percent adolescent girls' population.

The report of the United Nations Population Fund (2013) identified Bangladesh (40%) as the only country outside sub-Saharan Africa with over 30 percent adolescent childbirths population. More so, the World Health Organization (2008a) and Presler-Marshall and Jones (2012) highlighted that seven countries alone in the world account for half a population of adolescent girls who have given birth aged 10-19. The countries include Nigeria, India, the Democratic Republic of Congo, Bangladesh, Ethiopia, Brazil and the United States. The UNFPA (2013) noted that globally, pregnancy among adolescents before aged 18 has slightly decline from 23.3 to 20.1 percent, given a decline of 14 percent overall. Eastern Europe, Central Asia and South Asia encounter highest decline by 20 percent. The East Asia and the Pacific declined by 13 percent. The Latin America, sub-Saharan Africa, the Caribbean and the Arab States accounted for just 10 percent decline.

The report from the United Nations Population Fund (2013) showed that in sub-Saharan Africa, the decline of adolescent pregnancy varies across sub-regions with some having an increase rather than reduction in adolescent pregnancies. It found that the West and Central Africa are sub-regions with an increased adolescent pregnancy rate. Particularly, the report showed that in year 1990 through 2008 among the West and Central Africa, adolescents who gave birth before 18th birthday were 1.1 times higher than that of South Asia, 2.7 times higher than that of Arab States, and 4 times higher than that of Eastern Europe and Central Asia. Whereas, between 1997 and 2011, the probability accumulated increases with 1.3 times higher than that of South Asia, 2.9 times higher than that of Arab States and 4.9 times higher than that of Eastern Europe and Central Asia.

2.5.3 Disparities and Inequalities in Adolescent Birth Rate by Regions

Adolescent birth rate (ABR) is the average number of births to adolescent girls aged 15-19 years per 1000 girls of ages 15 to 19 at time period. A report from the United Nations Population Fund (2013) showed that globally, adolescent birth rate is marked at 50 per 1000. In the less developed countries, it is marked at 85 per 1000, with sub-Saharan Africa having the highest adolescent birth rates. The report indicated that sub-Saharan has over 100 per 1000 adolescent birth rates, while the East Asia and the Pacific has as low as 20 per 1000 adolescent birth rates.

Inequality and disparity in adolescent birth rate were further examined by location, educational level, and household wealth. The UNFPA (2013) found that adolescent childbearing is higher among rural dwellers than urban by 1.8 ABR. It was higher among less educated adolescents than educated adolescents by 2.8 ABR. It was higher among adolescents of poor households than adolescents of rich households by 2.8 ABR. The report from the United Nations Population Fund (2013) showed that disparities occur among regions. It found that the East Asia and the Pacific have the highest rates of disparities. In East Asia and the Pacific regions, the agency found that adolescents who live in rural areas gave birth 2.3 times higher than those in urban areas. The rural has 69 per 1000 ABR while urban has 31 per 1000 ABR. The West and Central Africa has the highest disparity in educational attainment. In the region, the study found that adolescents with secondary education or more had 52 per 1000 ABR while those with no education had 210 ABR. This implies that adolescent birth rate among girls with no education in the West and Central Africa is 4 times higher than those with secondary or more education in the same region. The Latin America and the Caribbean have the largest wealth disparity. In this region, the UNFPA (2013) found that adolescent girls who held in the poorest households were 4.8 times more likely to undergo childbirth compare to those who held in the richest households.

2.5.4 Access to Reproductive Health among Adolescent Mothers

The World Health Organization (2018) study explained that many adolescents become pregnant or mothers because of lack of access to contraception, linked to governmental laws and policies restriction of adolescents from accessing contraception or by adolescents' personal characteristics. The study found that in some countries or

culture, adolescents are restricted from accessing contraception because they are minor. In some societies, adolescents do not have access to contraception because they are not married. The WHO (2018) study showed that these societies believed that contraception should be used within marital unions. It revealed that lack of health workers and pharmacists' willingness to recognise adolescents' sexual needs also debar many adolescents from accessing contraception. The World Health Organization (2018) further found financial constraints, distance and ignorance of adolescents about contraception as some factors restricting adolescents' access to reproductive health information.

A report from the World Health Organization (2018) showed that adolescents encounter additional barriers even when they have had access to contraception. Some of the limitations found include lack of knowledge on the proper use of contraception, pressure to have children, fear of contraceptive's side effects, stigma associated with premarital sex, poor first experience encountered with health workers or pharmacists on contraception issues, and intentional discontinuation of contraceptive use.

The World Health Organization (2013) revealed that about 20 percent of adolescent girls in the world are coerced or forced into unwanted sex which is likely to be unprotected and harmful to reproductive health of adolescents. Sexual abuse limits adolescents from accessing reproductive health. It found that cultural norms that tolerate sexual violence against adolescents also increase adolescent risk of unwanted pregnancy. In a survey by UNFPA (2013), findings showed that among the less developed countries, 84 percent of adolescent girls aged 15-19 and 97 percent of adolescent boys aged 15-19 are unmarried. This shows that more boys were unmarried compare to girls. The report revealed that out of 16 percent adolescent girls who are married in the less developed countries, 45 per cent lack access to contraception. About half have intention for contraceptive use while others do not. About 55 per cent of the adolescents who do not want contraception explained that they wanted to give birth. According to the United Nations Population Fund (2013), the desire to bear a child among adolescent girls contributed to 85 births per 1000 adolescents in the less developed countries.

The United Nations Population Fund (2013) indicated that married adolescent girls have high unmet needs of contraceptive use compare to the unmarried cohort and the

married adults of aged 30 and above. Twenty-two per cent of married adolescent girls compare to 60 per cent of married adults aged 30 or above used contraception. The report showed that in the West and Central Africa 28 per cent of adolescent girls aged 15-19 with live births are unmarried but accounted for 129 per 1,000 live births, 30 percent lowest demand for family planning and 7 percent lowest use of contraception. The survey showed that in the West and Central Africa, 70 percent of the married adolescents wanted their last births, however found that 23 percent married adolescents recorded unmet needs for contraceptive. As a form of comparison, the same survey showed that in the Eastern Europe and Central Asia, 54 per cent of adolescents with live births had no desire for contraception, however revealed that 9 per cent of adolescents in these regions are in marital union. This contributed to 31 per 1000 live births among adolescents in Eastern Europe and Central Asia, which is relatively low compare to 129 per 1000 live births recorded in the West and Central Africa.

2.5.5 Adolescent Childbirth: Future and its Challenges

The World Health Organization (2018) indicated that pregnancy among adolescents contributed largely to maternal and infant morbidity and mortality around the world. It also influences intergenerational cycles of poverty across nations. The WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division (2015) showed that complications in childbearing of adolescents aged 15-19 contribute largely to maternal deaths across the world. Ganchimeg, *et al.* (2014) highlighted that higher risks associated with pregnancy and delivery are such as eclampsia, and other infections are common among adolescents aged 10-19 compare to women of ages 20-14.

Darroch, Woog, Bankole and Ashford (2016) found that about 3.9 million unsafe abortions occur among female adolescents aged 15-19 every year, with consequences including deaths, diseases and illnesses. The World Health Organization (2018) identified higher psychological and social needs among pregnant adolescents than older women. Ganchimeget *al* (2014) in their study of pregnancy and childbirth outcomes found that children born by adolescent mothers are at higher risks of neonatal complications, and pre-term delivery. They highlighted that infants born by adolescent mothers also encounter lasting health challenges. According to Kozukiet *al*

(2013) if an adolescent mother has a repeated pregnancy, her risk of maternal related risks increases rapidly.

A report from the World Health Organization (2018) pregnancy and childbirths among adolescents do not only have negative effects on adolescents and their newborn, it also has negative effects on their families and communities. The agency noted that premarital pregnancy among adolescents exposed them to rejection and stigmatization from friends, parents and community members. The UNFPA (2013) indicated that pregnant adolescents less than 18 years of age are more likely to encounter abuses from partners in both marital and non-marital unions. The WHO (2018) noted that dropping out of school is a common consequence of adolescent pregnancy, and more so, they are more likely not to continue their education, even after delivery. World Bank (2017) noted that in many countries of the world, about 5 to 33 percent of girls aged 15-24 leave school because of pregnancy or marriage.

The World Health Organization (2018) explained that consequent on adolescent withdrawal from school due to pregnancy have fewer chances of overcoming poverty in the future because they are more likely to have low education and possess fewer skills which prevent them from having good employment and earning high income. World Bank (2017) reported that early marriage predisposed girls to earning low income and reduces their future earnings by 9 percent. The WHO (2018) asserted that early pregnancy debar adolescents' country of origin or resident from enjoying the additional annual income, economic and social contributions which the girls would have provided should they not have encountered early pregnancy.

A report from the United Nations Population Fund (2013) noted that in the year 2010 in the less developed countries of the world, more than 36 million women aged 20-24 years have a live birth before their 18th birthday, which gives an estimated 7.8 million births annually. The agency predicted that if the trend continues without reduction, 78 million adolescents will encounter childbirths in 10 years time from the time of the survey. In other words, an estimated 7.8 million adolescents will deliver each year beginning from 2011-2010. The implication is that by 2021-2030, the population of adolescents with live births would be higher getting to 86 million by 2030. The UNFPA (2013) noted that this will keep increasing the fertility of the countries involved because as years progress maternal related mortality is reducing due to

technological advancement. The agency noted that majority of the adolescent pregnancy before 18th birthday would occur in sub-Saharan Africa in 20 years time. The projection showed that the West and Central Africa may have an increase of 67 per cent adolescent childbirths from 2010 to 2030. That will give an increase from 5.4 million in 2010 to 8.9 million in 2030 with 1.1 to 1.8 million yearly increased respectively.

2.5.6 Assessment of Adolescent Pregnancy/Childbearing in Nigeria

Nigerian population census of 2006 reported that adolescents constitute 22 percentage of Nigeria's populace. Studies have cited that adolescent birth is a chief contributory element to excessive total fertility rate (TFR) of Nigeria in addition to Nigeria's rapid population increase (Makinwa-Adebusoye, 2006). The NPC and ICF International (2014) report indicates that overall, the fertility rate of adolescents aged 15-19 continuously increased in Nigeria with a slide decline in 2008. The report confirmed that rural fertility rate of adolescent in Nigeria has remained always high and chronic while compared with city location.

Ajala (2014) in his study of teenage pregnancy and fertility in Nigeria showed that adolescent fertility increased in 2003 more than what it held in 1999 but decreased in 2008. His study revealed that fertility rates reduction within the three round years' periods largely occurred in the urban area giving a one and a half times reduction below fertility rates of rural setting. This indicates that in Nigeria, high fertility rates occur in the rural area than urban area and are associated with personal, cultural and environmental factors that exposed adolescents to early childbearing. The World Vision (2013) study of early marriage in fragile States indicated that Nigeria is one of the topmost countries in the world with a very high incidence of early marriages among adolescents of ages less than 18 years.

A study conducted by Makinwa-Adebusoye (2006) and Osakunle and Tayo-Olajubutu (2017) highlighted that the desire for virginity among girls and cultural expectation of sex within marital union are key to early marriages, pregnancy and motherhood among adolescents in Nigeria. This implies that people in this part of the world placed value on virginity and have negative perception against any adolescent girl who involve in premarital sex. The implication would also be that men may hunt adolescent girls who

they believed to be virgin to have as wife or sex partner. Consequently, this increases fertility among adolescents, classified among vulnerable groups in maternal health literature.

The National Population Commission and ICF Macro (2009) indicated that 75 percent of women aged 15-25 years are in marital union or have ever married in Nigeria. The implication is that fertility would also be high among this age category given that many married girls or women in Nigeria are classified among those with high contraceptive unmet needs (NPC and ICF International, 2014). Makinwa-Adebusoye (2006) and Adamuet *al.* (2011) explained that many pregnancy and childbirth among adolescents in Nigeria have contributed largely to academic backwardness among girls in the country and have made a lot of them to possess fewer or no skills to earn reasonable income in the future. The Action Health Incorporated (2011) revealed that among the core northern states, including North-East and North-West regions have a very high incidence of adolescent childbearing that are within marital union. As a matter of fact, the survey showed that adolescent girls in northern Nigeria married about 4 years earlier than their counterparts in the southern Nigeria.

The CommunityBased Support [CUBS] Project for Orphans and Vulnerable Children in Nigeria (2010) showed that maternal risks associated with early pregnancy and childbirths in the southern Nigeria can be equated with that of the Northern Nigeria, notwithstanding the fact that adolescent pregnancy and childbirths in the northern states are more likely to occur within marital union. Babafemi and Adeleke (2012) in their study of teenage pregnancy in Bayelsa State found that the stigma initially attributed to early premarital childbearing is gradually declining but noted that the health consequences associated to early pregnancy and childbirths remained and are found reflecting on young adolescent mothers and their children. They noted that in some culture, adolescent pregnancy is beginning to take a normative stance and their children considered 'god-given gift' that should be well taken care of.

A report of the Action Health Incorporated (2011) showed that in Northern Nigeria, parents or guardians who wish their children to continue education beyond secondary school adopted the strategy of giving out their children hand in marriage so that the education of their children could be sponsored by their husband while they are in pre-nuptial agreement. Ajala (2014) in his study of teenage girls noted that in northern

Nigeria, there are existing interventions that aimed at encouraging adolescent mothers to further their education after delivery. A study by Action Health Incorporated (2011) showed that there are ‘Adolescents-Friendly Schools’ in some states of the north, namely; Yobe, Bauchi, Adamawa and Borno in the state capitals that encourage married girls to return to school.

A report from the National Population Commission and ICF International (2014) indicated that adolescent pregnancy and childbirths are among the major issues affecting adolescent population in Nigeria and have exposed many to high risks of maternal morbidity and mortality, and their children not excluded from the child health risks and complications. This indicates that adolescent pregnancy and childbirths do not only affect adolescent mother, it equally negatively affects the health of their children with some having lasting consequences. Ajala (2014) in his study noted that about 3 out of every 10 adolescents in Nigeria are married. In his analysis of the 2013 NDHS data found that in a year time preceding the survey, 19.6 percent of adolescents have had premarital sex and about 4 percent currently pregnant or have had a child. His study revealed that despite low record of cohabitation, previously married and not currently living with a man, about two-thirds of adolescent within these categories were currently married or have had a child.

Ajala (2014) in his teenage study found that adolescents who have never married or were previously married by not currently in marital union were less likely to be currently pregnant compare to those in marital unions. This indicates that pregnancy is more likely to occur among adolescents who are currently in marital unions than among those who are outside marriage. This means that adolescents in marital union are more likely to have unprotected sex or frequent sexual intercourse than those outside marriage. As a matter of fact, Ajala in his study found that marital status was the only variable that significantly influences adolescent pregnancy. He also found that childbearing among adolescent girls increases with age with younger adolescents less likely to have childbirths compare to adolescents aged 19 years. He explained that the proportion of childbearing is more likely to increase along with age of girls given that the older the girls are, the more they are exposed to longer sexual duration that may come in form of marriage, cohabitation or sexual partnership.

Ajala (2014) analysis of 2013 NDHS data found that adolescent pregnancy and childbirths were associated with poverty. He realised that adolescents from the poorest households were more likely to be pregnant and give a child compare to adolescents from the rich households. His study indicated that poverty may likely be a reason for becoming sexually active or marrying early. The poor are also more likely to stop schooling and pregnant or marry while the rich are more likely to continue schooling. Education is a major factor that can delay marriage or pregnancy among adolescents. As a matter of fact, Ajala (2014) found that adolescents with secondary education were significantly less likely to become pregnant or have a child compare to those with no formal education.

2.6 Factors that Influence Pre-marital Pregnancy of Adolescents

It is essential to review existing studies on related factors that determine pre-marital pregnancy among adolescents. The World Health Organisation (2016) indicated that poverty, lack of education, non-contraceptive use and cultural practices influence adolescent pregnancy in the world, especially among the less developed countries. The agency found that more than 16 million adolescent pregnancies occur each year, accounting for about 11 percent of all births in the world. It highlighted that while ninety-five percent of the births occurred in low- and middle-income countries, more than 50 percent occurred in sub-Saharan Africa. The agency indicated that half of every adolescent pregnancy occurs in just seven countries of the world: the Democratic Republic of the Congo, Bangladesh, the United States, India, Brazil, Ethiopia and Nigeria and are highly being influence by personal and social factors.

The United Nations Population Fund (2013)'s study showed that that the factors that determine early premarital sex among adolescents include peer pressure and poverty. It reported that the proportion of girls with pregnancybefore age 15 years varies within regions. Particularly, in sub-Saharan Africa: Sierra Leone (13.6%), Mozambique (9.8%), Nigeria (6.5%), the Democratic Republic of Congo (4.3%), and Rwanda (0.3%). This implies that Nigeria contributed about 7 percent of adolescent pregnancy in sub-Saharan Africa. It also means that Rwanda contributed the least with less than 1 percent among the six countries mentioned.

The World Health Organisation (2014) identified lack of contraception among unmarried adolescent as key factor that influence premarital pregnancy among adolescents. It showed that some adolescent pregnancy is intended, while others are not. According to the agency's report, the intended ones are most likely to be within marriages and are commonly found in societies where child marriage or early marriage is practice. It identified sub-Saharan Africa as one of such regions with intended pregnancy within marital union and associated it with early marriage. It showed that adolescent pregnancies which are intended are mainly due to social and cultural norms. It indicated that among the unmarried adolescents, pregnancy is more likely to be unintended and to end in unsafe abortion. It also identified factors such as non-consensual sex and non-contraceptive use as determinants of pre-marital pregnancies among adolescents.

Obono and Obono (2009) study of mass exposure and reproductive behaviour of adolescents in Ugep, Nigeria identified social media, liberal sexual norms, poverty and pressure of urban lifestyles as factors influencing adolescents' sexuality. Fawole (2011) study of adolescent sexual and reproductive health in Nigeria identified drug abuse as key factor determining adolescents' sexual behaviour and pregnancy in Nigeria. Isiugo-Abanihe, Olajide, Nwokocho, Fayehun, Okunola and Akingbade (2014) study of adolescent sexuality and life skills education in Nigeria noted that poor knowledge of young adolescents of their sexual and reproductive health issues account for adolescent sexuality. It highlighted that several international conventions and agreements to which Nigerian government is a partner have expressed strong interest in educating Nigerian adolescents to reduce early pregnancy and childbearing among adolescents.

The Federal Ministry of Health (FMoH) (2004) survey of national HIV prevalence and sentinel across Nigeria States found that lack of integration of adolescent reproductive health in policy formulation and implementation is key to harmful exposure of adolescent to premarital sex, early pregnancy and childbirth. It indicated that one of the targets of the 2004 Nigerian national population policy was to increase the integration of adolescent reproductive health into developmental issues to successfully address adolescent reproductive health and associated needs. This implies that lack of adequate and appropriate intervention of government in adolescent reproductive health issues contributes to high incidence of premarital sex and early childbearing of adolescents

Nigeria. Isiugo-Abanihe (2011) study of adolescent sexuality and sexual behaviour in Nigeria explained that the period of adolescent is a segment in existence where young people are particularly liable to many risks, especially risks related sexuality. He therefore, identified lack of access to adequate and regular counselling services as vital issues affecting adolescent health, sexuality and developmental needs in Nigeria.

Isiugo-Abanihe *et al* (2014) study identified early sexual development of adolescents as a factor influencing earlier pregnancy among adolescents in Nigeria. The study explained that at the age of adolescence, a good number of them are at their most impressionist years when behaviour and personal traits are yet to completely develop. For the fact that they attained sexual maturity earlier than intellectual and emotional maturity and social abilities to understand consequences of sexual activities, they are prone to early pregnancy in as much as they involve in unprotected sex. A study by Federal Ministry of Health (2004) found that ignorance among adolescents has ended a number of them in undesired childbearing and harmful reproductive health consequences. The FMOH (2004) showed that the misconceptions or beliefs that pregnancy cannot occur in the course of first sexual encounter and that the use of contraception will result to infertility are other factors prompting early premarital pregnancy among adolescents in Nigeria.

Isiugo-Abanihe *et al* (2014) study noted that upward push to inclinations of sexual experiment, informal and unprotected intercourse and willful submission to wrongful peer affections contribute to early premarital childbearing among adolescents in Nigeria. A report from the NPC and ICF International (2014) showed that in Nigeria, 21.5 percent of adolescents aged 15-19 experienced first sexual intercourse by age 15 year; about 30 percent adolescents are sexually lively, 23 percent female adolescents have begun childbearing, and about 33 percent have had excessive risky sexual intercourse a year preceding the survey. This indicates that adolescents' early exposure to sexuality influences early premarital childbearing among them.

Berer (1998) earlier study of thematic issues in reproductive health mentioned that determinants of adolescent sexuality is multidimensional, and include the meaning the individual adolescent attached to sex, the identity of the individual, decision to carry out the act, kinds of information acquired, perceived pleasure that would be derived from sex and group of companionship kept. de Francisco, Dixon-Mueller and

d’Arcangues (2007) study of adolescent sexuality in the less developed explained that the factors that influence adolescent childbearing in this part of the world are beyond concerns associated with adolescents’ conducts, sexual companionship and activities. They noted that factors such as socioeconomic and cultural elements that make adolescents prone to chances and manner of indulging in early sex should be factored into consideration. By implication, their study showed that the determinants of early premarital childbearing among adolescents include economic, social and cultural factors.

2.7 Antenatal Care (ANC) Practice

The ante-natal period is the period before childbirth. It is the period of pregnancy. The care given to a pregnant woman or adolescent girl to prevent harmful complications is called antenatal care. The care provided within this period largely determined the survival of the mother and her unborn baby. A report from the World Health Organization (2010b) showed that antenatal care was introduced in 1900s to assist pregnant women/adolescents stay healthy, discover and rectify undesirable conditions, and improve health of unborn babies. The WHO and UNICEF (2003) study showed that the reason for intensive initiation of ANC anchored on the conviction that it is feasible to discover and substantially control the symptoms of illness and mortality at period of pregnancy.

Tran (2012) study of antenatal and delivery care in Vietnam found that a conventional ANC practice includes three vital components namely: the examination of mother and foetus, the preventive strategies or curative health care, and the health care counselling or education. Although, the benefits of ANC seem to be very clear to individuals; the maximum number of visitation and issues related to ANC for low and high-risk pregnancies are debatable, and recommendations differ across countries. For the less developed countries such as Nigeria, for example, the WHO (2016b) recommendations suggested that four ANC visitations, with an emphasis on the first visit which should be within the first trimester for women with uncomplicated pregnancy, should be employed among pregnant women. The recommendations included; the compulsory measurement of blood pressure, urine, and blood tests as well as a non-compulsory measurement of weight and height at each ANC visit (WHO and UNICEF, 2003; WHO, 2016b).

A study by Tran (2012) showed that more than 70 percent of women in the world have a minimum of one ANC visit, and the disparities across nations are huge. His report showed that the ANC coverage is particularly high among the more developed countries (98%) than the less developed countries (68%). The WHO and UNICEF (2003) found that the region with the least coverage of ANC is Southeast Asia, with 54 percent of pregnant women receiving ANC services from modern health facilities. The World Health Organization (2016b) found that in many African countries, less than 70 percent of women attended ANC, and further indicated that most pregnant women attended just one or two visits, and at times lately at pregnancy. This implies that most pregnant adolescents in Africa do not attend modern healthcare facility for antenatal check-ups and those who did are more likely to visit health facilities in their third trimester, which is dangerous to mothers and their unborn babies because it does not provide health professionals with the needed opportunities to check for complications prior to labour/delivery.

Houweling, Ronsmans, Campbell and Kunst (2007) study of inequality in maternity among developing countries found that in the low- and middle-income countries, the richest wealth index accounts for over 80 percent of women who received ANC compare to about 30 percent of pregnant women in the poorest wealth index who received same. This implies that the poor rarely access modern health facilities for antenatal care compare to the rich in the less developed countries. In this case, the factors responsible to unequal access to antenatal care could be associated with income and its attendant effects. The Save the Children (2010) study of world's mothers revealed that most pregnant women who lack access to antenatal services are those who need it the most, and included the poor who reside in the rural environments and urban slums. This implies that those who need antenatal care the most are the poor who are also more likely to lack basic education, exposure, nutrients and other basic necessities that make pregnancy and delivery safe.

Sarker, Schmid, Larsson, Kirenga, De Allegri, Neuhann, Mbunda, Lekule and Muller (2010) study of antenatal care in rural Tanzania and Naariyong, Poudel, Rahman, Yasuoka, Otsuka, and Jimba (2012) study of antenatal care in North District of Ghana showed that the standard of ANC in most developing nations remains extremely poor and requires necessitated improved attempt to achieve the SDG3 by 2030. This means that if there are no adequate and timely interventions to improve antenatal care in the

less developed countries, antenatal care aspects of the sustainable development goal will likely remain unachieved in this part of the world.

According to Nisha *et al* (2015) study of beliefs and practices during pregnancy in Karnataka of India, women were faced with a lot of challenges that had to do with their nutrition and all other aspect of lives. They noted that in India, it is belief that pregnant women/adolescents should not eat cucumber, pumpkin, ragi, and ghee. Babu (1998) earlier study of illness and health care in Madugula Mandal of India found that pregnant women were prevented from eating egg, spinach, red meat, and chicken. Some of the foods identified by these two studies are nutritious and could assist to improve health conditions of pregnant women/adolescents during prenatal period. Stopping pregnant adolescents/women from eating some of the identified foods, vegetables and fruits indicated that cultural practices and beliefs could contribute harmfully to health of adolescents/women during pregnancy.

Neeta, *et al* (2018) in their study of maternal health care in rural Ballari indicated that most mothers agreed that green leafy vegetables, rice, less spice, bread, ragi, jowar, groundnut powder, meats, eggs, fruits like apple, mosambi, and sapota improve the health of mother and child. They noted that with reference to the antiemetic properties of condiments like rasam, corriander powder and red chilly powder, these spices were more routinely consumed during the first trimester. They found that the people of Ballari have a common belief that the food a pregnant woman eats during pregnancy could influence the skin colour of the child after delivery. They also found that most mothers believed that fair skin babies were blessings from the divine and an insignia of social stature. The implication is that cultural beliefs and practices have a way of influencing antenatal care. It could cause harmful effects on mothers and babies or promotes good health of mothers and babies, however depends on the nature of cultural norms, beliefs and practices and how they are upheld by the people.

For instance, Nisha *et al*, (2015) study of beliefs and practices during pregnancy in rural Karnataka of India found that perceptions of the people prompted many pregnant women to drink at least two glasses of milk with saffron every day and night during pregnancy with the hope that it would influence the skin colour of their child when born. On the other hand, Neeta, *et al* (2018) study of maternal health care in Ballari found that food items made of raggi were steered clear of by women in maternity,

despite being nutritious, for fear that such food would cause their baby to have darkened skin. The authors found that green leaf, chicken, and mutton were consumed during the second trimester because they contain galactogogues which is good for the supply of milk to the foetus. In a related study by Raj (2015) among married women in Uttar Pradesh of India, they found that in some other communities in India, ridge gourd, rice, white pumpkin and green beans were considered to have cooling properties and were given to majority of mothers during antenatal period. Raj (2015) found that fish was particularly stressed upon with regard to its ability to improve the intelligence of babies. In the community of study, Raj realised that increasing the number of meals assumed prime importance during the first and second trimesters. His study revealed that this was considered quintessential by most mothers for maternal and child health care. This implies that what is forbidden among pregnant woman in one community may be recommended in another, hence, the need to adequately examine foods' components for sure of non harmful effects on pregnant women before enacting prescription or proscription on specific foods.

Raj (2015) study of pregnancy complication in Uttar Pradesh of India and Neeta *et al* (2018) study of maternal health care in rural VIMS of Ballari found that during the last trimester, food consumption was reduced to cushion abdominal tension. Their study found that when it was closer to delivery, certain foods like eating of meat such as lamb's head was practiced by some mothers because they believed that it would help their newborn baby to attain head control earlier and achieve motor milestones quicker. They found in their studies that there was an increased level of concern by most mothers on consuming certain foods believed to be abortifacients. Some abortifacient foods were specifically restricted during first and second trimester, while certain others were forbidden throughout gestation. This implies that many pregnant adolescents or women would prefer to eat food that would not be harmful to them and their baby. This also means that with adequate orientation and education, antenatal care could be improved in many communities.

Khanal, *et al* (2014) study of antenatal care and iron supplementation found that pregnant women usually select what they eat to avoid excess body weight or their unborn baby being weightier than what they could deliver through normal vaginal birth, to avoid surgical operation. Neeta, *et al* (2018) study of maternal health care in VIMS of Ballari found that foods which may lead to high body temperature among

pregnant women were usually avoided. These foods included fish, raw milk, mangoes, potatoes, and certain fruits. Their study showed that the consumption of Sesame seeds and jackfruit by pregnant women was believed to cause pneumonia in children after delivery. Thus, women were discouraged from eating such substances during pregnancy. They also found that a few mothers avoided the eating of bears because of the fear that it could cause discharge from the ear during pregnancy.

Das (2001) study of coverage of services by women of Jawan Block in Aligarh found that it was a taboo to eat fried foods during pregnancy, hence they were avoided because the people believed that they reduce the regular growth of the foetus (unborn child). The study found that eating of yam was avoided because it was believed that it could cause constipation to pregnant women and their unborn child. In order to avoid certain challenges during pregnancy, these food taboos were highly adhered by women in the communities. Dabade, *et al* (2013) study of maternal health in rural area of Aurangabad District of Maharashtra found that although, many practices of cultural prescriptions and proscriptions were not been scientifically proven to be correct, women were socialized into possessing such perception and undertaking those practices by learning from older women in their society, hence many were forced to adhere to those cultural practices for fear of being labelled and marked by people of their community.

Chukwudeh and Ojo (2018) study of child survival strategies among mothers in Ibadan of Nigeria noted that the reason for upholding food taboos was the belief that it makes pregnant women healthy, and build immune system of the unborn babies. They explained that the health of a mother during pregnancy was a reflection of the health of her unborn child. They found that in Ibadan, mothers consume indigenous herbs called “*agbo*” during pregnancy. They found that it was a belief that the herb helps to ensure child survival until delivery. Their study showed that the women believed that the herb makes foetus to be small so that mothers can have safe and easy delivery.

Neeta *et al* (2018) study of maternal health in rural VIMS of Ballari showed that in India, pregnant women were fed with herbs such as “*Setedua*”, “*Trɔntrɔfo*”, “*Akokɔnyindém*”, “*Abɔwombaeguw’ekyir*”, and “*Eban*”. The people believed that the herbs help pregnant women to prevent anemia during pregnancy. They found that pregnant women were fed with crab, fruit, and unripe plantains in order to make

mother and unborn baby strong. The people believed that consumption of those foods make pregnant women strong and prepare for safe delivery. Neeta *et al* (2018) further found that bleeding during childbirth was responsible for death of many women. To prevent high rate of maternal mortality, “*Shilo*” herbs were given to mothers before and during delivery. The study showed that even after a woman gives birth in the hospital, she still secretly drinks herb to prevent bleeding. This implies that women in the study location placed much value on herbs as one major ways bleeding could stop.

Raj (2015) study of pregnancy complication in Uttar Pradesh of India indicated that in some culture, antenatal care is related with fertility. The study showed that in India women were perceived as containers who are solely used for the production of new infants. He found that this part of the world practice “*sauputravatibhavh*” (be mother of hundred sons). His study showed that it was the society’s ideology that women are designed by God for childbearing and rearing. Therefore, pregnancy was one of the most important events in the life of Indian women. The awareness was raised with routine antenatal visits to receive needed care that will lead to safe delivery, hence, the familiarity of pregnant women with health facilities that will enable them to seek help more efficiently in the case of pregnancy complication. More so, in order to fulfill the role of a “*sauputravatibhavh*”, many females were married at a very tender age. By implication, many young adolescents were exposed to early marriage, pregnancy and childbearing which are detrimental to health, given that they were not matured enough to carry pregnancy to delivery or bear the rigours associated with childbearing.

Jegede (1998) earlier study of African culture and health noted that the age of a female determines her physiology and psychology. This implies that if a female is still young, her physiological and psychological states remain immature to perform certain tasks associated with matured age like childbearing. According to Ufford and Menkiti (2001) study of delivery care in Nigeria, they found that a number of maternal mortalities take place due to early childbearing. Adolescents become more prompt to childbearing complications because their body is not fully developed to withstand the rigours associated with maternity, starting from the period of pregnancy to postpartum (Idowu *et al*, 2011; Ufford and Menkiti, 2001). As a matter of fact, high fertility among young adolescents means that they are more exposed to maternal risks. This is because women who start child birth at an early age are likely to experience repeated childbearing. And the situation is made worse because many females who

start childbirth at an early age, on most cases have immature body capacity for the tasks associated with pregnancy, hence more likely to experience complications and other maternal health risks (Abdul*Aziz, 2008)

Graczyk (2007) study of adolescent maternal mortality showed that younger females or teenagers who commence reproductive experiences are more at risk of maternal morbidity and mortality. His study showed that these groups of young adolescent females were less likely to discuss reproductive health issues with their partners when it is appropriate. The NPC and ICF International (2014) found that lack of adequate ante-natal care in most parts of Nigeria, particularly the northern states and rural areas, has resulted in low tetanus immunisation rates and consequently high prevalence of neonatal tetanus. As a matter of fact, an earlier research, by the 1999 NDHS showed that about two-thirds (64%) of women with births in the three years preceding the survey had received ante-natal care from a health professional. However, a large gap exists between regional, urban and rural divides. The proportion of pregnant women who had no ante-natal care in rural areas was almost four times those in urban areas (37% vs. 10%). Comparing zones, 28 percent of women received ante-natal care in the northeast, in contrast to 82 and 89 percent in the southeast and southwest, respectively. Poor ante-natal care coverage could be found reflecting on the level of tetanus disease in the society.

Bankole *et al* (2009) study of barriers to safe motherhood in Nigeria found that more than 40 percent of pregnant women in Nigeria do not receive ante-natal care treatment from the trained health care provider. By implication, this has serious effect on the health of women in each household. Though, recently there is the desire for small family size, this also has its own danger due to patriarchal system in Nigeria. Chukwudeh and Ojo, (2018) study of child survival strategies noted that if a woman tries to minimize family size, she is likely to be in danger of not having enough children or not having a male child in the process. The desire to achieve any of the two options make many to opt for more children and having many children endangers the live of women, especially in a rural environment where access to medical facilities is limited.

A report from the National Population Commission (NPC) and ORC Macro (2004) showed that many women/girls in Nigeria who have unplanned pregnancy are less

likely to attend ante-natal care because of shame of what people may say and some other related factors. It noted that unplanned pregnancy is usually accompanied with pre-termed delivery, especially in the case of early childbearing. The study found that unwanted births have increased, specifically in the South-South Nigeria. It reported that in the South-South region, 24 percent of unprepared pregnancies were considered unwanted births by mothers in 1990, relative to 55 percent in 2003. The implication is that there is a need for intervention to monitor and control unwanted pregnancies in order to prevent its attendant negative consequences on mothers and children. A study of unintended pregnancies by Marston and Cleland (2003) in five developing countries and a study of barrier to antenatal care by Erci (2003) in Turkey showed that women who did not desire to be pregnant are not likely to attend antenatal care on regular bases.

In the less developed countries, generally there are inadequate health services to cater for pregnancy, ante-natal practices, and births. This constitutes maternal risks for mothers and their children. This is more so likely to be worse among younger women who are less than 16 years of age because early childbearing is associated with obstructed labour and preterm delivery (UNPFA, 2015). The National Population Commission and ORC Macro (2004) estimated that cases of complications among pregnant women/adolescents could be reduced by 11–13 percent if early childbearing is eliminated or controlled. The report further indicated that an account of obstetric fistulas in Nigeria is 2.11 in 1,000 live births. About 28 percent of this is experienced by mothers who are younger than 20 years old. The Nigerian Demographic and Health Survey on the account of childbearing of adolescent younger than aged 18 years showed that the incidence varies across regions in the country but more pronounced among Northern States. For the south-east and south-west, the percentages were lower than other regions. The World Health Organization (2016b) suggested that access and utilization of antenatal care is beneficial to mothers and their unborn children and can substantially influence safe delivery and postnatal health of mothers and babies.

Early or unplanned pregnancy may be destructive to both mothers and children. A report from the UNICEF (2014) suggested that a girl must not be pregnant earlier than aged 18 due to her physical immaturity which is yet set for childbearing. The study revealed that children born by girls who are younger than the age of 18 are more likely to be delivered prematurely with concomitant effects of low body weight or death at

first year of age. The WHO (2006a) highlighted that the rate of maternal death is doubled by female genital mutilation (FGM) and the risk of still birth increase following the practice. Oranye (2002) study of health and illness in Nigeria indicated that FGM is one of the cultural practices of some communities in Nigeria and is impacting negatively on maternal health. According to Onyema (2011) study of maternal mortality in Ngbo clan of Ebonyi in Nigeria found that FGM can have a profound negative effect on pregnancy, causing difficulties, pains and intense distress during sexual intercourse and obstruction at time of delivery.

The former Chairman of Senate House Committee on Health, Senator Iyabo Bello in a meeting held in Ebonyi State, attributed the death of women during childbirth to FGM, and stated that the practice is more destructive to girls or women if undertaken among many at a time, especially at ritual ceremony (This Day, 2001). She explained that for the fact that FGM is mainly performed by traditional medicine men or female birth attendants with insensitivity to disease prevention, hygiene and sterilisation, it is more harmful to maternal health.

Morris *et al* (2014) studied of maternal health practices in Southeast Madagascar found that that the practices, beliefs and traditions of coitus avoidance between 3-8 months of pregnancy to a minimum of three months following delivery among the people of Southeast Madagascar was detrimental to maternal health of women. According to their findings, it was anti-normative in the culture of Southeast Madagascar for the husband of a pregnant woman to have sex with his wife during pregnancy due to beliefs that such intercourse could be destructive to unborn babies. They also found that among the people of Southeast Madagascar, it was normative for a man to have affair with his wife within the months immediately following delivery; the period which to some other cultures are considered delicate for sexual penetration.

A study of maternal health by Idowu (2011) in Nigeria showed that it is established that some women of child bearing ages are faced with challenges resulting from beliefs which they practice. They found that many women die in Nigeria due to delay in attending ante-natal care because they were constraints by their belief system. They also noted that in a patriarchal society like in Nigeria, many women wait for their husband to take decision on either to attend ante-natal care or not. The delay in attending basic antenatal care has endangered the life of many reproductive women in

the country. Erinosho (2005) of Nigeria noted that culture influences the behaviour of people on issues related to health and illnesses and their actions towards maintaining good health. Noteworthy that culture factors include ante-natal and post-natal practices, gender norms and nutritional taboos, especially during pregnancy, child marriage and early pregnancy, birthing activities and female genital mutilation.

Kitts and Roberts (1996) in an earlier study of pregnancy and reproduction showed that cultural practices have endured the test of time and are still widely held in many societies. One of such could be male child preference in the Africa societies. Michael and Scent (2017) study of desire for less children in Nigeria showed that male preference factor still constrains women's decision on the number of children they desire and the birth spacing to practice. This implication is that women reproductive experiences are mainly determined by the cultural norms and value that have placed men in position of authority over women. The UNFPA (2000) showed that women are usually afraid of their husband actions when embarking on any kind of maternal care. This implies that the culture of the society has influence on maternal health choices, information and quality of life of women.

Kowalewski *et.al* (2000) study of women at risk of health care found that health needs are shaped by different taboos which restrict women from discussing and taking certain decisions that affect their own lives, especially during pregnancy. Their study showed that in most homes, it is the husband that takes health decision for the wife. This depicts that that most women are dependent on their husband to attend ante-natal care, take specific medications and involve in all other reproductive health issues. Kowalewski *et.al* (2000) found that this also contribute to delay in accessing medical care in time of illness. A report from the UNFPA (2000) showed that women in some part of northern Nigeria are restricted from attending orthodox care during pregnancy because of fear of being attended to by male doctors. This study indicated that this is not limited to period of pregnancy alone as it is a taboo for women to raise public opinion over reproductive health issues in communities. The study noted that it is more damaging when it has to do with menstrual anomaly and bleeding that require urgent attention. Hence, such restriction only endangers the lives of woman and exposes them to reproductive health risks.

Otooet *al*, (2015) study of food prohibitions during pregnancy in Western Ghana found that pregnant women were not supposed to come close to fire, prepare food with firewood because they believed that it could cause miscarriage or make the baby to have a long cord. Evans (2013) study of maternal mortality in the less developed countries found that in some clans in Ghana, pregnant women are not expected to tie wrapper or cloth around the chest because they believed that it could make the baby to have cord around his/her neck. He found that among pregnant women, they were not expected to expose breast to each other (a pregnant woman should not expose her breast to another pregnant woman). This was because of the belief that when a pregnant woman exposed her chest to the public or to another person, it is possible that an evil spirit can attack the foetus and kill the unborn baby.

Parmar *et al* (2013) study of taboos during pregnancy in Surendranagar District found that a pregnant woman was not allowed to help anyone to offload a burden from his/her head. Even when a woman fetches water from the stream, she is not supposed to help anyone to carry his/her load to his/her head or offload. They believed that by doing so it could affect foetus and kill the baby and the mother. In the same clan, they found that pregnant women were not allowed to carry heavy load for fear of miscarriage. This depicts that cultural practices surrounding pregnancy are widely held, upload and passed down from generation to generation. For instance, in Kwame in Ghana, it is widely belief that a pregnant woman should not allow anybody to pass behind her. It is the belief that when a person passes behind a pregnant woman, all the ill luck of that person will be transfer to the unborn baby. In this community, it was the norms for pregnant women not to cross their legs, for pregnant woman who crosses her leg, her baby may not walk on time or may not walk at all. Furthermore, a pregnant woman who eats while standing up, her baby is likely to stretch all the time after birth (Otooet *al*, 2015).

Another practice that captivates is the study findings of Omane-Adjakum (2010) in Ghana that a pregnant woman should not kneel down in front of anybody. This is because such act could delay the ability of the baby to walk after birth and the baby could even turn to cripple because of such act of kneeling down by the mother during pregnancy. There are so many practices during pregnancy and these practices are shaped by the belief system of the society. For instance, a study revealed that during pregnancy many women used herbs for different purposes such as consuming

Adaade for easy labour, and *Shilo* (white clay) to prevent labour (Otoo, Habib, and Ankomah, 2015).

2.8 Child Delivery Care Practice

A pertinent issue during child delivery is the care of skilled birth providers. According to World Health Organisation (2004), skilled birth providers or attendants are healthcare professionals such as doctors, midwives, or nurses, who have been trained and found knowledgeable about the management of normal child delivery and the postpartum challenges that accompanied delivery, thus, they can detect health challenges and proffer emergency services to patients or transfer such to a superior health care provider.

Consequent on the sequence of methods based on pending and confirmed evidence supporting maternal practices, PAHO and USAID (2007) proposed that: after delivery, the infant should be immediately dry, and place lying face down on the mother's tummy. The infant should be kept covered with a dry towel or cloth to inhibit loss of heat. In a situation where the newborn is limp, pale, or breathless, such should be kept at perineum to permit adequate flow of blood and oxygenation while maintaining resuscitations. The health care provider should provide early clamping of cord if necessitated to save mother and child health. In addition to this, the infant should be given oxytocin immediately following delivery and pulsations of cord is ceased (about 3 minutes after birth). The cord should be clamped and cut following strict hygienic techniques. Following this, the infant should be placed on the chest of the mother, lying face down, while the skin of the infant touches the skin of the mother. This allows the skin of the mother to regulate the temperature of the newborn. The mother and the newborn should be covered with a cloth or towel that is dryly warmed to inhibit loss of heat. Cap or cloth should be used to cover the head of the baby.

The PAHO and USAID (2007) further recommended that the delivery of placenta should be guarded by umbilical cord traction and uterus counter-pressure. While this is on, the uterus should be massaged by the tummy following the placenta delivery. In furtherance, the uterus should be palpated by the belly per 15 minutes for a period of two hours within discovery to ensure positive firmness while vaginal bleeding is also observed for quantification. Major objective should be at delaying routine procedures

such as weighing or bathing for a minimum of one hour after delivery to permit the mother and the newborn to remain in an unbroken skin contact, while breastfeeding begins. Where need be, the nurse midwife should help the mother with the first breastfeeding exercise, with attention directed at being receptive to the mother yearning for modesty.

An earlier study of childbearing in America by Leavitt (1988) showed that historically women were being assisted by their fellow women during labour and delivery, however noted that over years women have begun to delivery in the hospitals or clinics rather than at home. He explained that the transition to modern care during childbearing is not what introduce delivery support, but has helped to improve existing norms of providing delivery care. His study revealed that prior to 1950s when a woman is in the labour room; her husband was not allowed to go in with her. He explained that this was not limited to hospitals or clinics, but was equally applicable to home deliveries. The husband was meant to be downstairs or remained in another room in the apartment. In the case of hospital or clinic, the husband was to sit in the waiting room because it is believed that a woman who is in labour need her partner around her to ease the stress of labour during time of delivery. Notwithstanding, today experts have debated that it causes no harm to a delivery woman if her husband is in the delivery room with her in as much as she desires his presence, and that it eases delivery.

Vernon (2013) study of men at birth indicated that obstetric care could subject women to institutional routines, especially if not supported by emotional care. The effects include difficulty in labour. The provision of needed emotional support and relevant information do promote successful labour. Likewise, the provision of women with feelings of control over themselves. The implication is that supportive labour reduces the call for obstetric intervention. The study indicated that health workers, husband/partner or family member could provide the needed care in as much as the woman/adolescent in labour desired for it. The study showed that participation of the child's father during delivery contribute to better birth outcomes provided child's father is not excessively anxious.

2.9 Postnatal Care (PNC) Practice

The postnatal periods are the days or weeks following delivery of a child. It continues for the first six weeks after delivery. The care provided within this period is very essential to the health of mothers and their newborns and referred to as postnatal care (Collins Dictionary of Medicine(2005). A report from the World Health Organization (2014) indicated that significant changes usually take place within the postnatal period and often decide the health of mothers and newborns. It mentioned that despite the importance of PNC, the period is usually largely ignored by many in seeking adequate health care. The report suggested that inappropriate care at the postnatal period may result in substantial illness or loss of life of mothers and children. It indicated that the proportion of professional care services is usually lesser at postpartum than at antenatal and delivery periods. Consequently, the report showed that significant number of maternal and newborn mortality does happen at postnatal period.

The World Health Organisation (2013)'s postnatal care recommendations for newborns and mothers stated that following a non complex vaginal delivery in medical services, mothers and newborns should be provided care in the medical centre for a maximum of 24 hours subsequent to delivery. It emphasised that if delivery is in a health facility (i.e. hospital or clinic), mothers and children must be provided with after delivery care in the health centre for a maximum of 24 hours following delivery, but in a situation where delivery occurs at home, the first postpartum services have to be as timely as possible within 24-hours of delivery. A minimum of three more postnatal services are also suggested for every mother and newborn on: day-3 (48–72 hours), between day 7–14, and 6-weeks after delivery. Home visitation within the first week of delivery was recommended for adequate provision of healthcare services for mothers and their infants.

Langlois *et al* (2015) study of postnatal care in low- and middle-income countries indicated that post-natal period which is the six weeks after child delivery is as important to the life of a woman just as the time before her delivery. According to them, this is because of the many problems faced by women during this postnatal period. The implication is that the postnatal period is as important as any other phases of childbearing, hence should be provided adequate care to safe life of mother and her baby. Otoo, Habib, and Ankomah (2015) study of food prohibitions during pregnancy in Western Ghana indicated that in some African societies, women are not allowed to consume solid food after delivery. Neither do they eat balance diet after given birth,

but rice and curry which are preferred for the first seven days after delivery. Their study indicated that prescription and proscription beliefs emanated from the elderly women who lived in the same households with the newly delivered mother. Their study also showed that among the community of study, foods were restricted to two times a day following delivery because it was believed that excessive food-intake may cause constipation to breastfeeding infants. Hence, the assumption that reduction in food intake helps mothers' womb to heal.

Again Otoo, Habib, and Ankomah (2015) in their study of food prohibitions during pregnancy in Western Ghana found that delivery mothers were only allowed to eat rava-ganji for 48 hours after delivery. On the 3rd day, they can only eat rice, ghee and roti till 15th day of post delivery. However, noted that in some cities in Ghana, milk, meat and chicken were given to delivery mothers to increase production of breast milk for babies' consumptions. Spicy foods were prohibited because they were believed to cause constipation, increase body heat and cause risks to new born babies. They highlighted that the prescription and proscription practices after delivery have nutritional implications for the newborn babies and mothers. For instance, the foods that were perceived to increase breast milk were encouraged immediately after delivery. The foods include snake gourd, sorrekai, raggi-mudhe, ground nut, ghee, milk, meat and ginger. They found that the eating of fishes was highly forbidden because the perceived that the bone in the fishes could injure the throat of the newborn infant during feeding.

Otoo, Habib, and Ankomah (2015) study indicated that the stomachs of delivery women/adolescents are usually weak after childbirths and excessive disturbances due to water consumption are not ideal for mothers who have just given birth; thus, a cup of water was recommended for the first three weeks following delivery. They noted that anything contrary was prohibited among the Ghanaian population studied. They indicated that in some quarters of Ghana, mothers believed that excessive consumption of water after delivery cause protracted long vein in breast feeding babies' body. The consumption of warm water was not also encouraged. Mothers who just gave birth were encouraged to drink only cool water to revert the womb back to its normal state. They found that in some clans, the women who just gave birth were not allowed to eat with other family members because of the fear that someone may inflict evil on their newborns, therefore, endangering the life of mothers and their babies. As a result, the

newly born mothers ate alone for the first 90 days after delivery. More so, they found that having sexual intercourse after childbirth was perceived to endanger the health of baby, because they believed that sperm could enter the mouth of the newborn baby during breast-feeding process and this could increase the risks of babies' dying before their five years of age.

Abuidhail (2014) study of postnatal practices among rural Jordanian mothers found that the main reason many mothers underutilized postnatal care from modern health facilities was the importance placed on traditional beliefs over modern health care. Cheng, Fowles and Walker (2006) study of postpartum care in the United States found that the practices of wrapping and breastfeeding newborns are imbedded in the cultural norms of the people that such a practice increases bond between mothers and infants, and that it is impossible to separate body, spirit and mind. Today, the practice is recommended in modern health care and referred to as kangaroo care. Fogel (2017) study of inadequacies in postnatal care noted that due to lack of comprehensive strategic plan that encourages mothers to seek and obtain postpartum care, many mothers suffer from post natal depression with lack of knowledge of its symptoms. Langlois *et al* (2015) study of postnatal care in the less developed countries indicated that mothers' unpreparedness for the required postnatal care after delivery could be connected to poor knowledge of its benefits.

Langlois *et al* (2015) study of postnatal care showed that in countries such as Lebanon, postnatal care services have increased due to increased education on its importance. However, noted that some mothers still prefer the familial and midwifery supports, especially in the rural settings. Langlois *et al* (2015) opined that it is in line with this subscription that the World Health Organization suggested that lack of education, poverty, and limited access to health-care facilities are associated with low use of PNC services. This implies that it is well established that postnatal care services is depleted by poor socio-economic status of mothers. Goyal, Gay and Lee (2010) study of socioeconomic status, prenatal and postnatal depression indicated that mothers' level of education, financial status and exposure influences mothers' awareness and knowledge of postnatal depressive symptoms. Clark, Frijters, and Shields (2008) in their study of income, happiness and utility suggested that primiparous and multiparous women who are younger with low income and less education are likely to experience depression due to poor knowledge of its symptoms after childbirth.

Ngunyulu and Mulaudzi (2009) study of indigenous practices of postnatal care in South Africa noted that in South Africa there is a great concern about the health of mothers after they had given birth. They indicated that as a result mothers were not allowed to engage in physically exhausting activities after delivery in order to recover emotionally and health wise. They highlighted that the primigravida women were given special consideration by their immediate family members because many of them seemed to be inexperienced at the time of delivery. Ngunyulu and Mulaudzi (2009) further noted that the women were not allowed to engage in household activities, including washing of clothes fetching of water for household use and other related activities. Studies showed that the practices of not allowing a postpartum mother to engage in any household activities after childbirth was also found in Nigeria and Bangladesh where mothers who just gave birth were restricted to their rooms in order to recuperate and regain their well-being (Olds, London, Ladewig and Davidson, 2004; Obikeze, 2005).

Armstrong and Edwards (2004) study of pram-walking exercise in postnatal period and Cronje and Grobler (2003) study of Obstetrics in Southern Africa suggested that women who are at their post-natal period should be allowed to engage in physical activities in order to build their muscles. According to Armstrong and Edwards (2004), exercise by post-natal mothers is a way of helping the women to enhance circulation of blood in their body, and improve their psychological well-being. Olds *et al*, (2004) noted that in Bangladesh, the high rate of uterine involution among post-natal women has been associated with engaging in serious physical activities after birth like carrying of heavy water or firewood on their heads. The strenuous activities caused uterine prolapsed and uterine involution in post-natal mothers in Bangladesh, the authors noted.

Ngunyulu and Mulaudzi (2009) study of postnatal care in Limpopo Province of South Africa indicated that it is a well-known fact that after delivery some women experience haemorrhage, breast problem, puerperal sepsis, and retention of the placenta. In view of these challenges, many women have designed various means to manage them. In their study, they found that in South Africa, the tummy of women is usually tied for several days following delivery. They do until the bleeding stops. In the same study, they found that in some other part of the country, a post-natal mother is forced to sit on a hot coal or hot water or any hot object to cushion the effect of expected bleeding

after delivery. According to their findings, the practices were often instructed by traditional practitioners.

Aside from bleeding which is a common occurrence after delivery, there is also the tendency for post-natal mothers and their children to get infections because postpartum period usually delicate for both mothers and their children. Ngunyulu and Mulaudzi (2009) study of postnatal practices in South-Africa found that after seven days of delivery, mothers were given water mixed with salt to drink in order to prevent sepsis or infections. The mothers were also encouraged to do salt bathing (using salt water to bath) in order to cure prevent or cure postnatal infections. They noted that during the period when mothers were treated from infections, they were not allowed to handle their baby for a long time. They found that the babies were also bathed with salt water to prevent mother to child infection. A separate basin was used for child bathes and caring because at that point in time, newborns' immune system was considered still weak to withstand infections. They found that in a situation where a mother has virginal tear during delivery, a local plant called "*munywana*" was boiled with salt water and dipped into her virginal for quick healing of sores. This explained the reason post-natal mothers are usually advised to bath with hot water (Costello, Osrin, and Manandhar, 2004).

The delivery of the placenta is the third stage of labour and this occurs at the post-natal period. A study by Ngunyulu and Mulaudzi (2009) in Limpopo Province of South found that a hot slippery vegetable drink called "*dinda*" was given to postnatal women immediately delivery to assist in pushing the placenta out. They found that if there was a challenge at this stage causing delay in placenta removal, the mother was given an empty bottle to blow continuously until the placenta fall out or in some cases, the mother was told to sit on a cooking stone and cough continually while sitting until the placental comes out. In a situation where there was a retained placenta, the traditional birth attendants will give the post-natal mother an herb called "*mahurumeje*" to help induce placenta delivery to avoid any further damages it could cause to the woman. They found that sometimes, medications which induce vomiting were given to the woman to make her vomit. This was associated with the beliefs that it will expel the placenta with ease. They also found that in some of the rural settings, charms were tied around the waist of the postnatal mother to induce placenta labour or pulled the placenta manually with hand.

In a study by Obikeze (2005) among the Igbo of Nigeria, they found that traditional birth attendants usually pat post-natal mothers on their thighs or beat them on the head and waist to stimulate an emotional reaction that will help to forcefully push out retained placenta after delivery. In a study by Ngunyulu and Mulaudzi (2009) in South Africa, they found that if mothers experienced abdominal pain after delivery, a hot local vegetable called “*mukhusu*” was administered to cushion the pains and reinstall mothers to normal state prior to delivery. This indicates that cultural beliefs and practices influence postnatal period of mothers and determine largely their health condition after delivery. Piperata (2008) study of postpartum practices found that in many societies of the world, the post-partum period is sensitive and requires considerable attention to protect health of mothers and babies. Polat (1995) earlier study of folk medicine among people of Sivas Ulas found that many women in Africa prefer care from traditional health providers during post-natal period because of inability to afford hospital expense, long distance to health facility, lack of health insurance and delay in accessing care in public health facilities.

2.10 Theoretical Framework

This study is hinged on two theoretical perspectives – the Subcultural and Rational Choice theories. Both perspectives provide appropriate explanations to the determinants of premarital childbearing and maternal healthcare practices among young adolescents in Akwa Ibom State.

2.10.1 Sub-cultural Theory

The Sub-cultural theory conceives premarital childbearing among young adolescents as a behaviour that contradicts acceptable cultural beliefs of the people. According to Cutler (2006), subcultures are clusters of adolescents with non normative form of adjustment to societal norms in a manner that is detestable and contradictory to that of the mainstream culture. Adolescents within the subcultural perspective are noted for the exhibition of behaviours, actions and beliefs that oppose the general assumptions of dominant culture. The application here further indicates that premarital sex and childbearing among young adolescents are distinct behaviours that deviate from the mainstream culture of Akwa Ibom State which perceives sex and childbearing as socially accepted only among adults in marital union.

Gelder (2005) refers to young adolescent subcultures as groups of people that are in some way represented as nonnormative through their particular interests and practices, through what they are, what they do, and where they do it. Gelder reveals how the entire society such as Akwa Ibom State views pregnant young adolescents or mothers, and how they are categorized and isolated as “subcultures”. The theory supposes that although subcultures partake in constituents of the mainstream culture, at the same time they are distinct from it (Brake, 1987). This theory uniquely influences the study of adolescent deviant behaviour in Akwa Ibom State on aspects of premarital sexual initiation and childbearing. It explains young adolescent childbearing in Akwa Ibom State from the cultural enclave of delinquency. It argues that adolescents in Akwa Ibom State have generated a culture with its normative values converse to that of the main culture. It explicates that the subculture emanated when adolescents from subordinated social and economic status struggle to acquire success in the state. It opines that the inability of adolescents to attend successes spring up adolescents’ association with deviant practices in order to find success and status enhancement within their community or state. It perceives delinquent subcultures strategies as “non-utilitarian”, “malicious” and “negativistic” (Cohen, 1955:25) given to it connections with frustrated adolescent status as a way-out technique (Macdonald, 2001).

The theory further identifies poverty as one of the substantial indices of adolescent delinquency, particularly with a combination of fathers absent from homes, clearly reflecting the situation of things in Akwa Ibom State and many other states in the country. According to Nwalozie (2015), the absent of mothers or working mothers came in for criticism later. The perspective explains that adolescent delinquency is particularly grounded in local traditions with low socio-economic individuals (Brake, 1987). It considers the entire entity of adolescent delinquency on the basis of groups rather than on individuals (Newburn, 2007). It places deviant adolescent groups in an emblem of societal deviation (Young, 2010).

The theory supposes that young adolescents’ life circumstances in Akwa Ibom State may influence their actions in a way that it becomes detrimental or beneficial to their existence. For instance, Miller (1958) asserts that young adolescents are motivated to engage in premarital sex by their desire for attending valuable ends or materials needs, thus circumventing the disvalue within their most meaningful cultural milieu using the most feasible means. Cloward and Ohlin (1960) uphold that adolescents with

delinquent subculture posses internalized non-rebellious objectives. And, when adolescents are confronted with defective lawful possibilities to objectives and are also unwilling to modify their pursuits, together with experiences of relentless frustrations, they resorted to higher levels of delinquency (Nihartet *al*, 2005). This suggests that unfavourable circumstances and disappointment in Akwa Ibom State may influence early premarital sexual activities and childbearing among young adolescents. However, the inability of this theory to explain the rationale for maternal healthcare practices among young adolescents at various stages of maternity in Akwa Ibom State necessitated the adoption of the next theoretical perspective.

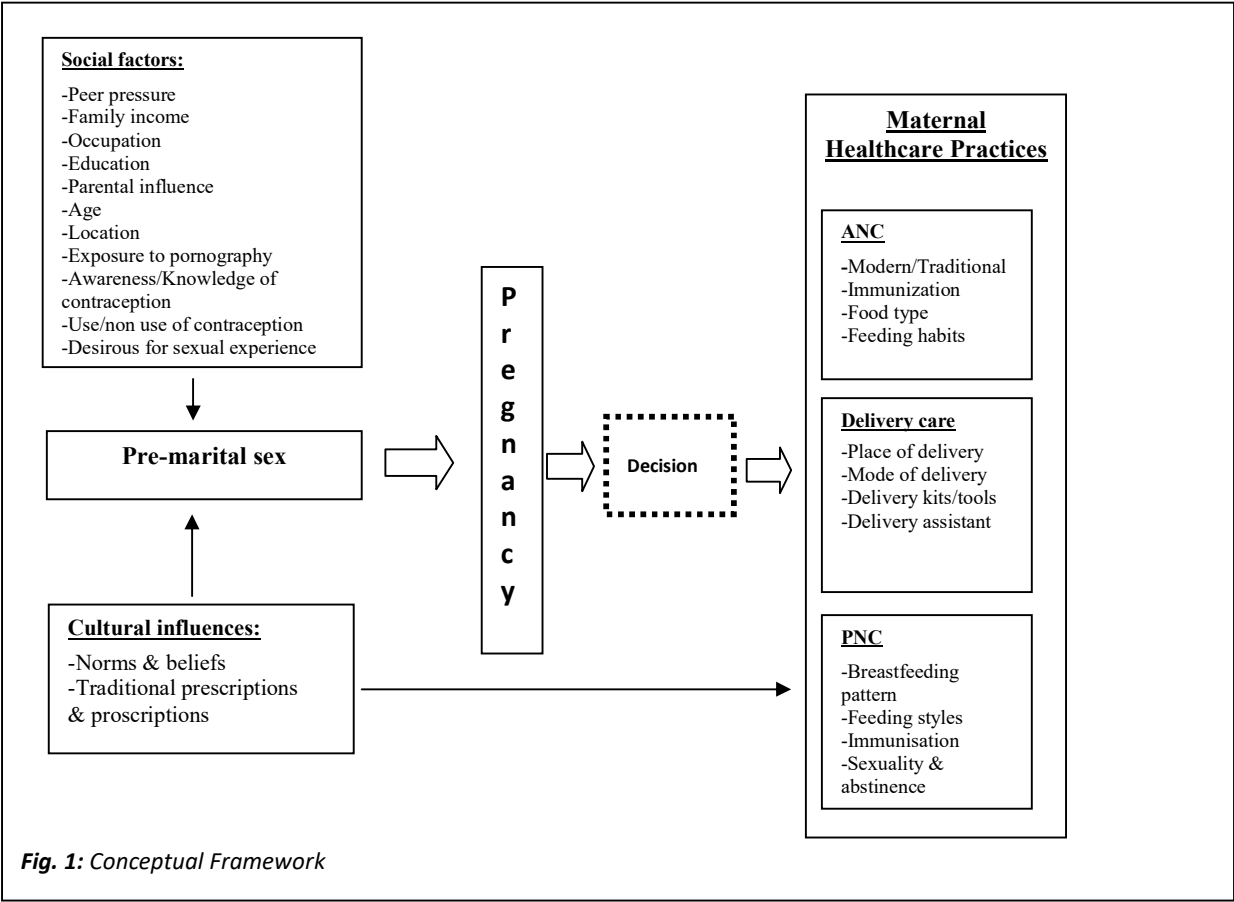
2.10.2 Rational Choice Theory

The Rational Choice Theory employed as the second approach for this study hinges on the assumption that individuals do not act on the basis of accident, but carefully weigh the benefits and costs of an intended action considering available resources (Ritzer 2008; Charles 2010). The theory is of the opinion that an actor who has the privilege of choice between alternative actions, in a social context, chooses an action considered more beneficial than the other, because the other is considered more costly (Nwokocha and Michael, 2015). The application of this theory reflects in daily activities of women/girls in maternity in Akwa Ibom State. Though, the practicability of this approach will make a complete meaning, if actors are aware of the expected healthcare practices at period of pregnancy, delivery and postpartum, and the consequences surrounding their opinion. However, rationality itself is contentious. What appears rational to one may not be to another probably due to variation on availability of information and its concomitant effects on actors' decisions and choices (Heckathorn, 1997).

The relevancy of this theory is grounded on the fact that actions are undertaken to attend goals that are coherent with actors' most preferred choices (Ritzer, 2010). A young adolescent in Akwa Ibom State will choose modern or traditional healthcare or probably decide to choose none of the options base on preference, available information and/or resources, in as much as the choice is perceive greater than the alternative. The implication is that young adolescents or significant others, who may influence their choice of action, will decide to visit medical facility for antenatal, delivery and postnatal care after a careful weigh of costs and benefits, especially in a

state like Akwa Ibom where health care services are paid mainly from the individual's pocket and some functional healthcare facilities distant from the rural area. The theory elaborates that actors will be more likely to seek professional medical care if the benefits outweigh the costs, or choose alternate options such as staying back at home or visiting traditional birth attendant for care if the costs of visiting professional medical facility outweigh perceived benefits.

On the basis of traditional beliefs and practices, such as cultural prescriptions and proscriptions in Akwa Ibom State, the theory impinges that an actor will employ any of such practices, among alternative actions in a given context, if the cultural prescription or proscription is considered more beneficial than the forgone activity. In situations where such Akwa Ibom cultural norms or practices (prescriptions or proscriptions) are considered costly, Coleman contends that "both corporate actors and human actors have purposes". Thus, within the sphere of corporate organizations, "human actors may pursue purposes of their own that are at variance with corporate purposes" (Ritzer, 2010:451). What follows, is the synthesis of the two theoretical perspectives in figure 1.



The conceptual framework synthesises the theoretical perspective of subcultural and rational choice theories with study's objectives to provide basis for the model. The framework mirrors premarital sexual determinants of young adolescents and the rationale for choice of maternal healthcare practices at various stages of maternity. The study has two dependent variables namely, premarital sex and maternal healthcare practices. Beginning from the left side of the framework, the two arrows connected to 'pre-marital sex' shows how predictors or determinant factors influence premarital sex. The predictors include peer pressure, age, location, family income, occupation, education, parental influences, and awareness, knowledge and use of contraception, among others. The arrow linking 'premarital sex' to 'pregnancy' shows how premarital sexual intercourses, especially, the unprotected ones being undertaken by young adolescents result to 'unplanned' pregnancy in the case of Akwa Ibom State.

The framework shows that when pregnancy occurs, the decision for choice of maternal healthcare practices arises. The rectangular shape with dotted lines suggests the stage of decision making. It links pregnancy with choice of maternal healthcare practices at various stages of maternity, beginning from antenatal care (ANC) through postnatal care (PNC). It suggests that at this juncture, an adolescent will seek antenatal (ANC), delivery or/and postnatal care (PNC) from more or less skilled healthcare provider or stay back at home without receiving care from healthcare provider. The framework illustrates how maternal healthcare activities are also been influenced by cultural beliefs and practices, especially in aspects of prescriptions and proscriptions on food, feeding habits, length of breastfeeding, sexuality and abstinence. Although, the shape with norms and beliefs linked cultural influences to maternal healthcare practices from the bottom, in real sense, it is showing that maternal beliefs and practices influence all the three stages/phases of maternity.

The framework showed the determinants of premarital sex in Akwa Ibom State and further demonstrated that in contemplating maternal healthcare practices among young adolescents in the State, the likely effects on the actors should be considered in order for actors to benefit from the positive conclusions arrived at through discourse and negotiation. This is compounded on the fact that, when a particular culture practices healthcare of maternity, they have good intentions to improve health of mothers and newborns. Though, some of the practices, consequent upon knowledge of modern medicines and technologies may seem harmful to health of pregnant young

adolescents or mothers, a better understanding of such cultural activities should be factored into consideration to adequately improve maternal health without necessarily destroying the beliefs and cultural relevancy of the people.

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter explains the procedures employed in planning and organising this study.

3.1 Research Design

The study employed an analytical cross-sectional survey design. The design permitted the collection of data from the sub-sets of the population, the generalisation of the results on the entire population, and a careful investigation of the under studied subject in a single period. The design also allowed for the triangulation of qualitative and quantitative instruments to explore the issues under study. This combination of instruments provided for richer information as each complemented the other. For instance, the qualitative instruments provided more in-depth themes and perspectives on issues which the quantitative instruments could not cover adequately.

3.2 Study Area

The study was conducted in Akwa Ibom State of Nigeria. The State is one of the six States that make up the South-South Geo-Political Zone of Nigeria. It is one of the highest oil producing State in Nigeria. It is bordered by the Atlantic Ocean, Cross River State, Rivers State and Abia State. It lies between latitudes 4°31 and 5°31 North and longitudes 7°35 and 8°25 East. The State has a total land area of 7,245,935km². It is one of the 36 States in Nigeria with an estimated population of 3,920,208 (NPC, 2010), Male: Female Ratio, 50.82: 49.18; out of which 85% live in the rural areas (Federal Republic of Nigeria, 2010).

Akwa Ibom State has a number of primary, secondary and tertiary institutions but many adolescents especially in the rural area are yet to benefit from these educational

opportunities, largely due to poverty and ignorance, hence resulting into many illiterate and less educated majorities. For instance, a report from the Federal Republic of Nigeria (2010) showed that there are 91,307 illiterate adolescents aged 10 -19 in Akwaibom State.

According to Akwa Ibom State Ministry of Health (2010), the rural settings of the State are characterized by poor housing, bad roads, inadequate transportation system, non hygienic environment and insufficient health facilities. A lot of informal healthcare providers operate freely in these settings. The State is religious and its traditional beliefs and practices are largely maintained across Akwa Ibom State. As a matter of fact, the State is uni-cultural. Its cultural norms and traditions are widely shared among the inhabitants. According to the Ministry of Health report of 2010, while the State life expectancy is 49 years, preventive diseases have continued to affect the health of many AkwaIbomites.

Although there has been no state specific population based survey, but relying on the validity of the 2013 NDHS, Akwa Ibom State Total Fertility Rate is 3.9, twenty-three percent of women receive no antenatal care, forty-seven percent receive delivery assistant from a traditional birth attendant, fifty-six percent deliver at home, and thirty-five percent obtain no postnatal care in the first two days following delivery. The survey also shows that 17.9 percent of women between aged 15 and 19 have experienced childbearing; 16.2 percent are mothers while 1.7 are at first pregnancy.

As at 2010, Akwa Ibom State has a total of 182 medical doctors, 1940 Nurses/Midwives, 31 Medical laboratory Scientists, three dentists, 19 Medical laboratory Technicians, 24 Pharmacy Technicians, 238 community Health workers, 36 Pharmacists, three Radiographers, 79 Medical record Technicians, three Ophthalmic Opticians, 12 X-Ray Technicians and 1 Ophthalmologist (Akwa Ibom State Ministry of Health, 2010). These are spread across the 383 Public Health facilities in the state. The state also has 232 registered private health facilities. To enhance capacities, in 2008, the Hospitals management Board sponsored a Manpower Development/Personnel training which involved 33 Medical Doctors including 20 House officers in Teaching hospitals and 75 other health workers. More so, 10 Doctors, 45 Nurses and other support staff variously participated in short courses and Personnel trainings sponsored by SMOH (AKSMoH, 2010). The implementation of the ward minimum health care

package is just beginning in the State with the Federal Model Primary Health Care. The 31 Local Governments of the State are on outreaches in order to reach out to the communities in the riverine and difficult terrains.

There are inequitable distributions of health centres in all the Political Wards of the State. Most of the health centres do not have adequate manpower to provide services. A report from Akwa Ibom State Ministry of Health (2010) shows the precarious situation of health care provision in the State: the Doctor Population Ratio is 1:24,000 while the Nurse Population Ratio is 1:1,500. Most health centres in the State do not have basic medical equipment. The health sector of the State is wide and consists of public and private healthcare providers, and faith-based or traditional health care providers. The structure of these health care providers is varied and involves unregistered and registered providers starting from the traditional birth attendants and sole medicine sellers to modern medical hospitals. In addition, 232 out of the 615 facilities in Akwa Ibom State are owned by the private sector, and account for one-third of primary healthcare facilities (AKSMoH, 2010). Consequently, the State practices multiple healthcare delivery systems, which permits the western and the traditional healthcare providers to function together although with both systems rarely in collaboration. Also, the Akwa Ibom State is currently confronted with challenges of inadequate healthcare services, unplanned pregnancies and births among adolescents, low life expectancy, and insufficient healthcare personnel (Akwa Ibom State Ministry of Health, 2017).

Noteworthy that the cultural norms of Akwa Ibom State do not in anywhere permit or promote premarital sexuality. It discourages childbearing outside marriages. However, it should also be noted that largely given to high level of poverty in the state, a number of adolescents are now becoming pregnant and selling babies to child traffickers to make money. In recent times, a number of babies buying and selling dormitories have been discovered in the State by police and some suspects apprehended (Vanguard News Nigeria, 2016). The child traffickers usually move about in the interior/rural parts of the State in search of pregnant girls to abode, feed and care until delivery, so that they can buy their newborn babies and sell to couples who do not have a child or to ritualists for sumptuous amount of money. This contributed to parents tolerating their pregnant adolescent children, not disgracing them openly, and not sending them away from home compare to decades ago for fear of exposing pregnant adolescents to

child traffickers. This also made a number of adolescents to increasingly involve in premarital sexual intercourse without fear of pregnancy care and its attendant consequences. Given to the fact that child traffickers do not provide standardized maternal healthcare services to pregnant adolescents under their hostage but patronised less skilled birth attendants who are also their staff largely contributes to maternal morbidity and mortality in the state. The implication is that the state of healthcare activities in Akwa Ibom State, particularly as it concerns pregnant adolescents or mothers is precarious and requires scientific investigation. See figure 2 for the map of the study area.

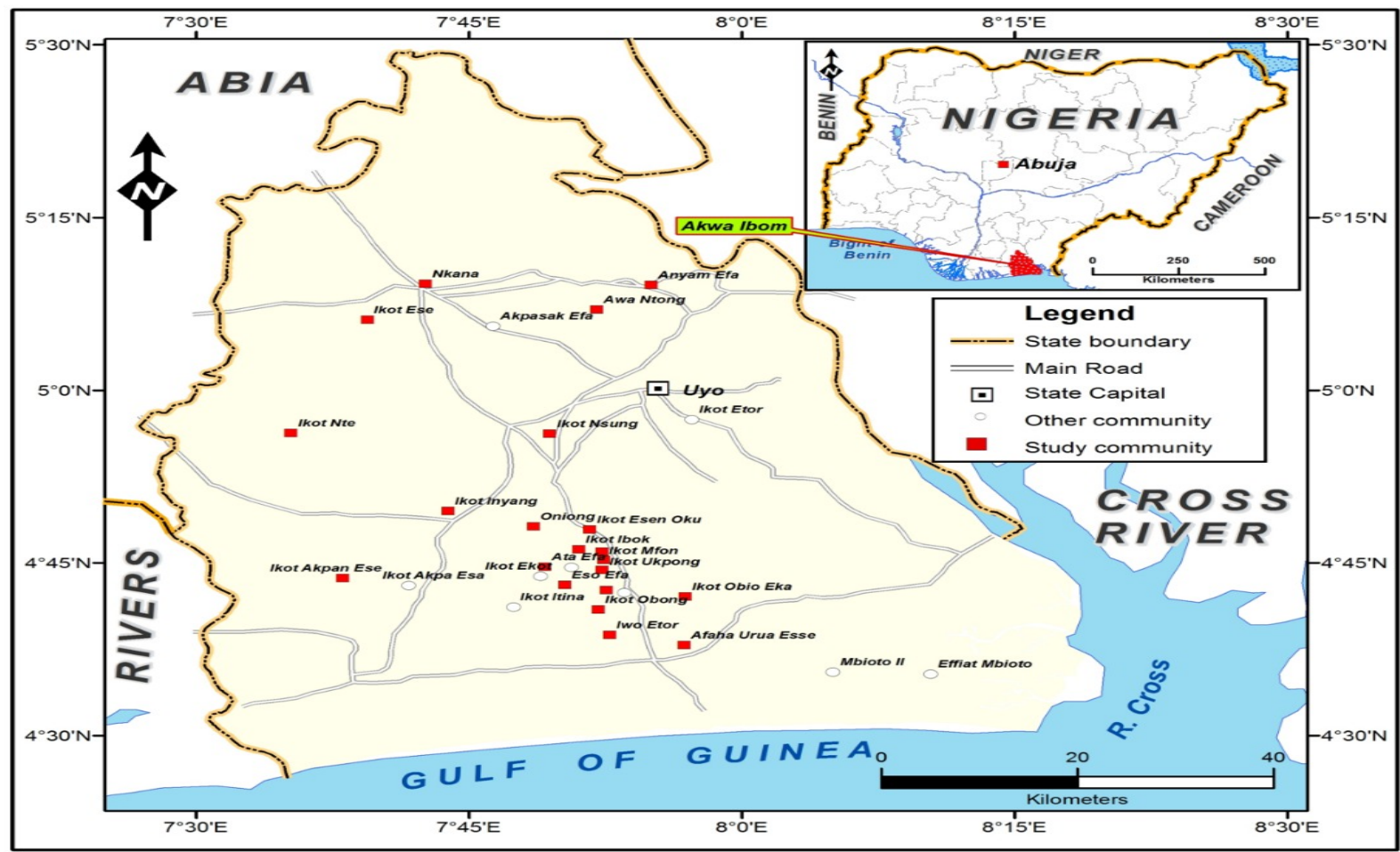


Fig. 2: Map of Nigeria and Akwa Ibom State Showing Study Communities

3.3 Study Population

The study focused mainly on unmarried young adolescents aged 10-16 who were either pregnant or had given birth to at least a child, and had resided in the study area for a minimum of five consecutive years prior to the study. The reason for the five years criterion was to exclude those who were visitors to the study area as at the period the study was conducted. The study population further included fathers of unmarried young adolescents' children, health workers, traditional birth attendants, caregivers (parents, grand-mothers, aunts, and/or other relations), traditional and religious leaders. The latter group of participants were included in order to accommodate more information which aided the study.

3.4 Sample Size

For clarity, the study sample size was sub-divided into quantitative sample size and qualitative sample size.

In aligning with the principle of representativeness as well as statistical sample size determination, Cochran (1977) quantitative sample size determination formula was adopted. The formula states that

$$n_0 = \frac{Z^2 p * q}{e^2}$$

Where n_0 is the desired sample size. Z^2 is the abscissa of the normal curve that cuts an area α at the tails ($1 - \alpha$ equals the required confidence level of 95% or 1.96). e is the expected level of precision ($e = 0.04$). p is the assumed population variance, or variability. Because we do not know the actual population variability, we assume maximum variability (.5), and q is $1-p$.

It should be noted that this formula is essential for calculating a sample for proportions, and it is generally accepted for calculating a population with an assume maximum variability of .5 for populations with no estimated proportion of attribute. Thus, the use of this formula was justifiable. However, base on the yearning for a sizable sample that should yield reliable estimates of the population parameters; the standard error was set at 4% precision. This implies that the risk of error in the

estimation of the sample in this very study was 4 out of 100. It also means that the estimated sample of the study was likely to be correct 96 times out of a hundred. This margin was considered acceptable and has aligned with the 95-confidence level generally permitted in social science research. Thus, $Z = 1.96$, $p = .5$, and $e = 4\%$ (.04).

The computation of the sample size is:

$$n_0 = \frac{Z^2 p * q}{e^2} = \frac{(1.96)^2 [.5 * (1-.5)]}{(.04)^2}$$

$$= \frac{3.842 * 0.25}{.0016} = 600.25$$

With addition of 10 percent (60 questionnaires) to account for attrition, the study sample size was theoretically put at 660. However, subsequent to questionnaire administration in the field, 621 copies of questionnaire were returned and found valid for analysis.

The sample size for the qualitative aspect of this study included 30 IDIs, 12 FGDs and 4 Life Histories. What informed the number of each of the sample size was the nature of this study which required a sizable number of respondents/participants to achieve its aim. Notwithstanding this, for each respondent's or participant's exercise, points of saturation or information redundancies determined the extent to which each of the interviews was conducted. For more details on sample size breakdown, see sampling techniques and table 3.3.

3.4.1 Inclusion Criteria

- i. Unmarried young adolescent aged 10-16 who must have resided in the study area for a minimum of five consecutive years prior to the study.
- ii. Ever-pregnant unmarried young adolescents who were ages 10-16 years.

3.5 Sampling Techniques

Multistage sampling technique was adopted in this study. Based on 2013 NDHS findings, Akwa Ibom State was purposively selected for this study because it has the highest percentage of unmarried adolescent mothers (17.9%) in Nigeria (see table 3.1) to mark the **first stage** of sampling selection. It should also be noted that the NDHS

data has an inclusive minimum age of 15 years for women of reproductive age. Notwithstanding, this reflects why it was important to study adolescents of ages below 15 years which many studies have excluded. More so, Akwa Ibom State has a number of unmarried adolescent childbearing whose predisposition for early sexuality is largely different from those of other parts of the country because they are pregnant or mothers out of wedlock.

Table 3.1: Adolescent Pregnancy and Motherhood Aged 15-19 in South-South Nigeria and Neighbouring Geo-political Zones in Percentages

State/Zone	Has Had a Live Birth	Are Pregnant with 1st Child	Begun Child Bearing
Akwa Ibom	16.2	1.7	17.9
Cross River	16.0	1.4	17.4
Bayelsa	14.2	2.5	16.7
Rivers	13.7	0.2	13.9
Delta	7.1	1.2	8.3
Edo	3.4	0.5	3.9
South South	11.2	1.1	12.3
South West	6.5	1.7	8.2
South East	6.9	1.3	8.2
Nigeria	17.1	5.4	22.5

Source: NPC and ICF International (2014)

Second Stage: Having selected Akwa Ibom State for the study, it was obvious that young adolescents who were pregnant or mothers were not likely to be easily found appreciably in all parts of the state. In this regard, a reconnaissance visit was made to the state to find out the prevalence of young adolescents' childbearing in different localities and communities that make up the State in order to identify the most appropriate location for the study. On the basis of this, Southern Iman of Etinan in Akwa Ibom State was purposively chosen for the study. This part of the state constitutes centre points of ever pregnant young adolescents in Akwa Ibom State with 18.0 percent prevalence, which is higher than those of other localities in the State (Akwa Ibom State Ministry of Health, 2017). Southern Iman comprises thirty villages or communities grouped into one but large autonomous community with common identity.

Third Stage: Within the Southern Iman, 20 communities were randomly selected and copies of household survey questionnaire were administered in these communities. The twenty communities are shown in Table 3.2 and Figure 2.

Table 3.2: Names of the Study's Sample Communities

Names of Communities									
AfahaUrua Essien	AnyamEfa	Awa Ntong	Eso- Efa	Ikot Akpan Esa	Ikot Akpan ObioEket	Ikot Ese	EkotEsen Oku	Ikot Ibok	Ikot Iyang
Ikot Mfon	Ikot Nsung	Ikot Nte	Ikot Obio Eka	Ikot Obong Ikot Inyang	Ikot Ukpong	Ikot Umiang Ede	Iwo Etor	Nkana	Oniong

Fourth Stage: In each of the 20 communities selected, adolescents who met the inclusion criteria were purposively selected and questionnaires administered until the required number was obtained. For an easy identification of young adolescents who met the inclusion criteria, visits were undertaken to homes of traditional birth attendants, health clinics/centres, churches and households to interview pregnant young adolescents or mothers. Consent seeking and approval were received from both respondents and caregivers. For those respondents who could not read and write, the researcher assisted by interviewing and filling the questionnaires' spaces for them.

The qualitative aspect of the study adopted the purposive sampling technique which included IDIs, FGDs, and Life Histories. The interviewees were purposively selected because of the distinct features which each was expected to possess in order to permit for the collection of relevant information needed to achieve the objective of this research. For instance, the FGDs were included to allow for a social aspect of group discussion in order to provide more information with divergent views than interviewing a single person. Each FGDs comprised male and female participants of different age categories, statuses and roles and made up of 6-12 discussants. The life histories particularly aided retrospective construction of determinants of pre-marital sex and maternal healthcare practices of young adolescents with peculiar cases. All respondents/participants for the qualitative aspect of the study were reasonably selected to reflect differences in age, sex, education, social class, location, religion and marital status. Finally, each of the interviews was tape-recorded with respondents consented to it. Below is the breakdown:

- Thirty-five IDIs were conducted among: 10 young adolescents (5 pregnant + 5 ever given birth) (1 in two communities), 5 fathers of young adolescents' children (1 in four communities), 5 caregivers (parents/guardians) (1 in four communities), 5 traditional birth attendants (1 in two communities), 5 faith-based birth attendants (1 in two communities) and 5 health personnel (1 in four communities).
- Twelve FGDs were conducted among community members (participants shall include community leaders, religious leaders, young adolescents, youths and ordinary men and women community members).
- Four Life Histories were conducted among two pregnant and two ever given birth young adolescents (1 in five communities).

3.6 Instruments of Data Collection

The instruments for the study included interviewers' administered questionnaires, In-depth Interview (IDI) guide, Focus Group Discussion (FGD) guide and Life History guide, serving the purpose of primary source of data collection. Each of the qualitative instruments contained questions that made respondents to express themselves freely on the subject matter. Each question was framed in line with the study objectives. While published and unpublished materials related to this study have aided in instruments designing, they further served as point of reference during discussion of findings.

3.6.1 Questionnaire Instrument

Six hundred and twenty-one copies of a semi-structured questionnaire were administered on young adolescents aged 10-16 who met the inclusion criteria and had consented to participate in this study. The sample for the survey questionnaire being sex and age specific based on the nature of the phenomenon under study. The questionnaire was sub-divided into five sessions, and comprises: the background characteristics of respondents and the four specific objectives of the study.

The design of each section of the questionnaire was guided by a pilot study which revealed the salient variables and values needed to comprehensively investigate issues connected with maternal healthcare practices among young adolescents. The approved questionnaires were administered by the researcher, one trained male and four trained female field assistants under the supervision of the researcher. The training of the field assistants was to ensure that the interviewers were equipped with necessary data collection skills that were needed to conduct sensitive studies of this kind. The administrators visited all the sample-locales and ensure that questionnaires were administered to appropriate respondents.

Table 3.3: Data Sampling Techniques by Sample Population

SAMPLE POPULATION	QUANTITATIVE	QUALITATIVE		
	Questionnaire	IDI	FGD	Life History
Young adolescents	621	10	✓	4
Children's fathers		5		
Traditional birth attendants		5		
Faith-based birth attendants		5		
Health Personnel		5		
Caregivers (parents/guardians)		5		
Community leaders			✓	
Religious leaders			✓	
Community members			✓	
Sub-total	621	35	12	4

3.7 Method of Data Analysis

The study analysis considered both the quantitative and the qualitative data collected in the field to complement each other. Quantitatively, the valid and returned questionnaires after being edited to minimize errors were coded for analysis using SPSS. Univariate, bivariate and multivariate statistics were used for analysis. Univariate statistics analysed descriptive statistics such as background characteristics of respondents and present them in frequencies and percentages. While inferential statistics such as chi-square tested the bivariate variables, regression tested the multivariate variables. Qualitatively, those data collected through IDI, FGD and Life history guides recoded in a tape were transcribed and analysed by both content and thematic analysis with the aid of ATLAS.ti Scientific Software for qualitative data analysis. Those conducted in local languages were appropriately translated into English with the assistance of experts in the local languages in order to avoid misinterpretation and mistranslation of context and content of messages. The recorded interviews were arranged by themes and sorted by group of participants. The transcripts were examined and blunders omitted before subjected to analysis. Data analysis involved multiple reading and extracting of relevant statements to reflect the objectives of the study. The combination of both methods of data analysis aided in establishing summary results and making inferences that led to logical conclusion.

3.7.1 Data Analysis Plan (A & B)

Table 3.4A: Matrix showing the instrument of data collection and measurement of specific objectives of the study

Specific Objectives	Research Instruments			
	Questionnaire	IDI	FGD	Life history
1. Factors that determine pre-marital childbearing among young adolescents in Akwa Ibom State	X	X	X	X
2. Antenatal care practices among unmarried young adolescents in the study area	X	X		X
3. Activities associated with child delivery among unmarried young adolescents	X	X		X
4. Postnatal care practices among unmarried young adolescents	X	X		X

Table 3.4B: Data Analysis Matrix by Tools and Questions

Objective	Indicators	How indicators were examined	Tools & Questions	Reliability $\alpha = \frac{N \cdot \bar{c}}{\bar{v} + (N-1) \cdot \bar{c}}$	Statistical Analysis
1. Investigate the factors that determine pre-marital childbearing among young adolescents in Akwa Ibom State	Determinants: Desire for sexual experiment, peer pressure, financial inadequacy, parental/guardian influence, use of contraception etc	- Influencing factors - Source of information about reproductive health - Parents/guardians communication about sexual & reproductive health - Parents/guardians monitoring of adolescents' leisure hours - Consensual sex - Pregnancy intention - Attempted abortion & sources	- Questionnaire: (Que 201 - 205) - IDI, FGD, Life history	$\alpha = 0.73$	- Simple percentages - Bar charts - Chi- Square - Content analysis
2. Examine antenatal care practices among unmarried young adolescents in the study area	ANC visits, ANC provider, Place of ANC, Traditional practices at ANC	1 st person visited for ANC, No. of months pregnant at time of 1 st ANC visit, No. of ANC visits, Choice of ANC services, Cultural activities at ANC, exercises and food prescriptions and proscriptions	- Questionnaire: (Que 301 -305, 404) - IDI, FGD, Life history	$\alpha = 0.71$	- Simple percentages - Bar charts - Chi- Square - Logistic regression - Content analysis
3. Identify the activities associated with child delivery among unmarried young adolescents	Place of visit for delivery, Place of delivery, Assistance during delivery, Traditional practices at place of delivery	Place of 1 st visit for delivery, Place of delivery, Assistance during delivery, Duration of stay at place of delivery after birth, choice of delivery assistance, cultural activities at place of delivery	- Questionnaire: (Que 402 -408) - IDI, FGD, Life history	$\alpha = 0.74$	- Simple percentages - Chi- Square - Logistic regression - Content analysis
4. Examine postnatal care practices among unmarried young adolescents	PNC after delivery, Time at 1 st PNC, Timing of breastfeeding, New-born feeding after delivery, PNC provider, Traditional practices at PNC	PNC in the 1 st 2days after delivery, Time at 1 st PNC, Type of health provider, Timing of breastfeeding, New-born feeding in the 1 st 3 days of delivery, Choice of PNC provider, Cultural prescriptions and proscriptions at PNC	- Questionnaire: (Que 501- 507) - IDI, FGD, Life history	$\alpha = 0.71$	- Simple percentages - Chi- Square - Logistic regression - Content analysis

Note: ANC – Antenatal Care, PNC – Postnatal Care, IDI – In-Depth Interview, FGD – Focus Group Discussion, α – Reliability Cronbach Alpha

Table 3.4C: Variable Descriptions, Coding and Measurements

Variables	Description	Coding	Measurement
DEPENDENT VARIABLES			
Antenatal care visits	Healthcare provider for antenatal care of the last/current pregnancy	Skilled care provider =1 Otherwise = 0	Dummy
Delivery care	Assistance for the delivery of the last birth	Skilled care provider =1 Otherwise = 0	Dummy
Postnatal care	Healthcare provider for postnatal care within 6 weeks of delivery of the last birth	Skilled care provider =1 Otherwise = 0	Dummy
INDEPENDENT VARIABLES			
Age	Current age of an adolescent	10-13 = 1, 14-16 = 2	Dichotomous
Age at last birth	Age in which an adolescent has her last childbirth	≤13 = 1, 14-16 = 2	Dichotomous
Delivery status	Current delivery status of an adolescent	Currently pregnant = 1, Ever given birth = 2	Dichotomous
No. of children ever had	Total number of children an adolescent has had	None =0, 1 =1, 2 or more =3	Categorical
Consensual union status	Adolescent lived with a man as if married	Never lived =0, otherwise 1	Dummy
Parent living	Parent(s) of an adolescent alive	Both parent alive =1, otherwise = 2	Dummy
Household's wealth index	Household wealth index of an adolescent. Items measured includes: type of flooring, refrigerator, water supply, type of vehicle, sanitationfacilities, persons per sleeping room, electricity, ownership of agricultural land, radio, domestic servant, television, and telephone.	Poor (0-4 items) = 1, Middle (5-8 items) = 2, Rich (9-12 items) = 3	Categorical
Occupation	Current occupation of an adolescent	Student = 1, Employed = 1, Apprentice = 2, Other = 3	Categorical
Education	Educational level of an adolescent	None = 0, Primary =1, Secondary+ =2	Categorical
Religion	Religion of an adolescent	Catholic = 1, Other Christian =2	Dichotomous
Parental-adolescent communication	Parents/guardians communication about sexual & reproductive health issues with adolescents	Never =1, Rarely =2, Sometimes =3, Most times =4	Categorical
Parental monitoring of adolescent free-time	Parents/guardians monitoring of adolescents free-time	Never =1, Rarely =2, Sometimes =3, Most times =4	Categorical
Age of person responsible for adolescent's pregnancy	Age of the man/boy that is responsible for an adolescent's pregnancy	≤20 =1, 21-25 =2, 26+ = 3	Categorical
Educational level of person responsible for adolescent's pregnancy	Educational level of the person that is person responsible for an adolescent's pregnancy	None = 0, Primary =1, Secondary =2, Tertiary = 3	Categorical
Marital status of person responsible for adolescent's pregnancy	Marital status of the person that impregnated an adolescent	Married 1, Cohabited =2, Single 3, Other =4	Categorical
Household wealth index of person responsible for an adolescent's pregnancy	Household wealth index of the person who is responsible for an adolescent's pregnancy. Items measured includes: type of flooring, refrigerator, water supply, type of vehicle, sanitationfacilities, persons per sleeping room, electricity, ownership of agricultural land, radio, domestic servant, television, and telephone.	Poor (0-4 items) = 1, Middle (5-8 items) = 2, Rich (9-12 items) = 3	Categorical

3.7.1 Model Specification

This study employs logistic regression model. This allows us to establish a relationship between a binary outcome variable and a group of predictor variables. The binary logistic regression is a type of regression analysis where the dependent variable is a dummy variable (coded 0, 1). The binary logistic regression model is simply a non-linear transformation of the linear regression. The logistic distribution is an S-shaped distribution function (cumulative density function) which is similar to the standard normal distribution and constrains the estimated probabilities to lie between 0 and 1.

The equation for this type of modelling is:

$$\text{Pr ob}(SHP = 1) = F(Z) = \frac{e^{z/(1+e^z)}}{1 + e^{z/(1+e^z)}} = F(\alpha_0 + \alpha_1 x) \quad (1)$$

Where:

$F(Z) = \frac{e^{z/(1+e^z)}}{1 + e^{z/(1+e^z)}}$ is the cumulative logistic distribution, which denotes the probability of an ever-pregnant adolescent receiving antenatal, delivery or postnatal cares from a skilled healthcare provider. Z is the practice of adolescents aged 16 and below; α denotes the vector of parameters while x represents the vector of independent variables.

$$\text{Pr ob}(non_SHP = 0) = 1 - F(Z) = \frac{e^{-z/(1+e^{-z})}}{1 + e^{-z/(1+e^{-z})}} \quad (2)$$

To determine the odd ratio for adolescent receiving healthcare from a skilled healthcare provider or otherwise, we divide equation (1) by equation (2), and this gives;

$$\frac{F(Z)}{1 - F(Z)} = \frac{1 + e^{-z_i}}{1 + e^{z_i}} \quad (3)$$

Equation (3) above represents the ratio of the probability that an adolescent received healthcare from skilled healthcare provider or otherwise. Transforming equation (3) into a natural log form, the equation becomes:

$$L_i = L_n \left(\frac{F(Z)}{1 - F(Z)} \right) = Z = (\alpha_0 + \alpha_1 x_1 + \alpha_2 x_2 \dots \alpha_n x_n) \quad (4)$$

where L_i signifies the logit (i.e. natural logarithms of the odd ratio).

$\frac{F(Z)}{1-F(Z)}$ represents the odd ratio of the probability of adolescent receiving maternal care from skilled healthcare provider or otherwise.

$F(Z)=1$ if adolescent received healthcare from skilled healthcare provider and $1-F(Z)=0$ if otherwise. Given this, the dependent variable in this model is whether adolescent receive antenatal care, delivery care or postnatal care from skilled healthcare provider or otherwise. Therefore, the empirical logistic regression model for this thesis is specified thus:

$$L_i = Ln\left(\frac{F(Z)}{1-F(Z)}\right) = \alpha_0 + \alpha_1 age_lb + \alpha_2 edu + \alpha_3 partl + \alpha_4 hwi + \alpha_5 relg + \alpha_6 occup + \alpha_7 edu_mal + \alpha_8 age_mal + \alpha_9 mar_mal + \alpha_{10} wi_mal + \alpha_{11} dec_mf + \alpha_{12} cho_mf + \mu \quad (5)$$

Where;

age_lb	= age at last birth
edu	= education
partl	= parent living status
hwi	= household's wealth index
relg	= religion
occup	= occupation
edu_mal	= educational level of males responsible for pregnancies of adolescents
age_mal	= age of males responsible for pregnancies of adolescents
mar_mal	= marital status of males responsible for pregnancies of adolescents
wi_mal	= wealth index of males responsible for pregnancies of adolescents
dec_mf	= decision making factor on choice of ANC, Delivery Care or PNC
cho_mf	= choice making factor on the choice of ANC, Delivery Care or PNC
<i>u</i>	= random error term

An a priori expectation of the logit regression model is given thus:

$age_lb, edu, partl, hwi, edu_mal, age_mal, wi_mal, dec_mf$ and $cho_mf > 0$
while $relg, occup,$ and $mar_mal < 0$

3.8 Validity and Reliability of Research Instruments

To ensure the validity of this study instruments, a pre-test of the instruments was carried out among a population other than the intended population of the study, but with similar attributes to ensure that they met their actual purposes. Moreover, the

study instruments were subjected to content validity assessments by experts in the field of this study. To ensure the reliability of the study instruments, Nunnally (1978) acceptable reliability coefficient of 0.7 and above was considered. This helped to examine the degree to which multiple measured variables of the same thing agree with one another.

3.9 Ethical Considerations

The study was guided by the General Accepted Scientific Principles of Human Research Ethics. Ethical approval was obtained from the Social Sciences and Humanities Research Ethics Committee, University of Ibadan, Ibadan, Nigeria with assigned number: UI/SSHEC/2018/0005. As such, the fundamental ethical principles of (i) Voluntariness and Informed consent (ii) Confidentiality (iii) Beneficence of participants and (iv) non-maleficence to participants were adhered to in the research. How the ethical principles were observed is expressed below:

(i) Voluntariness and Informed consent: The human participants of this research were given complete information about the study and their roles. The researcher ensured that all participants fully understood the information given and voluntarily decided to participate in the study. For the fact that some of the respondents were not up to the legal age of giving consent, their parents or guardians consented for their participation. The researcher fully explained the purpose of the study to all participants. He also shed light on all the necessary terms and provided the participants with ample opportunities to ask questions. The researcher also let the participants know that they were free to decline participation or withdraw from the study at any time without any negative consequences. Hence, each participant of this study decided to participate of their own free will and without coercion.

(ii) Confidentiality: The study contained some sensitive issues such as contraceptive use, determinants of premarital childbearing and maternal healthcare practices at various stages of maternity. The discussion of any of these issues could be considered as intrusions of privacy by the respondents and some of whom may be reluctant for such information to be made public. Consequently, efforts were made by the researcher to protect the confidentiality of the research participants. Before providing sensitive information, most of the participants demanded an assurance of confidentiality and in order to preserve the confidentiality of the participants, the

researcher ensured that the participants' records were kept anonymous. That is, the information and measurement obtained from each participant were not referred to by the participant's name either during the course of the study or in the written report of the research results. Each of the respondents was assigned a code number or code name which became the only reference used. To ensure the confidentiality of the data, the researcher specifically avoided any direct connection between the identity of a participant and the reference code that is used for that participant. Thus, both the participants and the researcher were free from psychological distress and public embarrassment.

(iii) Beneficence of participants: The goal of this research is to find ways of reducing maternal morbidity and mortality among young adolescents in Akwa Ibom State. The researcher is optimistic that effective maternal healthcare practices will reduce the rate of morbidity and mortality that attends childbearing. The researcher assured the participants of the potential benefits which the findings of the study would provide them and their communities. The participants were made to understand that the findings of this study would be made available to policy makers and other relevant stakeholders whose duty it is to formulate and implement policies that could improve maternal health related issues in Akwa Ibom State.

(iv) Non-maleficence to participants: The research posed no harm to participants. The researcher personally avoided any action that could expose the participants to physical or psychological harm. The researcher would have informed the participants of any circumstances or situations that had the potential for distress and the potential research findings would have been fully explained to participants and consent sought. More so, the researcher would have ensured that such risk was of significance to the study, and that there was no possibility of achieving positive results without undertaking the risk. On the whole, the researcher ensured that no participant was exposed to situations that could cause them any form of harm.

CHAPTER FOUR

DATA PRESENTATION AND DISCUSSION OF FINDINGS

This section of the study presents the results of the analysis of the data gathered from the field. The data are presented in percentages, chi-square and regressions. This chapter is divided into sub-sections based on the objectives and research questions of the study. These include the background characteristics of unmarried young adolescents; the determinants of premarital pregnancy; the antenatal, delivery and postnatal care practices indicating the socio-cultural factors that influence the maternal health care of unmarried young adolescents. Where appropriate, the quantitative and qualitative results are discussed together.

4.1 Background Characteristics of Unmarried Young Adolescents

Table 4.1 shows the socio-demographic characteristics of unmarried young adolescents. The respondents were categorised into three: early stage (aged 10-13), middle stage (aged 14-16) and both stages (aged 10-16) for some kind of comparison that could further assist in policy intervention. The sub-grouping of the respondents was based on UNICEF's (2006) classification of adolescent framework which classifies adolescents into three stages: early (aged 10-13), middle (aged 14-16), and late (aged 17-19). The framework identifies the early and the middle stages as the phase when adolescents are most vulnerable to reproductive health issues. This study excluded the late stage of adolescence because of its focus on the most vulnerable and

poorly under-studied group of adolescence on reproductive health and maternity issues (UNICEF 2005; WHO, 2008).

More than half of the respondents (66.5%) were in the middle stage of young adolescents. The disparity between the percentages in the sub-groups of sample increases as adolescent age increases. Most of the adolescents were in secondary schools; 90.4% and 71.7% for early and middle adolescence respectively. This

Table 4.1: Percentage distribution of unmarried young adolescents by selected socio-demographic characteristics

Characteristics	Young Adolescents		
	Early stage	Middle stage	Both stages
	10-13	14-16	All (%)
All	208* (33.5)	413* (66.5)	*621 (100)
Delivery status			
Currently pregnant	29 (13.9)	30 (7.3)	59 (9.5)
Ever given birth	179 (86.1)	383 (92.7)	562 (90.5)
No. of children ever had			
0	29 (13.9)	30 (7.3)	59 (9.5)
1	170 (81.7)	283 (68.5)	453 (72.9)
2	9 (4.3)	100 (24.2)	109 (17.6)
Consensual union			
Never lived	45 (21.6)	119 (28.8)	164 (26.4)
Ever lived	163 (78.4)	294 (71.2)	457 (73.6)
Parent living			
Both parents alive	74 (35.6)	180 (43.6)	254 (40.9)
Otherwise	134 (64.4)	233 (56.4)	367 (59.1)
Education			
None	7 (3.4)	30 (7.3)	37 (6.0)
Primary	13 (6.3)	87 (21.1)	100 (16.1)
Secondary	188 (90.4)	296 (71.7)	484 (77.9)
Occupation			
Student	135 (64.9)	235 (59.0)	370 (61.1)
Employed	14 (6.7)	44 (11.1)	58 (9.8)
Apprentice	29 (13.9)	30 (7.5)	59 (9.7)
Other	30 (14.4)	89 (22.4)	119 (19.6)
Religion			
Catholic	19 (9.1)	30 (7.3)	49 (7.9)
Other Christian	189 (90.9)	383 (92.7)	572 (92.1)
Household's wealth index			
Poor	104 (50.0)	264 (63.9)	368 (59.3)
Middle	60 (28.8)	134 (32.4)	194 (31.2)
Rich	44 (21.2)	15 (3.6)	59 (9.5)
Age of person responsible for pregnancy			
≤20	45 (21.6)	104 (25.2)	149 (24.0)
21-25	105 (50.5)	190 (46.0)	295 (47.5)
26+	58 (27.9)	119 (28.8)	177 (28.5)
Education of person responsible for pregnancy			
None	14 (6.7)	59 (14.3)	73 (11.8)
Primary	20 (9.6)	44 (10.7)	64 (10.3)
Secondary	160 (76.9)	280 (67.8)	440 (70.9)

Tertiary	14 (6.7)	30 (7.3)	44 (7.1)
Marital status of person responsible for pregnancy			
Married/cohabited	30 (14.4)	58 (14.0)	88 (14.2)
Otherwise	178 (85.6)	355 (86.0)	533 (85.8)
Wealth index of person responsible for pregnancy			
Poor	104 (50.0)	236 (57.1)	340 (54.8)
Middle	75 (36.1)	162 (39.2)	237 (38.2)
Rich	29 (13.9)	15 (3.6)	44 (7.1)

*No. of adolescents outside parentheses

demonstrates that childbearing among young adolescents increases with educational level (from no schooling to secondary school). More than half of the respondents (61.1%) in both stages recognised studentship as their occupation while less than 10 percent were in apprenticeship. More than half of the respondents (59.1%) had single parents or no parent (64.4 and 56.4 per cent for early and middle stage adolescents respectively). While most of the respondents had ever given birth (90.5%), less than 10 percent were pregnant during the study.

About 71 percent of persons responsible for pregnancy of the young adolescent sampled had secondary education. Only very few of the persons responsible for pregnancy of adolescent's (7.1%) had tertiary education. While more than half of the respondents hailed from poor households (59.3%), less than 10 percent were associated with rich households. More than half of the respondents (54.8%) had person responsible for their pregnancy categorised under the poor wealth index. Only very few were classified under the rich wealth index. Majority of the respondents (85.8%) were impregnated by males who were yet to marry. This may indicate that a large number of the unmarried young adolescents had sexual encounters with unmarried males. As a matter of fact, nearly half of the persons responsible for pregnancy of adolescents were between ages 21 and 25 years old. Persons responsible for pregnancy of young adolescents were more likely to be young men or youths. More than 73 percent of the young adolescent sampled had lived with a man in quasi-marriage conditions. By this, we mean having regular intimate relations with a man. While 72.9 percent of the sampled adolescents had one child, 17.6 percent had two children. The number of repeat births was high among the middle adolescence category, giving a total of 24.2 percent.

A deeper view at Table 4.1 reveals that there is a need for comprehensive sex education among male and female secondary school students to appreciably reduce pregnancies among people of this age group for both early and middle adolescence. As shown in the table, pregnancy is highest among both male and female individuals with secondary school education. The implication is that the current state of sex education among secondary school students is inadequate to curb premarital sex among them, hence, the need to include both teachers and school administrators in the delivery of sex education to secondary school students.

4.2 Determinants of Pre-Marital Pregnancy among Young Adolescents

This section presents results on the factors that determine pre-marital pregnancy among young adolescents. Table 4.2 shows that the perceived factors that motivate premarital sexual activity among young adolescents include the desire for sexual experimentation, peer pressure, financial inadequacy and parental/guardian negligence, among others. Within the scope of the identified factors, the desire for sexual experimentation (48.1%) and peer pressure (34.1%) are outstanding. This indicates that in addition to pressure from peers, most of the adolescents sampled actually wished to experience sexual relations with the opposite sex. Financial inadequacy accounted for less than 10 percent of young adolescents' premarital sexual relations.

Table 4.2 shows that young adolescents received information about sexual and reproductive health from school teachers, friends, social media, health professionals and parents/guardians, among others. However, a high number of the adolescents sampled attributed their sources to school teachers and friends. About 45 percent of the adolescents sampled recognised school teachers as their main source of information while 24.5 percent indicated friends. Owing to the fact that most of the adolescents were in secondary school, it is expected that their main source of education would be their school teachers. School teachers are more likely to educate adolescents on the right attitude towards sex including, abstinence from sexual activity, than other persons they interact with. Based on the results from the analysed data, it could be rightly argued that despite receiving information from school teachers on sexual behaviour, the orientation gotten from friends strongly influences early sexual relations among adolescents.

Table 4.2: Percentage distribution of respondents by influencing factors of premarital sexual activity and source of information on sexual and reproductive health issues

	Young Adolescents		All
	Early stage 10-13 (N=208)	Middle stage 14-16 (N=413)	
Influencing factors			N=621
Desire for sexual experimentation	28.0	58.2	48.1
Peer pressure	15.1	43.7	34.1
Financial inadequacy	10.7	9.1	9.6
Parental/guardian influence	3.3	6.1	5.2
Use of contraception	0.6	1.3	1.1
Other	0.4	2.6	1.9
Sources of information			
School teacher	28.6	53.2	45.0
Friends	10.7	31.4	24.5
Social media	9.2	20.5	16.7
Health professionals	1.7	6.2	4.7
Parent/guardian	0.3	6.1	4.2
Other family members	2.2	6.3	4.9

*Percentages and totals are based on multiple responses

The consensus in the FGD of young female adolescents supports the view of respondents in the quantitative findings, and also added developmental characteristics following puberty as a salient point. The discussion shows that the determinants of premarital sex are interactive. The group had the opinion that the desire for sexual experimentation motivated their choice of premarital sexual activity. They identified parental influence as another determinant since less support from their parents in terms of financing and monitoring predisposes adolescents to early sexual activity. The group's view was captured by a participant thus:

Our body changes as we grow... When we begin to observe new development in our private parts that are associated with puberty, it tells us that we have reached the stage of maturity... At that time in life, we wish to experience new things that adults do... It is natural among us adolescents. The desire brings about sexual practice... Influence from friends, what we hear from others and the level of monitoring from our parents also have a way of influencing us... When parental monitoring is weak, we are more likely to involve in the practice. (FGD/16years/Female/Ikot Akpan Esa/2018)

It is obvious from the above that a biological factor such as puberty interacts with social elements (parental monitoring, peer influence and role modelling) and influences adolescents' predisposition to premarital sex. This highlights the importance of the adequate supervision of adolescents by parents or guardians in order to manage the sexual urges which accompany puberty.

A focus group discussion with a group of young males, who were identified to have had intimate relations with young female adolescents, revealed that, poverty instigated

premarital sex among adolescents. The discussants revealed that it is possible that most of the girls would not have had affairs with them knowing marriage was not an option. However, after their male counterparts provided for their upkeep and bought them “rare” foods like indomie and eggs, the girls have sexual relations with them. In the words of one of the participants:

The young girls I know may have had the urge for sex but most of them could have controlled themselves. It is hunger, the desire to change underwear and braid their hairs that influenced and brought them to us... The fact is, when the young girls are hungry and without food in their homes, they are more likely to remember that we once wooed them... Often times when we asked them out, they might ignore us but when they are hungry or lose appetite for a particular food which they have been eating often, in the morning, afternoon and night, such as ‘fufu, the next step of action is to visit us... They may not come directly to us,... but would walk through the paths where we can sight them... Whenever we see such signals, we quickly grabbed the opportunity because we may not have the opportunity again... We will invite them home and cook indomie and eggs for them. After they have finished eating, the next step is to begin love discussion, romancing and love making while they wait to eat the remaining cooked food... (FGD/Male responsible for young adolescent pregnancy/26years/Oniong/2018)

This demonstrates the influence of poverty on premarital sex as it illustrates how adolescents exchange sex for food, clothing and other basic necessities. It describes how their male counterparts had sex with them by taking advantage of their vulnerability: those needs which they or their parents could not afford. This implies that poverty promotes premarital sex in that part of the world.

When asked a young pregnant adolescent in an in-depth interview about her source of information about sexual and reproductive health prior to her pregnancy, she replied that she really did not have a good knowledge of reproductive health issues. She explained that she acquired the little she knew from her peer group and most time their information was from their experiences. She explained that her parents never discussed sexual issues with her because of the belief that it would expose her to sex activity. She added that her school teachers rarely taught about sexual education, probably because of the presence of male students in the class and the belief that both boys and girls would be exposed to sexual practices. Hence, the superficial teachings

about reproductive health which are too elementary compared to the expectations of the adolescents. In her words:

My parents never discussed sexual education with me... When I had my first menstrual period, I was afraid and had to tell my female friends... It was one of my friends who had experienced it earlier that put me through on how to manage menstruation... Do you believe that up until now, my parents have not discussed menstruation and how to take care of it with me...? Our teachers in school also usually feel uncomfortable to teach sex education in class. In fact, sometimes, the teacher would ask the boys in the class to shut their ears against her teachings on sex education as if it is not part of our school curriculum...(IDI/Pregnant adolescent/15years/Pregnant/Ikot Obio Eka/2018)

The above extract demonstrates the need for an all-inclusive sexual education that teaches abstinence and preventive sex. It also shows the role of teachers and parents in determining premarital sex among young adolescents. It illustrates the fact that adolescents wish to have a proper knowledge of sexual and reproductive health prior to puberty or the bodily changes that attend physical development. This shows that there is a need to train teachers on how to educate adolescents on reproductive health issues without reservations or the mistreatment of adolescents. The qualitative interview section reveals that many adolescents were aware of the unwillingness of their teachers and parents to discuss sex. The implication is that young adolescents become afraid of approaching parents or teachers for explanations on reproductive health. This forces them to lean towards knowledge gotten from personal experience and peers; two very costly yet grossly inadequate sources of sexual education.

Figure 4.1 presents adolescents and parents/guardians communication about sexual and reproductive health issues. It shows that more than half of the samples (66.7%) never communicated with parents/guardians about sexual and reproductive health. Majority of the 31.7 percent that communicated ‘sometimes’, were in the middle adolescence category. The implication is that parents/guardians were more likely to discuss reproductive health issues with older adolescents than their younger counterparts.

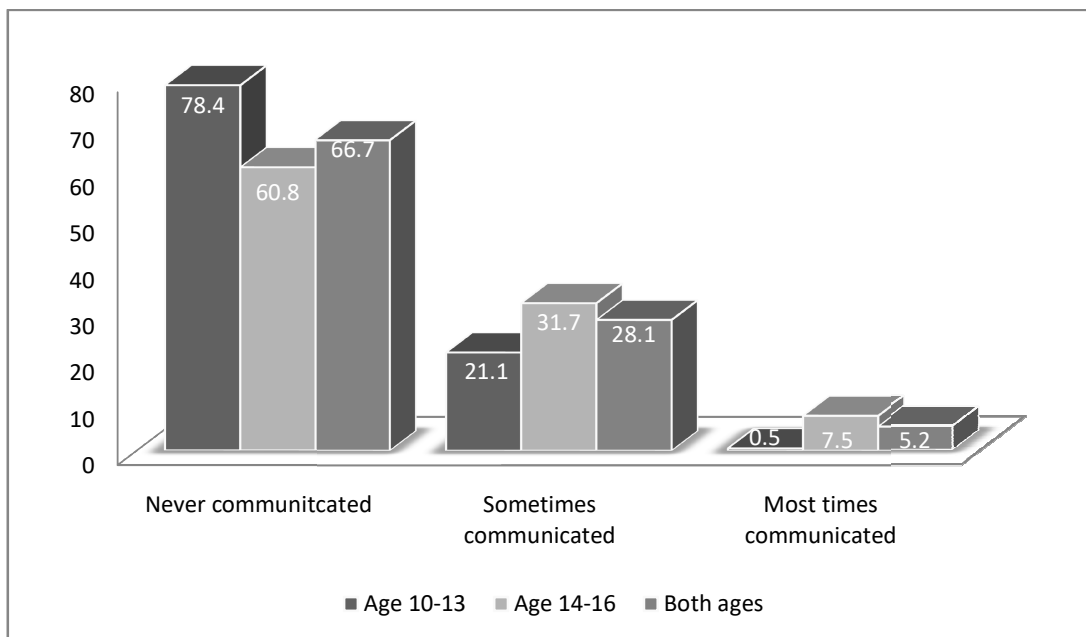


Fig. 4.1: Percentage distribution of respondents by parents/guardians communication about sexual and reproductive health issues

Figure 4.2 presents results on how knowledgeable parents/guardians were about what young adolescents do with their free-time. Fifty-one percent of the adolescents sampled responded that their parents/guardians never knew what they did with their free time. For those whose parents/guardians monitored their free-time, at 'most of the time' (28.2%), much attention was given to middle adolescence. This could have resulted from the belief that adolescents of older ages were more likely to be exposed to premarital sex, hence the need for monitoring. Keeping reproductive health discussion from early adolescence could have exposed many of them to early sexual relations as revealed in the qualitative findings.

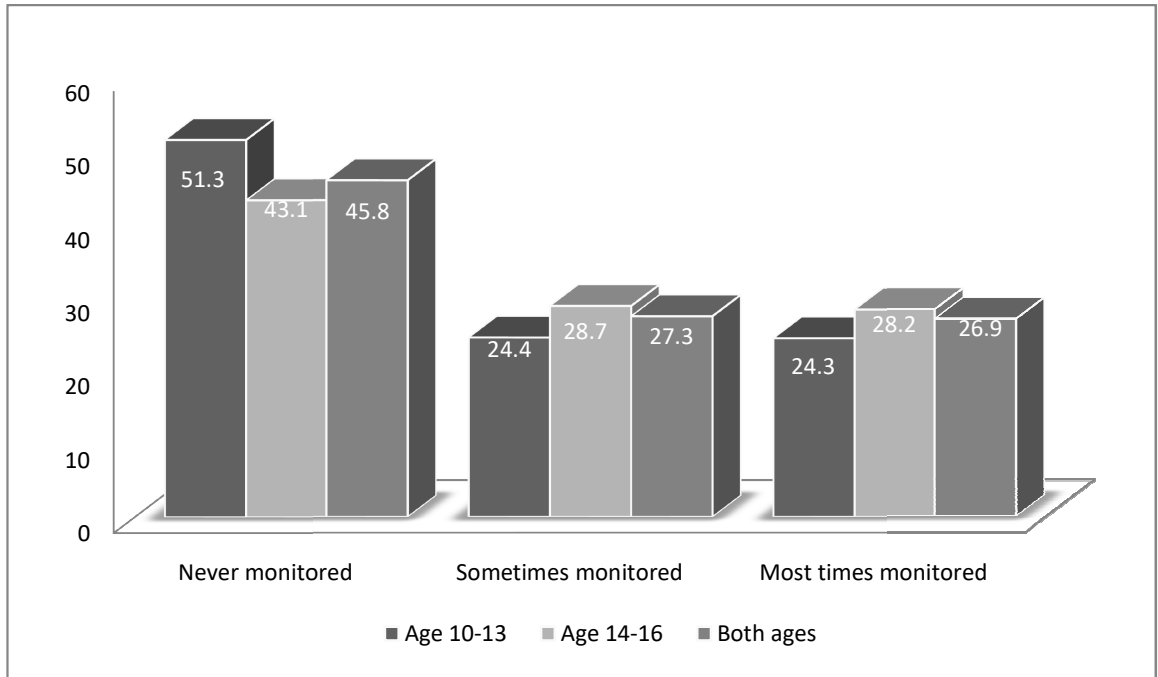


Fig. 4.2: Percentage distribution of respondents by parents/guardians monitoring of adolescents' leisure hours

A mixed reaction about the determinants of childbearing among unmarried young adolescents arose among the parents who took part in the FGD conducted among adult community members. Just as reflected in the quantitative instruments, a large number of the participants explained that they monitored the older adolescents more because they believed that sexual exposure was higher among them. One of the participants stated that:

The way I monitored my child of age 15 is not the same way I monitored her younger sister who is aged 12... The boys in this community are more interested in the elder sister who is 15 years, especially now that she is beautiful... You know, the older she gets, the more likely that her physique would attract the opposite sex. Hence, I monitor her more. (FGD/Parent/Female/46years/Ikot Iyang/2018)

The foregoing demonstrates the influence of age on the parental monitoring of adolescents' leisure hours. It indicates that the focus was on older adolescents who were more mature and more likely to engage in sexual activities. As such the younger adolescents who were left to their own vices engaged in premarital sex without their parents notice. Adequate monitoring should be provided to adolescents of all ages. The younger adolescents should also be properly monitored in order to prevent early exposure to premarital sex. The above portrays wrong parental perception of adolescent age at sexual monitoring.

Contrarily, a male parent whose 11-year-old child was impregnated by a boy of 17 years old had a different opinion. Based on his experience, he was of the opinion that it was necessary to monitor the whereabouts of all his female children as long as they were 9 years old or more. In his words:

From my experience which many are aware, my little child of 11 years old was impregnated by a boy of 17 years in this community two years ago... Although, it was a very painful experience, but I have learnt never to allow any of my female child in as much as she is aged 9 or above to move about without my knowledge of her station and what she is doing... (FGD/Parent/Male/52years/Nkana/2018)

The above experience of the male discussant shows that there is a need for adequate monitoring of adolescents of all ages. It indicates that younger adolescents could also be involved in premarital pregnancy regardless of age. It signifies how the inadequate

monitoring of younger adolescents by parents has led to premarital sex and early childbearing.

Table 4.3 presents results on adolescents' consent to the sexual encounter that resulted in the last birth or pregnancy. The tables show that nearly all adolescents (94.7%) consented to last sexual encounter, 93.8% and 95.6% for early and middle adolescence respectively. The results indicate that a very low record of non-consensual sex occurred in the study area. It also implies that even though adolescents were too young to give consent, they were not coerced into sex. The fact that the sampled adolescents were below the legal age of consent, makes sexual consent in this context debatable, regardless of the legal implications.

Table 4.3 Percentage distribution of respondents by other selected factors that determine pre-marital pregnancies

Variables/categories	Young Adolescents		
	Early stage	Middle stage	All
Consensual sex	10-13 (N=208)	14-16 (N=413)	N=621
Not consented	7.2	4.4	5.3
Consented	92.8	95.6	94.7
Pregnancy intention			
Not intended	93.3	86.0	88.4
Intended	6.7	14.0	11.6
Abortion attempt			
Not attempted	75.3	86.4	82.7
Attempted	24.7	13.6	17.3
Abortion attempted (sources)			
Self prescribed drug	36.7	65.2	53.7
Doctor/nurse	2.0	24.6	17.0
Traditionalist	61.2	10.1	27.2

Table 4.3 shows that although young adolescents believed that their sexual encounters were with their consent, they never wanted to be pregnant at that time. About 89 percent of the adolescent sampled indicated unplanned pregnancy, (93.3% and 86% for early and middle adolescence respectively). Unplanned pregnancy was higher among early than middle adolescence. The qualitative findings shed more light on the quantitative results. They reveal that the young adolescents just wanted to have sexual experience without getting pregnant. As a matter of fact, the adolescents were highly aware that pregnancy among adolescents was repugnant and abominable in the study setting. An IDI conducted with a 12 years old, pregnant, young adolescent revealed that:

I just wanted to experience sex. In fact, it was my first time of affair with a guy. We had only been touching and kissing. ...I didn't want to be pregnant because people of my age are not expected to be pregnant in this community... I even took water and salt solution after the affair to prevent pregnancy as directed by my friend... Maybe, because I didn't take it earlier, the pregnancy occurred after one month of unusual body changes. (IDI/ Pregnant adolescent/12years/Ikot Nsung/2018)

The excerpt from the interview shows that the adolescent desire for sexual experiment is a determinant of premarital sex in the study location. It also indicates that adolescents in the area involve in non-penetrative sex for fear of pregnancy. It demonstrates that adolescents give little or no concern to sexually transmitted infections or diseases which could be contacted through oral sex. The continual practice of non-penetrative sex among adolescent would most likely lead to penetrative sex. Adolescents need to be cautioned against the effects of non-penetrative sex. They should be made to understand that pregnancy is not the only consequence of premarital sex. In designing programmes to tackle premarital sex in Akwa Ibom State, the consequences of non-penetrative sex should be considered.

The qualitative interviews also reflect mixed reactions. Some young adolescents, especially the older ones were less bothered about pregnancy when compared to younger adolescents because they found it easier to adjust to the shame that resulted

from early pregnancy than their younger counterparts. In an IDI interview conducted, an older adolescent of age 16 stated:

Although being pregnant before marriage is not welcome in our community, I am not bordered... I am not the first young person to become pregnant in this village and I will not be the last person... Pregnancy takes 9 months, after that, all these insults and embarrassments end. Although, it is painful because I didn't plan for it, I cannot kill myself for being pregnant. (IDI/Pregnant adolescent/16years/Ikot Ibok/2018)

This paints a portrait of premarital sex and adolescent pregnancy in the study area. Just as expressed earlier, the statement demonstrates that premarital sex and adolescent pregnancy contradict the norms of Akwa Ibom State. The statement shows that adolescents have generated a defence mechanism of consolation whenever they are pregnant or are involved in premarital sex. They cite other adolescents who practice premarital sex as points of reference to show that they are not the first and will not be the last to involve in premarital sex. The implication is that when adolescents have created a clique of friends or group of reference on behaviour that is abnormal, it becomes very difficult to control such a trend because they have formed a sub-culture that deviates from the mainstream culture of society.

An in-depth interview with a young adolescent mother of age 15 presented a contrary opinion about adolescent pregnancy. The respondent stated that she deliberately wanted to be pregnant even when adolescent pregnancy was not tolerated in her community. Her reason was the fear of her partner marrying someone else when he travels outside the state. In her words:

I know that it is not good to be pregnant outside marriage in our community, but I had to be pregnant because I loved my partner so much and I was afraid of him marrying someone else when he travelled outside Akwa Ibom State... Now, I know that I made a wrong decision because of the pains and sleepless nights I experienced during pregnancy, delivery and post delivery... My boy friend is not calling me again; he told me to blame myself for the wrong decision. (IDI/Adolescent mother/15years/EsoEfa/2018)

The above introduces a different perspective to the discourse. It portrays the influence of the fear of unfaithfulness in distant relationships on premarital sex. It demonstrates

how emotion and the psychological state of an individual instigate early pregnancy as a device to control a partner. It also shows how such decisions results to trauma, pains, disappointment and disgrace. The implication is that young adolescents often make wrong decisions except they are provided with proper education about sexual and reproductive health issues in order to forestall such wrong choices and the attendant regret.

Table 4.3 shows that attempts to terminate pregnancies were less, among the adolescents sampled. Less than 18 percent of the adolescents attempted abortion. The results show that an attempt to terminate pregnancy was higher among early adolescence (24.7%) than middle adolescence (13.6%). This was attributed to the societal perception and stigmatization mostly attached to pregnancies that occur at very young ages despite the fact that premarital childbearing is prohibited for both age categories. Table 4.3 also shows that more than half of the adolescent sampled (53.7%) who had attempted abortion used self-prescribed drugs. Self-prescribed drugs are dangerous to health and are against medical recommendations. The use of self-prescribed drugs was higher among middle adolescence (65.2%) than early adolescence (36.7%). Seventeen percent of the sampled adolescents contracted medical personnel for abortions while twenty-seven percent contracted traditionalists. Self-prescribed drugs include over the counter drugs, leftover drugs which were prescribed for other purposes, drugs given by relatives/friends, and drugs sought from Internet or books.

The consensus among participants in FGDs consisting of young pregnant adolescents was that most pregnant young adolescents were not coerced into sex, they consented to it. The FGDs also revealed that most adolescents did not attempt abortion for the following reasons: the fear of God, not being able to conceive again and health complications arising from abortion. One of the participants captured the views of the majority thus:

Many of us here, including myself, were not raped or forced into having affairs... We used our two legs and walked into the men's houses willingly... We did not abort the pregnancies because we don't want God's punishment. We don't even know what our unborn children will become in the future... Anyone of the babies in our wombs could be

a future president or governor of this country.
(FGD/Pregnant adolescent/14years/AnyamEfa/2018)

The above scenario explains the proximate determinants of premarital childbearing in the study area. It signifies that most adolescents were not coerced into sex, rather they consented to it. It denotes that some young adolescents consented to consensual sex although they were not old enough to give consent. The implication is that the adolescents' decision to keep pregnancies to term was associated with beliefs and religiosity. Their decisions were not influenced by the constitution per se, even when it is illegal to abort in the country. The adolescents did not refer to abortion as illegal or against the law. Some of them may not have been aware of the illegality of abortion in Nigeria but their belief system prevented them from aborting. This demonstrates the influence of religion on the mental and social behaviour of adolescents. Thus, it functions as a control mechanism. With regard to inability to conceive in the future, one participant said:

We cannot abort because we don't even know whether we will have another chance of becoming pregnant when we need it... More so, our health is important... It is better to have safe delivery now than destroy our wombs forever.
(FGD/Pregnant adolescent/13years/Ikot Ese/2018)

The above discussant identifies health and the desire to be pregnant in the future as determinants for keeping pregnancy to term. This reflects the values attached to high fertility by Nigerians. It demonstrates that pregnant young adolescents prefer to carry pregnancy to term and have safe delivery than aborting which may destroy womb. This was expected given that most young adolescents lack the boldness to approach health experts for abortion, especially in Nigeria where abortion is illegal. If young adolescent should opt for abortion, they may likely rely on self-prescription which often has unhealthy consequences.

An IDI conducted with a young adolescent mother of age 14 revealed contrary views. She explained how her aunt had collaborated her efforts to terminate her last pregnancy. According to the respondent the abortion attempts were mainly by self-prescription:

I wanted to abort my last pregnancy... On several occasions, my aunt provided the drugs. She went to a chemist store to buy the drugs on three occasions, but they

didn't work. The last medication nearly killed me... I was very dizzy, shaky and unconscious. After the incident, we just decided to keep the pregnancy until delivery. (IDI/Adolescent mother/14years/Iwo Etor/2018)

The above signifies the efforts made by a young adolescent's relative to abort a pregnancy. Although the attempt was not successful, there may be long-term consequences for the adolescent and her newborn due to the consumption of non-prescribed drugs. The attempts at terminating pregnancies reflect the pains and shame which young adolescent pregnancy could fetch a family.

Table 4.4 presents bivariate results showing the percentage distribution of unmarried young adolescents by pregnancy intention, age and other determinant variables. Experts suggest that the intention of getting pregnant largely determined childbearing and maternal outcome (Rocca, Doherty, Padian, Hubbard and Minnis, 2010). Despite the fact that a number of young adolescents encountered unplanned pregnancies; intention is still a good measure of premarital childbearing among adolescents. In order to measure premarital pregnancy/childbearing, early and middle adolescence were sub-grouped into two: 'not intended' and 'intended' pregnancy, to show some form of comparison to prepare better ground for policy intervention. The bivariate analysis results show that occupation, household, wealth index of males responsible for pregnancies of adolescents, parents living and consensual union were significantly varied in both early and middle young adolescence categories. The results further indicate that while education and age of males responsible for pregnancies of adolescents were significantly varied among early adolescence, marital status of males responsible for pregnancies of adolescents, religion, and attempted abortion were significantly varied among middle adolescence.

Early adolescence with secondary school education (99.2%) were less likely to desire pregnancy than those with primary education. This could have resulted from the fact that adolescents with secondary education were more likely to be in school, hence less likely to have intentions of pregnancy than those with lower education. Those with lower education more likely consists of adolescents with no formal education, school drop-outs and awaiting schooling and are more likely uninformed about the consequences of adolescent sexual activity. The occupation of young adolescents significantly determines pregnancy intention for both sub-groups. While none of the

early adolescence sample students had intention of pregnancy, 19.2 percent of adolescents who had other occupations such as apprenticeship and businesses, among others had intention of pregnancy. Within the middle adolescence sub-group, nearly all (99.3%) who were students had no intention of pregnancy. About 33 percent of adolescents within the middle stage who had occupations other than studentship had intention of

Table 4:4: Percentage distribution of respondents by premarital pregnancy intention and determinant variables

Variables/ Categories	Early stage (aged 10-13)			Middle stage (aged 14-16)		
	N=208			N=413		
	Pregnancy intention			Pregnancy intention		
	Not intended	Intended	χ^2	Not intended	Intended	χ^2
Education						
< Secondary	30.0	70.0	0.000***	88.0	12.0	0.445
Secondary	99.2	0.8		85.1	14.9	
Occupation						
Student	100.0	†	0.000***	99.3	0.7	0.000***
Other	80.8	19.2		67.4	32.6	
Religion						
Catholic	97.6	2.4	0.219	79.0	21.0	0.000***
Other Christian	92.6	7.4		88.8	11.2	
Household wealth index						
Poor	86.5	13.5	0.001**	89.0	11.0	0.004**
Middle/Rich	97.6	2.4		78.4	21.6	
Parent living status						
Both parents alive	98.0	2.0	0.000***	81.5	18.5	0.003**
Otherwise	81.1	18.9		91.7	8.3	
Consensual union						
Never lived	96.8	4.2	0.042*	100.0	†	0.000***
Ever lived	91.4	8.6		80.3	19.7	
Sexual Consent						
Not consented	99.1	0.9	0.605	100.0	†	0.080
Consented	92.7	7.3		85.3	14.7	
Abortion Attempt						
Attempted	91.1	8.9	0.113	96.4	3.6	0.015*
Not attempted	97.9	2.1		84.3	15.7	
Age of males responsible for pregnancy of adolescents						
≤25	99.4	0.6	0.000***	84.7	15.3	0.792
26+	75.9	24.1		87.4	12.6	
Marital status of males responsible for pregnancy						
Married	99.2	0.8	0.112	99.1	0.9	0.001**
Not married	92.1	7.9		83.7	16.3	

Wealth index of males responsible for pregnancy						
Poor	84.5	15.5	0.001**	93.6	6.4	0.000***
Middle/Rich	99.1	0.9		73.5	26.5	

Chi-square values are significant at $p < 0.05^*$, $p < 0.01^{**}$ and $p < 0.001^{***}$; † No. in a cell < 1

pregnancy. This indicates that studentship has a way of discouraging adolescents from desiring childbearing and thus acts as a mechanism for birth control.

Early adolescence from poor household wealth index were more likely to desire pregnancy (13.5%) than those in middle and rich households. Among the middle adolescence, 21.6 percent desired pregnancy. This indicates that poverty influences early adolescence into desiring childbearing than it does to middle adolescence. This could be attributed to ignorance and the belief that being pregnant for a man may provide an escape from poverty. About 84.5 percent of early adolescence who associated with males from poor households did not have the intention of pregnancy. Among middle adolescence, while 93.6% and 73.5% who associated with poor and middle/rich household respectively had no intentions of pregnancy 21.6 percent of respondent who associated with rich/middle households, did. Although, the percentage seems low, it indicates that middle adolescence were more likely to bear children with males who hailed from middle/rich households. This could be based on the belief that interactions between poor and rich households would provide opportunity for the poor to benefit from the rich.

Age of males responsible for pregnancies of adolescents was significantly varied among the early adolescence subgroup. Adolescents were more likely to have intention of pregnancy if the male partner was aged 26 or above (24.1%) than if younger. The explanation for this could be based on the assumption that older males are more likely to be financially stable, responsible and more capable of providing for a family. Less than one percent of the sampled adolescents who associated with married men or men who lived with another woman as if married had intentions of pregnancy. Majority of the respondents (99.1%) that fell within this category did not plan to have their last pregnancy. This demonstrated the effect of the stigma attached to an unmarried adolescent having sexual relations with a married man. The stigma increases if the adolescent become pregnant for him.

The qualitative findings shed more lights on the point. An in-depth interview conducted with a young adolescent of 15 years old who was impregnated by a married man revealed the extent of disgrace and stigma she underwent during the pregnancy. According to the adolescent, the frustration nearly caused her to commit suicide:

I nearly committed suicide while I was pregnant. Everyone, including my family members, was just calling me names because I was impregnated by a married man... If I had any affair with a young guy, I would have held him responsible for the pregnancy, even when I knew it was for the married man... I was called husband snatcher, thief, fool, idiot and so many names. To worsen the matter, it was during the Christmas period where everyone was around... Those who travelled outside the community were also around and the community masquerades were using my name to sing songs while dancing... It was an indelible experience. (IDI/Adolescent mother/15years/AfahaUrua Essien/2018)

The above denotes the study community's cultural stance on fornication and adultery between married and unmarried partners. It demonstrates a communal disapproval of sexual affairs between adolescents and a married person. It shows some of the mechanisms used to control promiscuity in Akwa Ibom State, identifying name calling and folklores as some of the control mechanisms.

Table 4.4 shows that early adolescence with living parents were less likely to want children. Two percent of the adolescents with living parents opted for pregnancy compared to 98 percent whose parents were not alive. The desire to bear a child at this age, though significantly low at 18.9 percent was higher among orphans or adolescents with a single parent. This demonstrates the importance of having both parents alive early in life given the parental protection, guidance and provision which they offer. Young adolescents who had ever lived with a man as if married were more likely to want children than those who had not. This cuts across early and middle adolescence at 8.6% and 19.7% respectively. However, majority of the respondents: 91.4% and 80.3% who had ever lived with a man did not want the last birth or pregnancy. This shows that living together with a man as if married largely exposes adolescents who do not want pregnancy to early childbearing. Adolescents who opted for pregnancy were more likely to associate with unmarried males, 7.9 and 16.3 percents for early and middle adolescence respectively.

A large percentage of adolescents who were adherents of the Catholic Church(79%) and other Christian denominations (88.8%) had no intentions of their last birth/pregnancy. Twenty-one percent of adolescents from the Catholic Church and 11.2 percent of adolescents from other Christian denominations wanted their last birth/pregnancy. The difference between Catholic and other Christians demonstrated less significant association. It could be said that both denominations had limited influence on premarital pregnancy by adolescents in as much as both denominations discouraged premarital sex. Further interrogation of data via multivariate and qualitative analyses has provided more clarity on this finding. Sixteen percent of adolescents within the middle adolescence who did not attempt abortion wanted the last birth or pregnancy. This also explains their lack of attempts at abortion.

The qualitative aspect of the study provides explanation on how some of the adolescents became pregnant despite strict monitoring by their parents. Life history interview conducted with a young adolescent of age 13 years who had health complications during and after delivery shows that some of the adolescents used school as an excuse to visit male friends. The respondent stated that ordinarily her parents would not have allowed her to visit any boy. However, while going to school, she sometimes took a detour to her male partner's house in order to have fun with him. In other cases, she would not attend classes for the entire school hours. According to her, when school dismissed for the day, she would return home, dressed in school uniform like other students and no one would be the wiser. In her words:

I became pregnant not because my parents were careless but because I was... I usually diverted to my male friend's apartment on my way to school to have some foreplay with him. Once in a while I would not even go to school, but would spend the whole school hours in his bed having fun... The outcome was the pregnancy that nearly took my life. (Life history/Young adolescent mother/13years/Ikot Obio Eka/2018)

The above indicates the methods employed by young adolescents to escape parental monitoring. It reveals that young adolescents use school as a medium to visit partners for sex. This implies that the same mechanism (school) used to prevent premarital sex on the one hand is utilised by adolescents to promote sex on the other. This signifies that sending an adolescent to school is not enough to prevent early involvement in sex. Adequate monitoring to ensure that they attend school without diverting to a partner's

house is necessary. This signifies that a cordial and trusted relationship between class teachers and parents is needed to forestall premarital sex among young adolescents.

An in-depth interview conducted with a community leader who has been receiving cases of adolescent pregnancy from his subjects, blamed the onset of Christianity for the increase in adolescent pregnancy in his jurisdiction. The community chief put it this way:

If you are studying adolescent pregnancy, it is a common incident in this community. Nearly every compound has one or two cases in the past seven years or so... One major cause of the sudden increase in early pregnancy and childbearing in this community is night vigils and church programmes. That is where most of the cases of pregnancy among adolescents I have been attending drew roots from... Recently, my own daughter who is eight months pregnant was a victim. She would tell me that she is going to choir practice today. The next day, she is going to 'all night' in the church and would return the next morning... When I complained, the mother would say that she is going to church programmes... Now, it is pregnancy that she has brought home. (IDI/Community leader/Male/68years/Nkana/2018)

The above statement by the traditional leader shows that adolescent pregnancy or childbirth is common in the study area. It reveals that nearly every compound has one or two cases in the past seven years or so. His statement identifies church attendance as a strategy employed by young adolescents to escape parental supervision. This suggests that young adolescents misunderstood the concept of church activities. They misuse the privilege granted to them by their parents to serve God. Instead, they use these privileges to promote illicit sex. We want to note here that it is not enough to give young adolescents liberty to serve God, adequate monitoring is required to ensure that they do not abuse the privilege.

In an in-depth interview, another traditional ruler identified modernity and its technological effects as the determinants of adolescent pregnancy in his community. According to him, the increase in adolescent pregnancies came following the introduction of modern lifestyles and the weakening of traditional values which were initially placed on marriage and childbearing. He explained that modernity is what has taken away the respect children had for their parents. He added that pregnancy outside

marriage used to be a taboo, but now it is no more. He also identified movies and phones as common mechanisms that have made children to accept Western lifestyles, and early sexual experience as a norm with minimal disgrace in the event of pregnancy. In his words:

Phones, movies, pornography, and all sort of western life styles were not present in our days. What we had then were only the white men's religion and education... Now adolescents would use phones to communicate with male friends and watch all kinds of pornography without their parents' knowledge... They would go online and access information about sexual and reproductive health. The more they acquire this information, the more they would wish to practise it.... Adolescents have learnt to make-up, wear trousers, and do all sort of things to attract men...Some of them became pregnant in order to have babies to sell to baby-buyers for thousands of naira... All these were not common in our days and have jointly increased early pregnancies today in our community. (IDI/Traditional Ruler/71years/Ikot Obong Ikot Inyang/2018)

The above statement by the traditional ruler shows how the source of information about sexual and reproductive health influences premarital sex among young adolescents. It reveals that the adolescents' access to online information about sex contributes greatly to sexual initiation and practice. It portrays the societal dynamics and the role of the mass media on sexual and reproductive health. The excerpt further shows that some adolescents became pregnant so that they can have babies to sell to baby-buyers that visit the community to buy newborn babies secretly. This demonstrates that illegal buying of babies occurs in the study community, and influences adolescent pregnancies without fear of childcare and upbringing.

An in-depth interview conducted with a church pastor in the community gave a different perspective about the church's stance on young adolescent childbearing. He stated that churches do not encourage adolescents to become pregnant. According to him, the church has been doing everything possible to reduce early pregnancy in the community. It has meted out some disciplinary measures to adolescents and parents who are involved in the act. The church believes that it is the responsibility of the parents to train their children in the way of the Lord, and where they fail, they should

be punished. The discipline for failure is usually suspension and it is usually allotted to both parents and adolescents. In the pastor's words:

The bible teaches every parent to bring up his children in the fear of the Lord because they are His heritage... Where parents who are members of this church fail to perform this function by allowing their children to become pregnant, we suspend both parents and the child from performing their expected functions in the church... The adolescent who is pregnant would be ordered to sit on the back bench of the church. If she was in the choir, she would be suspended from singing, until she has delivered the baby and showed sign of true repentance... Then, we would forgive her and her parents in the presence of everyone at a Sunday service so that others can learn lessons. (IDI/Church Pastor/Male/66years/Ikot Nsung/2018)

The above demonstrates the role of the church in the struggle against premarital sex in the study area. It shows that the church discourages pregnancy outside wedlock. It also demonstrates that there is a need for parents to ensure that their children are well brought up in the fear of the Lord in order to avoid illicit sex.

Interviews show that the doctrines of churches differ on their disciplinary measure despite all adopting the suspension of the pregnant adolescent. While some churches suspend both parents and the adolescent offender, other churches suspend only the adolescent and exclude the parents. The reverend pastor of one of such churches revealed this during an in-depth interview session:

We don't encourage early pregnancy and premarital childbearing because they are against God's plan for humanity. However, if any is found guilty, we only suspend the adolescent... The church doesn't take the punishment of a child to parents. We can only advice the parents to take proper upbringing of their children seriously because God will ask of them on the judgement day...However, if the adolescent shows remorse and signs of repentance, the church can forgive her before her delivery. (IDI/Church Reverend/Male/72years/Iwo Etor/2018)

The above demonstrates that the pardon of a pregnant young adolescent by the church authority could be done before delivery. All that was required was remorse and repentance on the part of the adolescent. In such instances, parents are allowed by the church to receive judgement from God. This is based on the belief that children are

God-given hence the rewards or sanctions for the conduct of their children, should only be given to parents by God.

In some instances, some churches suspend only the male partner who impregnated the girl if he was a member of the church. To churches that practice this doctrine, their reason was that if the girl is suspended, it would be a curse to her and her unborn baby that may affect her pregnancy and delivery. Hence, the need to exclude her from suspension. An in-depth interview conducted with a church pastor revealed that:

We do not punish or suspend the pregnant adolescent girl in our church; we only discipline the male partner if he is a member of our church. The reason is that the pregnant girl would undergo labour and delivery someday, hence if she undergoes the risky journey of delivery with suspension from the church, she may not be able to put to birth because the suspension would be a curse to her and her unborn baby and would take God's mercy away from her. In order to avoid this, we exclude pregnant girls from suspension. Although, we may not allow her to minister on some special occasion, she is not under suspension. (IDI/Church Pastor/59years/Ikot Ese/2018)

The above submission by a church pastor corroborates earlier assertions by pastors from other churches which show Church's on premarital sex. However, it also shows a bending of the rules in the exclusion of pregnant adolescents from punishment in order to avert God's anger from the pregnant girl and her unborn child. We note here that churches perform important roles in the prevention of premarital sex. These roles could help control early childbearing among adolescents.

4.3 Antenatal Care Practices among Unmarried Young Adolescents

This section presents findings on the antenatal care practices of young adolescents. Antenatal care (ANC) is essential during pregnancy because it is meant to ensure that the mother and her newborn remain in good health. Antenatal care from health professionals reduces the possibility of health complications occurring during pregnancy and delivery. While some of the sampled adolescents received ANC from trained health providers, others received ANC from non-professionals, hence information on the practices of antenatal care (ANC) of adolescents is shown according to antenatal care visit, health care provider, place of visit for ANC, number of ANC visit, timing of visit, and components of ANC received during pregnancy.

Figure 4.3 shows percent distribution of unmarried young adolescents by antenatal care visit. About 86 percent of the sampled adolescents received ANC for their last birth while others did not. Middle adolescence (81.8%) were less likely to receive ANC than early adolescence (93.3%). Although, the percentages for both stages of adolescence seem high, some received care from less skilled providers. Receiving antenatal care from trained health providers is recommended in order to prevent morbidity and mortality during pregnancy and delivery.

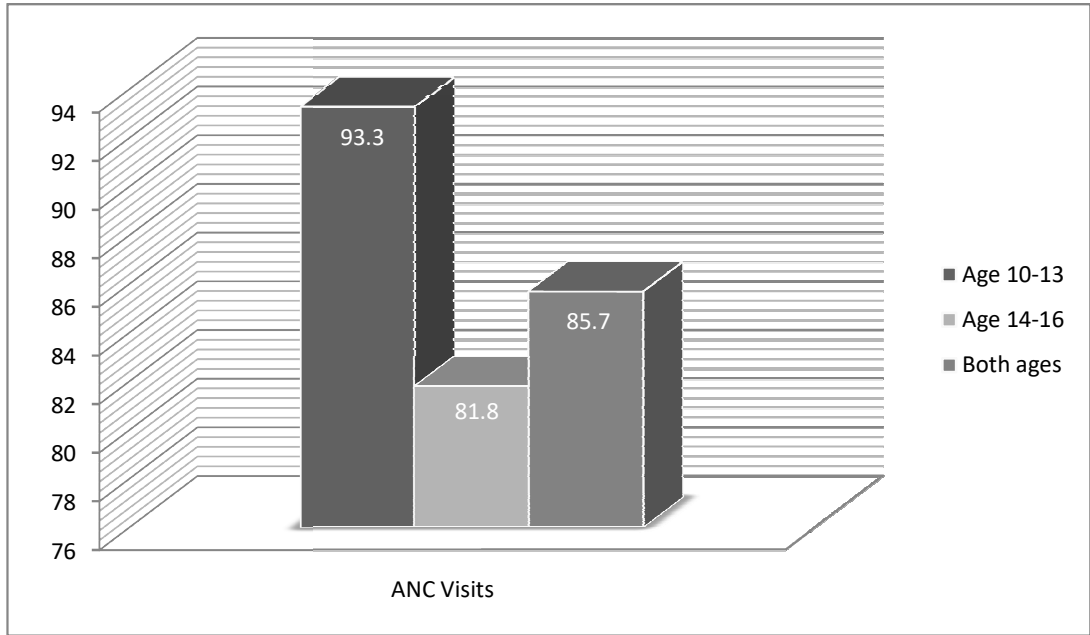


Fig. 4.3: Percentage distribution of respondents by antenatal care visits

The qualitative data for the study show similarity with the numerical findings on antenatal care visits for the last birth. Nearly all participants in the FGD conducted among a group of unmarried young adolescent mothers unanimously agreed that they had visited a medical healthcare facility or traditional birth attendant for antenatal care for the most recent birth. One of the participants aged 14 years old captured the group's opinions thus:

We did visit traditional birth attendant, health worker or both for the antenatal care of our last birth... Although, we may not have gone for antenatal check-ups on time due to stigmatization and lack of money, we still went for antenatal care before delivery. (FGD/Adolescent mothers/14years/Ikot Umiang Ede/2018)

The above indicates that nearly all adolescent mothers had visited a caregiver for check-ups before delivery. However, the statement shows that while some adolescent mothers visited skilled health care providers, others visited traditional birth attendants for pre-delivery check-ups. The statement reveals that some of the adolescents had late antenatal care check-ups. It identifies stigmatization and financial constraints as key factors for delayed antenatal care. It supports earlier reports that revealed that the community of study has a negative perception of premarital sex and young adolescent pregnancy. This could have resulted in the use of various kinds of informal sanctions such as stigmatization to discourage the continuity of adolescent premarital childbearing. Financial constraint was also expected because the pregnancies of the adolescents were mainly unplanned as revealed earlier by some discussants. The fact is, in some cases, the partner and family members were not financially buoyant enough to provide the necessities for early antenatal care registration. As such the adolescents had to visit traditional or faith-based birth attendants to examine their pregnancies.

A 12-year-old participant affirmed this statement. She said that they and their unborn babies needed to live, hence they had to visit a traditional delivery assistant who would

examine both mother and unborn baby to know how they were faring. She also noted that her mother encouraged her to visit a traditional midwife for antenatal care:

My mother advised that I should visit the traditional midwife for antenatal check-up of my little baby after a few months of illness following the pregnancy... I went to her and she examined my waist, weight and entire body. She recommended things I should and shouldn't eat and what I should and shouldn't do to remain healthy and fit for delivery... She said I should not eat beans, pap, and tea... Although, I didn't go to a hospital or clinic, I was comfortable with the care I received from the traditional midwife. (FGD/Adolescent mother/12years/Ikot Umiang Ede/2018)

The above statement shows the strong attachment of some people from Akwa Ibom State to their traditional beliefs and practices during pregnancy. The satisfaction easily derived from the care provided by a traditional midwife is as a result of a lack of patronage of skilled birth attendants. The statement depicts that in the absence of trained care providers, pregnant adolescents have the alternative of traditional or faith-based midwives. Although, the services of less skilled midwives may be harmful to the health of adolescents, out of ignorance and due to a lack of access to orthodox care providers, members of the study area have accepted it as an appropriate alternative to skilled birth services. Some of the practices include beans, pap and tea forbidding during pregnancy.

Table 4.5 presents information on unmarried young adolescents by all care providers visited for ANC of last birth/pregnancy. The results were based on multiple responses. Adolescents who received ANC from both faith-based and traditional birth attendants were 64.7 percent (40.7% and 24.0% respectively). For the fact that the qualitative interview reveals that the faith-based attendants were also less skilled birth attendants, the table shows that most adolescents received ANC from less skilled care providers. About 19 percent respondents received care from skilled care providers (nurses, midwives and doctors). Table 4.5 also presents the percentage distribution of unmarried young adolescents by place of visit for antenatal care. The World Health Organization (2011) recommends modern health facilities for antenatal check-ups. This is to ensure that pregnant women get the comprehensive care that would improve the state of their pregnancies and prepare the unborn babies for smooth deliveries. Table 4.5 shows that 63.9 percent of the adolescents sampled indicate no visit to

modern health facilities for ANC but visited traditional and faith-based maternity centres. About 13.0 percent of the adolescents sampled did not receive antenatal care from any source but remained at home until the time of delivery. The middle adolescence were more likely to remain without antenatal care visits (16.2%).

Table 4.5: Percentage distribution of respondents by all care providers and places visited for ANC of last birth/pregnancy

	Young Adolescents		All
	Early stage 10-13 (N=208)	Middle stage 14-16 (N=413)	
ANC care provider			N=621
Faith-based birth attendant	31.9	45.1	40.7
Traditional birth attendant	23.9	24.0	24.0
Nurse/midwife	12.5	13.4	13.1
Doctor	6.6	6.0	6.2
No antenatal care	6.7	16.2	13.0
Other	4.0	2.5	3.0
Place of ANC			
Faith-based maternity centre	32.0	45.9	41.2
TBA facility	23.6	22.2	22.7
Govt. Hospital/Health Centre	17.2	14.3	15.3
Private Hospital/Clinic	3.7	4.3	4.1
No antenatal care	6.7	16.2	13.0
Other	4.3	3.4	3.7

**Percentages and totals are based on multiple responses; TBA = traditional birth attendant

The data for the qualitative aspect of the study generated through IDIs shed light on the reason why most adolescents visited traditional birth attendants instead of orthodox health professionals. It also revealed the reason some adolescent mothers visited both providers for antenatal care and why others did not visit any care provider during pregnancy. An IDI conducted with an unmarried young adolescent of age 15 shows that some adolescents did not visit any medical health facility for antenatal care because of poor health provider-patient relationship, and the information spreading in the community that health workers usually maltreat unmarried young adolescents at the hospital/clinic. She recounted her first experience of the maltreatment of her friend whom she had accompanied to a health care centre for antenatal care. In her words:

I didn't go to any medical health care provider to avoid insult and embarrassment. The health providers are good at insulting young girls of my age when they go for antenatal care. There was a time I followed my friend who was pregnant at age 14 years. At the health centre, she received uncountable insults from the care providers. They said to her, so you could not keep your legs closed! So it was itching you! And you could not control your sexual urge. Now that you are pregnant, you will enjoy how painful it is to bear a child. When you are done with this journey, you will stay away from boys. (IDI/Adolescent mother/15years/Ikot Obio Eka/2018)

The above statement reveals how the poor patient-health workers relations in the hospitals/clinics in the study area discourage some pregnant adolescents from seeking antenatal care services from orthodox medical facilities. The interaction of this factor with other factors will show the reason for the low patronage of skilled care providers by pregnant adolescents especially in the early phase of pregnancy where complications are less visible.

An unmarried young adolescent aged 12 whose medical case was complicated explained in the life history conducted that she visited both traditional and medical care providers during pregnancy. She noted that she could not bear the agony of complications arising from her pregnancy and had to weep nearly every day and night until delivery. Information elicited from her revealed that she had pathological vaginal discharge and urinary tract infection. Her health challenges prompted her to move from the traditional midwife's apartment to a hospital:

My health during pregnancy made me to receive antenatal care from both traditional and medical care providers... About 5 months after my pregnancy, I developed serious health problems... Before, then I was receiving antenatal care from a traditional midwife. When the complications began, I had to live with the midwife for hope of quick recovery... While she was providing me with herbal medication, she kept telling me that the situation would be solved soon... After two months the problems became so unbearable that I had to be taken to a hospital for medical check-up. After diagnoses, I was informed that I was suffering from vaginal discharge and urinary tract infection... All through that period until delivery was terrible for me. (Life history/Adolescent mother/12years/Ikot Esen Oku/2018)

The above information from an adolescent mother highlights the importance of receiving prompt antenatal care from a trained provider. It also reveals that some pregnant young adolescents do not go for antenatal check-up until their second trimester. The delay exposes many of them to complications which could have been identified earlier during the antenatal care examination. Not receiving antenatal care from a skilled provider, especially in the first three months of pregnancy exposes pregnant adolescents to preventable maternal morbidity and mortality.

An IDI conducted with an unmarried young adolescent of age 16 who has given birth to two children revealed that some adolescents did not go for antenatal check up until the day of delivery, especially when they did not have serious complications. She explained that she saw no need for antenatal check-up when she could use that time for other more productive things. According to her, health check-ups are for those who have health challenges, hence as long as she didn't have any, there was no need for antenatal care:

Antenatal care is for people who are sick or have complications during pregnancy. During the pregnancy of my second child, I didn't have complication so I had no reason to have visited health facility for check-up. I stayed at home until delivery. It was when I was in labour and about to deliver that I went to our pastors' wife -who was the church midwife-for delivery. (IDI/Adolescent mother/16years/Eso-Efa/2018)

The above statement reveals the ignorance of many young adolescents with regard to the need for receiving antenatal care services from a trained provider. They perceive antenatal care as a curative rather than a preventive measure to safe delivery. It demonstrates the beliefs and attitude of the people towards orthodox medicine. Generally, many people in the study area only patronise orthodox health services when they are very sick and traditional or faith-based medicines have failed. Thus, the response from the young adolescent mother was expected.

Table 4.6 presents the distribution of unmarried young adolescents by first person visited for ANC of last birth/pregnancy. The first person visited for ANC plays an important role in determining subsequent visits for antenatal care. The results show that over half of the adolescents sampled (53.1%) visited faith-based birth attendants as first person of contact for antenatal care of last birth/pregnancy. This was followed by 25.2 percent who visited traditional birth attendants. The early adolescence were more likely to visit nurses/midwives for their first antenatal care compared to middle adolescence. This may have resulted from the fear of parents or guardians wanting to know the state of their daughters' health given the ages at which they got pregnant.

Table 4.6: Percentage distribution of respondents by 1st person visited for ANC of last birth/pregnancy

Variable/categories	Young Adolescents		
	Early stage	Middle stage	All
1st person visited	10-13 (N=208)	14-16 (N=413)	N=621
Faith-based birth attendant	41.4	59.0	53.1
TBA	33.1	22.1	25.2
Nurse/midwife	20.1	11.9	14.6
Doctor	4.0	4.1	4.1
Other	2.0	3.5	3.0

TBA = traditional birth attendant

An FGD conducted among unmarried young adolescent mothers supported the quantitative findings of the study. It revealed that six out of eight participants in the focus group discussion first visited faith-based birth attendants for antenatal care. Most of the faith-based birth attendants were stationed in church premises. The adolescents explained that since they were familiar with the church midwives and believed that God can do everything, including safe pregnancy and delivery, they had to visit the faith-based midwives first. In addition, for the fact that they did not have to pay for antenatal care for the first time of visit, they preferred the faith-based birth attendants to trained medical healthcare providers as the very first person of contact. One of the participants captured the opinions of many in her words:

I prefer to first visit the church midwife for antenatal care, especially as first place of contact because, first, I don't have to pay for the service on the first day of visit for pregnancy examination. Second, I need to take the pregnancy to God to ask for forgiveness and protection until delivery. You know, the pregnancy was outside marriage. (FGD/Adolescent mother/14years/Ikot Ese/2018)

The above scenario depicts the spiritual implication attached to pregnancy that occurs outside wedlock. It illustrates an extent that a pregnant adolescent had to rely on a faith-based antenatal care provider at the expense of an orthodox care provider in order to obtain God's mercy on her premarital pregnancy. It also indicates that poverty is an important factor preventing young adolescents from accessing skilled healthcare facilities for antenatal care. Perhaps adolescents considered their inability to afford hospital/clinic bills before taking the alternative of faith-based care services. This depicts that some adolescents may prefer skilled care providers to faith-based birth attendants, but poverty influences their choice of unorthodox healthcare services.

On the contrary, another young adolescent of 13 years old explained that her mother took her to the clinic for check-up immediately they realised that she was pregnant. Since then, she has been visiting the orthodox health facility for antenatal check-up. She noted that although she usually felt very shy whenever she had to visit the health care because of her early premarital pregnancy, she later learnt to visit the clinic for antenatal care because of her mother's encouragement and insistence on regular antenatal care visits in order to remain healthy:

When I became pregnant, I was very shy and didn't want to go for any check-up because of shame... On the third month of pregnancy, my mother forced me to visit the clinic for check up to know the state of my health... Although, it was not easy for me to walk along the way knowing that nearly everybody in the community knew that I was pregnant. However, with the help of my mother, who would give me her bicycle or ask my uncle to take me on his motorcycle to the clinic, I was able to follow up my antenatal care visits until delivery... (FGD/Adolescent mother/13years/ Ikot Ese/2018)

Clearly, the above discussant received support and encouragement from her mother notwithstanding the fact that she was pregnant outside wedlock. This support from her family contributed greatly to her overcoming the stigmatization and shame that is associated with premarital early pregnancy. The implication is that despite ridicule from outsiders, support from family plays an important role in young adolescents' decisions about antenatal care choices and adherence until delivery.

Table 4.7 presents the percentage distribution of unmarried young adolescents by number of ANC visit and timing of first visit. The antenatal care policy in Nigeria is aligned with that of the WHO antenatal care recommendations of at least four ANC visits for women without complications. The recommended schedule of visits includes: the 1st visit at the end of 16 weeks of pregnancy, the 2nd visit between 24 and 28 weeks of pregnancy, the 3rd visit at 32 weeks, and the 4th visit at 36 weeks. The recommendations include that women with complications, special needs, or conditions beyond the normal scope of basic care may require additional visits. The results of the analysis in Table 4.7 indicates that number of months at the time of the 1st ANC visits and number of ANC visits significantly varied by age of adolescents. The highest percent of the respondents (45.4%) went for their first ANC visit at 4-5 months of pregnancy. This contradicts the recommended period for the first ANC visit. A

pregnant adolescent is expected to go for ANC visit at least once during her first three months of pregnancy. That is, within the first trimester.

The results show that 11.9 percent of the sample met this expectation. Others delayed their ANC visits, a dangerous situation for both mother and child. Early visit for ANC is particularly important in the Nigeria context as it provides the opportunity for the early detection of complications. It also allows for early referral where necessary considering the challenges of accessing health care in the rural areas in Nigeria. Apart from the stage

Table 4.7: Percentage distribution of respondents by number of ANC visit and timing of first visit during pregnancy of last birth

Number and timing of ANC visits	Young Adolescents		%Total	χ^2	Df	p-value
	Early stage	Middle stage				
	10-13	14-16				
No. of months pregnant at time of 1st ANC visits						
No antenatal care visits	7.1	0.1	0.4			
<4	7.2	14.3	11.9	120.691	4	0.000***
4-5	36.1	50.1	45.4			
6-7	28.8	3.6	14.1			
8+	20.7	32.0	28.2			
No. of ANC visits						
None	14.4	3.6	7.2	66.167	3	0.000***
1	1.0	6.0	4.3			
2-3	36.1	17.9	24.0			
4+	49.0	72.0	64.3			

Significant at p<0.05*, p<0.01**, p<0.001***

of the pregnancy at the first antenatal visit, the number of visits is equally important. As explained earlier, a pregnant woman is expected to visit health facilities at least four times for ANC services before delivery. Table 4.7 shows that more than half of the respondents (64.3%), especially those at middle adolescence (72.0%) had four or more ANC visits before delivery. Regardless of the frequency of visits, the quality of the ANC is equally important as this further determines the health of the pregnant adolescents and their babies.

The FGD conducted among a group of unmarried young adolescents shows that most adolescents attend antenatal care on the fourth month of pregnancy or beyond. The participants revealed that they were more likely to visit care providers for antenatal care when complications had arisen. They believed that health care providers should be visited only when one is sick. The discussion indicates that most adolescents were interested more in curative rather than preventive healthcare practice. According to the discussants, they were more likely to attend check-ups as many times as possible in as much as they encounter complications. Since, they were more likely to receive antenatal care in the second or third trimesters, they were also more likely to experience pregnancy complications at these stages of their pregnancies. One of the participants who had intra-partum fever and prolonged labour had this to say:

It is only the sick that visit hospital. If we were not sick during pregnancy, then there was no need to see a doctor. Although, I later had a serious fever during labour (intrapartum fever), which was with a prolonged labour, I did not visit any doctor or health worker for care until my six months of pregnancy when my legs were too heavy and I was very 'very' sick... After being taken to the hospital, I visited the hospital four times before delivery. (FGD/Adolescent mother/15years/Oniong/2018)

The discussant was fortunate to have survived the severe illness that attended her pregnancy, without accessing professional health care. This shows the delays in seeking professional care among pregnant girls in Akwa Ibom State. As a matter of fact, it is common to find pregnant girls in the study area with heavy legs which they write of as; normal some are told that such legs do not require medical attention. The implication is that cultural beliefs and practices influence the maternal health care activities of young adolescents in the study area.

Another discussant, who was diagnosed with anaemia (low iron levels) and pregnancy induced hypertension shared her experience. She explained that she did not visit any health care provider for antenatal care until the fifth month of her pregnancy. She noted that she visited the hospital after a series of bouts of dizziness, skin pallor, fatigue and shortness of breath. According to her, it was when she started experiencing increased heartbeat that she was rushed to the hospital. She disclosed that when she first observed these symptoms, her mother and neighbours only encouraged her not to worry since they were the normal signs that accompanied pregnancy:

I first visited a hospital on my fifth month of pregnancy; I was very sick. I constantly experienced bouts of fatigue, dizziness, skin pallor, shortness of breath. It was when I started having fast heartbeats that everyone said that it was out of hand and I should be rushed to a hospital before I died. Meanwhile, when I experienced these sicknesses, I was told by my mother and our neighbours that they were normal symptoms that accompanied pregnancy... Although, I didn't deliver in the hospital, I was in the hospital for three days receiving medications. (FGD/Adolescent mother/14years/Oniong/2018)

The above statement depicts that some pregnant young adolescents visit professional healthcare facilities to receive treatment only when complications arise. However, they do not go to these facilities to deliver during labour. This shows that some young adolescents and caregivers are aware of the importance of delivery in orthodox health facility but do not go there because of some factors which were not included in the statement. These factors were identified and explained in the context of this study. They include financial constraints, distant health facility, sudden delivery, anxiety and fear of exchange of baby by health workers, among others. We hope to support these factors with evidence as we proceed.

Table 4.8 shows the percentage distribution of unmarried young adolescents by components of ANC received for pregnancy of last birth. The component of ANC is essential for quality antenatal care services. It helps to monitor pregnant adolescents for complications and provide counselling that will lead to safe delivery. To examine the component of ANC received by adolescents, they were asked a number of questions about the services they received during the pregnancy of their last birth. The questions include measurement of blood pressure, test of urine and blood samples, test for malaria infection and tetanus injection. The results show that 45.8% and 46.1% of the respondents did not have their blood pressure measured and urine sample tested during ANC visits, respectively. While 46.1 percent of the adolescent girls did not have their blood sample tested, 43.3 percent did not receive a test for malaria detection.

Table 4.8: Percentage distribution of respondents by components of ANC received for pregnancy of the last birth

ANC component: variables/categories	Young Adolescents			χ^2	df	p-value
	Early stage	Middle stage	(%)			
	10-13	14-16	All			
Blood pressure measured						
Not measured	45.9	45.8	45.8	0.001	1	0.979
Measured	54.1	54.2	54.2			
Urine sample test						
Not tested	61.3	38.5	46.1	27.743	1	0.000***
Tested	38.7	61.5	53.9			
Blood sample test						
Not tested	45.9	46.2	46.1	0.007	1	0.932
Tested	54.1	53.8	53.9			
Test for malaria infection						
Not carried out	45.9	42.1	43.3	0.754	1	0.385
Carried out	54.1	57.9	56.7			
Tetanus toxoid injection						
Not received	45.9	43.8	44.5	0.001	1	0.979
Received	54.1	54.2	54.2			

According to NPC and ICF International (2014), while malaria is a leading cause of the death of pregnant women and adolescent girls in less developed countries, neonatal tetanus is the primary cause of neonatal death in such countries. A high proportion of deliveries occur at home or at non-professional facilities like prayer houses and traditional birth attendants' facilities where hygiene is likely to be poor. NPC and ICF International (2014) reported that tetanus toxoid injections are provided to pregnant adolescents to prevent mortality arising from neonatal tetanus. It noted that neonatal tetanus is most likely to occur when hygienic practices are not undertaken during the cutting of the umbilical cord following delivery. It suggested that if an adolescent had not received any tetanus injections prior to pregnancy, it is suggested that she needs two doses of tetanus toxoid to be fully protected during pregnancy. However, if she was immunised before pregnancy, she may need one or no tetanus toxoid injections during pregnancy. Hence, the question on tetanus toxoid injection was essential to assess the components of antenatal care in this study. The results in Table 4.8 show that 43.3 percent of the adolescents sampled did not receive tetanus toxoid injection for at least once during their last birth's pregnancy.

In addition, Table 4.9 presents the percentage distribution of unmarried young adolescents by components of ANC received by place of ANC visits for the last birth or current pregnancy. This was an attempt at profiling the health providers who administered ANC care, given that some of the recommended components of antenatal care were found to be administered to adolescents in the study area by non-professional midwives. The results confirmed that non-professionals provided carried out some ANC tasks which were initially exclusive to medical healthcare practitioners. For instance, 35.7 percent of traditional birth attendants/faith-based midwives measured the blood pressure of their adolescent clients during antenatal check-ups. About 32 per cent of the adolescents had their urine samples taken while another 49 percent had malaria detection tests done by non-professionals.

Table 4.9: Percentage distribution of respondents by components of ANC received by place of ANC visits for the last birth/current pregnancy

ANC component: variables/categories	Place of ANC visits			
	Govt. Hospital	Govt. Health Centre	Private Hospital/Clinic	TBA/Prayer House
Blood pressure measured				
Not measured	-	14.4	-	64.3
Measured	100.0	85.6	100.0	35.7
Urine sample test				
Not tested	16.7	14.4	-	68.2
Tested	83.3	85.6	100.0	31.8
Blood sample test				
Not tested	-	1.9	-	79.0
Tested	100.0	98.1	100.0	21.0
Malaria infection test				
Not tested	-	-	-	50.3
Tested	100.0	100.0	100.0	49.7
Tetanus injection				
Not received	-	14.4	-	74.3
Received	100.0	85.6	100.0	25.7

The qualitative findings reveal that some of the traditional midwives were retired nurses while others had training but were not certified to provide any of these services to pregnant women or adolescents. This implies that most of these practitioners were quack midwives whose antenatal and delivery functions were contrary to medical ethics. These non-professionals utilised the opportunity provided by the dysfunctional health system in the area to deliver reproductive health services.

An IDI conducted with an unmarried young adolescent mother aged 14 confirmed that some traditional midwives in the study location were undertaken certain medical tests meant for trained care providers on pregnant adolescents. The young adolescent respondent revealed that her blood pressure was examined and her urine and blood sample tests in a traditional birth attendant's facility. In her words:

When I was pregnant, I did receive my antenatal care from a traditional midwife. I remember that on some of those days, I had my blood pressure measured and my urine and blood sample tested by the midwife... She has been doing it for all her clients. (IDI/Adolescent mother/14years/Ikot Ibok/2018)

This depicts an encroachment of areas exclusive to trained health care providers by untrained traditional birth attendant/faith-based midwives. It would have been a welcome development if they are well trained for such services and are offering it in line with medical ethics. However, this indicates the need for adequate orientation and a clear demarcation between the services rendered by faith-based, traditional and trained midwives. It also depicts the need to encourage the faith-based and traditional midwives to improve their skills. In as much as they wish to administer laboratory tests, they should acquire the required education that will make them fit for such exercises. This is to prevent pregnant girls or women from harm.

An IDI conducted with a traditional birth attendant in her facility confirmed that some of the traditional midwives administered blood pressure checks, urine and blood sample testing, malaria detection tests and gave tetanus injections to pregnant patients. When asked how they were able to carry out medical laboratory tests, one of the

traditional midwives replied that she had worked in a private hospital as a non-medical staff for seven years and had acquired the skill set that enabled her to provide these services to pregnant patients. According to her, she has been providing these services at her delivery centre for nine years without any negative report. She went further to show the researcher some of her tools: sphygmomanometer (blood pressure meter), urinary strips, hypodermic needles and fingerpick. She stated that:

I can do most of the things done by doctors in the hospital as regards maternal health care and safe delivery. In this delivery centre, I have blood pressure monitor/meter to measure the blood pressure of pregnant women and mothers. I also have urinary strips to test for the presence of urinary tract infection, white blood cells, bacteria, and amount of glucose in the urine for potential diabetes. I have hypodermic needles and fingerpick to extract blood from the vein for blood sample test where you can have a complete blood count (CBC) and check for signs of infection, immune system problems and anaemia (low iron). (IDI/Traditional Birth Attendant/63years/Ikot Nte/2018)

The administration of laboratory tests (blood pressure checks, urine and blood sample testing, malaria detection tests and tetanus injections), on pregnant patients are recommended when carried out by a certified expert. The administration of these tests by an uncertified staff in a private hospital or clinic is unethical and should be discouraged in order to prevent pregnant patients from complications that can arise from the wrong administration of the tests. Although, the traditional birth attendant may have the basic necessities in her facility for antenatal laboratory tests, she is not a certified expert so she either gets certified by the appropriate institutions or she should employ an expert to administer these tests on pregnant patients.

An IDI conducted with another traditional birth attendant revealed that some of the traditional birth attendants usually, received training on the delivery exercise from professional midwives in the local government councils. She noted that the purpose of the training was to enable them identify early complications during pregnancy and delivery and to refer the patients to hospitals where they would be given prompt medical care especially, during emergencies. According to her, most pregnant women/adolescents preferred her (the traditional birth attendant) to the strange medical personnel at the hospital facility. In her opinion, the training was to discourage

traditional midwives from attending risky deliveries. She observed that some of the traditional midwives refused to regularly attend the trainings, while others attended the training but refused to abide by its rules. The consequence of these trainings in her opinion, was that based on the knowledge acquired, some traditional midwives currently acted as if they were trained professionals on maternal health, pregnancy and delivery and were capable of attending to any emergency. In her words:

We used to attend trainings organised by the head of midwives in the local government council every last Saturday of the month to strengthen our midwifery practice. At the training, we are usually taught so many things including how to detect complications in pregnant women or adolescents during pre and post delivery period and how to refer pregnant patients with complications to health facilities or follow them to the facility for immediate attention. Some of us do not abide by the training tenets, we handle all sort of pregnancy complications as if we are experts and deceive patients to believe we are. Some of us are doing malaria infection test, giving tetanus injection, and taking blood and urine sample tests which are meant for professionals... Some of these testing and injection administering skills were not taught at the government training, but we have learnt from our colleagues and from other professionals in the environment to equip ourselves. (IDI/Traditional Birth Attendant/66years/Ikot Ibok/2018)

The above shows that the identified laboratory tests including urine and blood sample testing, and malaria detection tests were commonly administered by uncertified birth attendants in the study area. The researcher witnessed some of the instruments in the traditional midwives' facilities, thus confirming the respondents' information. This practice by some of the traditional midwives could be one of the factors discouraging pregnant women from attending antenatal check-ups in professional healthcare facilities. As identified by one of the respondents, the practice is deceitful. It is capable of making pregnant adolescents believe that the traditional midwives are experts, and skilful in attending to maternal related emergencies and complications.

The results of logistic regression for effects of selected characteristics on choice of ANC services for the last birth/pregnancy of young adolescents are shown in Table 4.10. The results are presented in three models. This was adopted to determine the net effect of each explanatory factor on the likelihood of choice of ANC services after controlling for the influence of other factors. To ensure that the models were best fit

for this exercise, adolescents at both early and middle stages were combined into a single group. This was to allow the models to be relied upon and to draw conclusions and predictive outcomes. This step was particularly important as it allowed for the attainment of an accepted analytical Hosmer-Lemeshow goodness of best fit test for each observation in samples. The option for integration was chosen because the disintegration of the samples into subgroups of early and middle adolescence gave redundancy of variables. The integration process permits models 2 and 3 to receive additional explanatory variables of partners' characteristics, and decision-making factors. For a reliable outcome, the model was further subjected to collinearity test to check for correlation between predictive variables, in order to exclude variables that were not independent predictors of the value of the dependent variable. That helped to solve the multicollinearity problem in the analysis.

Table 4.10 shows that with other variables under control, age at last birth exerts a significant influence on the choice of ANC services for the last birth after including males responsible for pregnancies of adolescents and decision-making factors. Adolescents aged 14 to 16 were 0.2 times less likely to choose modern health care facility for ANC services compared to adolescent aged 13 and below. Education also effects a significant influence on the choice of ANC provider of adolescents across the three models. For instance, adolescents with secondary education were 4 or more times likely to access modern health facility for antenatal care than those with lower education (Model 1 through 3). The number of parents alive also significantly influences the choice of ANC services. Adolescents whose parents were alive were 4 times more like to receive ANC from trained providers than those whose parent(s) were dead. The inclusion of characteristics of male responsible for pregnancy of young adolescents in Model 2weakened the probability of receiving ANC from trained professionals, however still significant.

The addition of decision-making factor in Model 3 increased the probability levels. It indicates that with the insertion of decision-making factor, adolescents with both parents alive were 6 times more likely to access modern health care for ANC than others. Adolescents' household index significantly effects choice of health care provider during pregnancy (Model 1 and 3). Adolescents with rich wealth index were 14 times more likely to access modern health care facility for ANC services than those with poor wealth index. The addition of educational characteristics of males responsible

for their pregnancy did not exert significant influence on adolescent childbearing except for males with ages 26 years and above (Model 2). Rich household wealth index significantly influences choice of ANC services (Model 3). This demonstrated the relevance of household wealth index in health seeking behaviour of adolescents. It also indicated that the higher the

Table 4:10 Coefficients from binary logistic regression analysis assessing the effects of selected characteristics on choice of ANC services for the last birth/pregnancy

Characteristics	Model 1 (N=621)	Model 2 (N=621)	Model 3 (N=621)
	Odds ratio	Odds ratio	Odds ratio
<u>Individual:</u>			
Age at last birth			
≤13 (RC)	1.00	1.00	1.00
14-16	0.979	0.714	0.165***
Education			
< Secondary (RC)	1.00	1.00	1.00
Secondary	4.066***	6.651***	7.345***
Parent's living status			
Both parents alive	4.012***	3.991***	6.276***
Otherwise (RC)	1.00	1.00	1.00
Household's wealth index			
Poor (RC)	1.00	1.00	1.00
Middle	1.362**	1.005	0.604
Rich	7.066***	2.745	6.744*
<u>Characteristics of males responsible for pregnancy of adolescents:</u>			
Education			
< Secondary (RC)		1.00	1.00
Secondary+		1.051	0.965
Age			
≤20 (RC)		1.00	1.00
21-25		0.689	0.331*
26 +		3.552**	1.271
Marital status			
Married		0.069	0.766
Not married (RC)		1.00	1.00
<u>Decisionmaking factor:</u>			
Decision maker on choice of ANC			
Myself (RC)			1.00
Parent/guardian			0.686
Male responsible for pregnancy			4.116**
Myself & male responsible for pregnancy			6.774***

Model chi-square	145.212***	172.918***	276.723***
Negelkerke R Square	0.365	0.422	0.609
2 Log Likelihood	479.193	451.487	347.682

Significant at $p < 0.05^*$, $p < 0.01^{**}$, $p < 0.001^{***}$, RC - reference category

household wealth index, the higher the chances of adolescents receiving ANC services from health professionals in such homes. Although, the educational level of males responsible for pregnancies of young adolescents is important to antenatal check-up, it did not influence adolescents' choice of ANC services. This could result from the fact that some males responsible for pregnancies of young adolescents did escape or travel away after impregnating adolescents. As a matter of fact, some males responsible for pregnancies of young adolescents were noted for denying pregnancies in the qualitative interview. In addition to the circumstances surrounding adolescents' pregnancy, the perception of community members against such may have interplayed in the process. Adolescents whose males responsible for their pregnancy made all decisions on choice of ANC were 4 times more likely to choose professional care providers for antenatal care when compared to adolescents who solely made decisions (Model 3). The probability of seeking trained provider for ANC drastically increased to 7 times likelihood when adolescents and males responsible for their pregnancy jointly decide on choice of ANC provider (Model 3).

4.4 Delivery Practices among Unmarried Young Adolescents

Increasing the proportion of delivery by trained professionals in health facilities is crucial to reducing death and harmful practices during delivery. This is important because a trained health provider can manage complications that may arise during delivery or timely refer the mother to an advanced care provider.

Table 4.11 shows the percentage distribution of unmarried young adolescents by first place of visit for delivery, place of delivery, assistance during delivery and duration of stay at place of delivery after birth, for the most recent birth. The results show that nearly half of the respondents (47.9%) indicated their place of first visit for delivery as faith-based maternity centres. This was probably due to the religious beliefs attached to delivery and the belief that the supernatural controls delivery, as revealed in qualitative interview section. Adolescents in the middle stage were more likely to visit the faith-

based birth attendants for delivery. Although, the faith-based and traditional midwives also provide delivery services to early adolescence, they were more likely to encounter anxieties due to the tender age of early adolescence. Hence, they were more likely to refer early adolescence to advanced care provider when any complications were observed. These findings were buttressed by interview session.

Table 4.11: Percentage distribution of respondents by selected delivery practices for the most recent birth

Delivery practice: variables/categories	Young Adolescents		All (%) N=562
	Early stage 10-13 (N=179)	Middle stage 14-16 (N=383)	
Place of 1st visit for delivery			
Faith based maternity centre	44.2	49.6	47.9
TBA facility	22.3	20.9	21.3
Govt hospital/health centre	28.5	15.7	19.8
Private hospital/clinic	2.0	4.1	3.4
None	3.0	9.7	7.6
Place of delivery			
Faith-based maternity centre	41.7	45.2	44.1
TBA facility	19.3	12.5	14.7
Public health facility	31.6	24.1	26.5
Private health facility	2.0	6.1	4.8
Home	5.4	12.1	9.9
Assistance during delivery			
Faith-based birth attendant	41.7	45.2	44.1
TBA	19.9	14.9	16.5
Doctor/nurse/midwife	26.1	21.3	22.8
Community extension health worker	7.2	7.5	7.4
Relative/friend	5.1	11.1	9.2
Duration of stay at place of delivery after giving birth			
≤1 day	25.1	26.1	25.8
2 – 6 days	65.7	56.9	59.7
7 weeks +	9.1	16.9	14.4

The results in Table 4.11 further show that overall, less than 28 percent of the adolescent sampled delivered in modern health care facilities. This was not a surprise given that most of the people had access to traditional and faith-based birth attendants and health facilities were either not opened or health providers were absent, especially in the night when labour occurs, the qualitative interview reveals this. The implication is that even those who were educated and wished to be delivered by skilled providers were compelled to seek assistance from traditional midwives. The results show that early adolescence were less likely to deliver at home (5.4%) when compared to middle adolescence (12.1%). The tender ages and negative experiences of complications among early adolescence explained this in the interview session.

The qualitative findings indicate that any attempt to go to the city for delivery was usually discouraged due to the distance and the lack of transportation to the city. In the cases where it was attempted, pregnant girls were more likely to put to birth before getting to a health. Moreover, it was not safe to travel in the night because of the notoriety of the area. More so, people went to bed very early in this part of the state. As such pregnant adolescents also found it difficult to access public transport to convey them to the city for delivery. Motorcycles were the common means of transportation in the study area, apart from bicycles. An IDI conducted with an adolescent mother of age 15 reveals:

During my last birth, my parents wanted me to deliver in the primary health centre of our community. For the fact that the labour started in the night, nurses had returned home and health facility closed, I was taken to a nearby church to be assisted by a church midwife. ...We could not go to the city during the labour for delivery because we didn't have means of transportation... We don't have motorcycle... What we have are bicycles. Also, it is very risky to travel in the night here. (IDI/Adolescent mother/15years/Ikot Obio Eka/2018).

Table 4.11 shows that nearly 60 percent of the respondents stayed at a place of delivery after birth for 2-6 days. Overall, less than 26 percent of the samples stayed at place of delivery for a day or less. Early adolescence were more likely to stay at place of delivery than middle adolescence. Staying longer at a place of delivery was associated with complications during delivery, interview session reveals this. The qualitative findings also show that most adolescents were from poor homes and had to pay for delivery bills. In cases where they or their parents/guardians were unable to pay on time, the adolescents had to spend more days at the place of delivery. An interview with traditional and faith-based delivery attendants and some adolescent mothers revealed this.

For instance, an IDI conducted with a young adolescent mother of 13 years old revealed that she stayed at place of delivery for two weeks because of complications following delivery. The interview revealed that her baby had meconium aspiration syndrome. Meconium is the first faeces or stool of the newborn. Meconium aspiration syndrome takes place when a newborn breathes a combination of meconium and amniotic fluid into the lungs during the period of delivery. It is a principal cause of morbidity and mortality in new-borns, happening in about 5 - 10 percent of births (Johns Hopkins Medicine, 2018). The respondent got to know that her baby had meconium aspiration syndrome in the hospital after days of delivery at traditional midwife's facility and illness of her baby following delivery. In the young adolescent mother view:

After delivery, my baby was very sick. She had bluish skin colour, breathing difficulty, and limpness, maybe because of the stress the baby experienced during the prolonged delivery... I was told my baby breathed in amniotic fluid containing meconium into her lung, thereby blocking her airways and affecting part of her lungs when I visited hospital. ...I had to remain in the traditional birth delivery centre for two weeks after delivery for my baby to be well before going home... The midwife often usually visits to check on the health of my baby. (IDI/Adolescent mother/13years/Ikot Obio Eka/2018)

The statement identifies illness as a factor that prolonged the stay of the adolescent mother at place of delivery. It shows the extent of belief and trust which pregnant adolescents have in traditional birth attendants. It also depicts the constant follow-up which most traditional midwives employ during post-delivery. The statement indicates

that despite a visit to hospital, the traditional midwife kept visiting to ensure that her baby was healthy. This could have enhanced a cordial relationship and trust between the people and the traditional midwives in the study community.

An IDI conducted with a father of one of the adolescent's babies revealed that money was the major reason why the mother of his baby stayed longer than expected at her place of delivery. According to him, it was after seven days of delivery that a relative paid off the delivery bill. He revealed that the amount collected for the delivery of a girl child was cheaper than that collected for the delivery of a boy child. In his case, his wife was delivered of twin boys, meaning that he had to pay double for the amount paid for the delivery of a male child. In his words:

The mother of my baby and her two boys were not sick after delivery. What kept them so long at the place of delivery for more than 7 days was money to pay the midwife for her delivery service. Since my wife delivered a set of two boys, I had to pay fourteen thousand naira (N14,000). The bill is seven thousand naira for a male child, five thousand naira for a female child and fourteen thousand naira for a set of two boys... It was a relative that came to my aid after days of her delivery. (IDI/Father of adolescent's baby/26years/Ikot Akpan Esa/2018)

This indicates that an inability to pay delivery fee on time could lead to a prolonged stay at the place of delivery. The statement also depicts that the preference of male children is common in Akwa Ibom State. Although, this practice is widespread in Nigeria and other Africa countries, it is uncommonly attached to delivery fee. The peculiarity of this attachment in the study area is noteworthy. The practice does not just provide an understanding of the reproductive behaviour of people of Akwa Ibom State. It also reveals the value placed on the delivery a male child by the people. This occurs notwithstanding, the circumstances surrounding pregnancy and delivery. For instance, despite the child was born out of wedlock, the high charges on delivery male child(ren) remains.

The qualitative findings also revealed that some midwives had to discharge adolescent mothers and their babies when their families were unable to pay on time. This was because the longer the adolescents stayed, the higher the expenses incurred in feeding them. Instead of accumulating more debts which may never be recovered, some midwives had to discharge adolescents after spending a day or more at their facility.

The interview also revealed that some traditional midwives now preferred to visit adolescents at their homes for postnatal care rather than allow them to spend more days at the place of delivery. In an IDI conducted, a traditional midwife noted that:

These days I don't allow pregnant mothers to stay long at my place of delivery, for lack of money to pay for delivery except, they encounter serious complications during delivery... The reason is that the more they stay in my home of delivery, the more I spend on their feeding. I cannot allow them to die of hunger since some of these adolescent mothers are so poor that they cannot even feed themselves... After delivery, what I do is to check the financial capacity of the new mother and her family... If they are not financially capable, I ask them to go home and return to pay the delivery money when they have it. (IDI/Traditional birth attendant/53years/Ikot Ukpong/2018)

The above gives a contrary view on the detention of adolescent mothers for the lack of payment of delivery services. While some traditional midwives do not discharge adolescents until the delivery fee is paid, others do not prolong discharge, except they encounter complications because of the expenses attached to prolonged stay. The statement described the state of poverty in the study community and its attendant effect on adolescent mothers, their relatives and the midwives.

Some midwives do discharge adolescents with the hope of getting delivery payment later. This is very rare in hospital/clinic facilities and it probably explains the high patronage of traditional midwives by pregnant adolescents in labour. In addition, the cost of delivery in professional health facilities is high and the payment plan is not flexible. To make matters worse, most orthodox health facilities in the study community are dysfunctional or very far from the people. There is the need to address these deficiencies in the health sector.

Table 4.12 indicates the percentage distribution of unmarried young adolescents by reasons for not delivering in a health facility for the most recent birth. The results show that the closure of health facilities at night or for some days was the highest determinants of respondents not delivering in a health facility (33.6%). This was closely followed by partner/family preference (19.7%) and financial cost of delivery (16.0). This implies that the closure of health centres in the area has a way of sending pregnant adolescents to traditional birth attendants for delivery.

Table 4.12: Percentage distribution of respondents by reasons for not delivering in an orthodox health facility for the most recent birth

Reasons	Young Adolescents		
	Early stage	Middle stage	All (N=562)
	10-13 (N=179)	14-16 (N=383)	
Financial cost of delivery	15.5	16.2	16.0
Health facility not open at time of labour	36.3	32.4	33.6
Distance from health facility	12.3	14.6	13.9
Quality of service	6.6	9.3	8.4
Partner/family preference	20.9	19.2	19.7
Baby came suddenly	6.2	5.0	5.4
Other	2.2	3.3	2.9

The FGD conducted with unmarried young adolescents supported the numerical findings. The discussants consented that the closure of the primary health care centres in their communities was the key reason for not patronising orthodox health care facilities for delivery. They noted that the health centres are usually closed and are only open on Wednesday for immunisation service. According to the discussants, after the immunization day, the centre remains closed until the next immunisation day. A visit to the health centre by the researcher on a work-day confirmed the participants' statements as the health centre was closed during working hours. One of the participants captured the consensus in her words:

Most of us, I, in particular didn't visit the primary health care centre in our community for delivery because when we go there at night there would be no health provider to attend to us. Even during the day, except on immunisation days, the facility is usually closed. (FGD/Adolescent mother/14years/Iwo Etor/2018)

The point put advanced by the discussants is crucial to improving the orthodox health care services in Akwa Ibom State. The fact that the closest primary health care centres are mostly closed can be discouraging to those who may wish to deliver in primary health care centres. This suggests the need for the regular operation and monitoring of primary health care centres, especially those operating in the rural areas. A dysfunctional health care system is detrimental to the safe delivery of children. By implication, the presence of traditional midwives in the study community (despite some forms of unethical practices) is practical, given that the dysfunctional orthodox health facilities.

An IDI conducted with an adolescent mother identified distance and lack of health facilities in their communities as determinants of to the failure to deliver at medical health facilities. She noted that:

We don't have any health centre in our community. We don't have a private or public hospital nearby. The only

health centre that is close to us is in Ikot Obio Eka (a community very far away). We cannot go to a very far place for delivery, especially at night because the delivery may take place on the way. More so, even at the Ikot Obio Eka primary health care centre, the probability of meeting a nurse is uncertain, especially at night. Therefore, we are left with the only option of visiting the traditional birth attendants who are always with us and are ready to assist with the delivery. (IDI/Adolescent mother/13years/Ikot Ibok/2018)

This depicts that there are some communities in Akwa Ibom State that do not have a primary health care centre. At least one functional primary health care is expected to be situated in each Ward in Nigeria (National Primary HealthCare Development Agency (NPHCDA), 2015). This was to permit the delivery of Ward Minimum Health Care Package which maternal health care is a strong component, to provide health for all at all ages. Distant and dysfunctional health facilities demonstrate the problems with the health system in the study community which the inhabitants to maternal risks.

Given that a significant number of the adolescents sampled were assisted by traditional and faith-based attendants during the last delivery, this section is devoted to non-institutional delivery practices. To achieve this objective, young adolescents and midwives (interview source only) were asked questions on the delivery of young adolescents such as delivery kits used during last births, instrument used to cut umbilical cord, what was applied on the stump after cutting the umbilical cord, Kangaroo mother care (a practice of placing a new-born baby on the belly/breast of mother while covered with dry cloth) as well as covering of head of the new-born baby with a cap or cloth after delivery. These questions were asked because they were capable of revealing the hygiene practice of skill providers as well as the practice of kangaroo care (mother-baby skin contact) during delivery as recommended by the World Health Organization (2015). Due to the fact that data showed similar percentages across delivery practices; early and middle young adolescent categories, the disintegration of data was considered unnecessary in this section.

While a set of vaginal delivery instruments in health facilities include amniotic hook, forceps, scissors, speculum, laparoscopic sponges, sutures, vacuum and haemostat, among others, a set of home delivery kits called 'mama kits' were recommended for non-health facility delivery (NPC and ICF International, 2014). The use of clean home

delivery kits is essential to preventing life threatening infections (such as neonatal tetanus) during delivery, especially in the rural area where the access to health facilities is limited. Due to health complications and infections arising from not using clean home delivery kits among midwives, the Federal Government of Nigeria, through the Federal Ministry of Health, includes a clean home delivery kit known as the “Mama Kit” in the distribution of maternal health supplies (NPC and ICF International, 2014).

In order to assess the home delivery kits used during childbirth, a set of World Health Organization (2017b) recommended home delivery kits consisting of a pair of gloves, a piece of cotton cloth (baby wrapper), small gauze pad, one laundry soap, a piece of cotton wool, a meter of polythene sheet, scissors and cord ligature were used. Respondents were asked questions and probably showed a set of samples of ‘mama kits’ for them to ascertain whether they were used during the last delivery. Responses were computed ranging from 0-8 to represent the sum of kits used. This was to be further reclassified into clean (hygienic) and not clean (not hygienic) categories.

Figure 4.4 shows that 51 percent of the traditional and faith-based birth attendants used clean home delivery kits during the last birth. This indicates that most of the traditional birth attendants were relatively knowledgeable about hygiene practices during delivery. Noteworthy that some traditional and faith-based midwives did not have all basic home delivery kits set at time of survey. However, with few delivery kits which they had, they were usually made relatively hygienic and ready before undertaking a new delivery. An interview showed that some of the traditional midwives adhered to hand glove use, specifically because of the fear of contracting disease. As a matter of fact, one of the factors which influenced the use of hand gloves among the midwives was the fear of contracting HIV/AIDS.

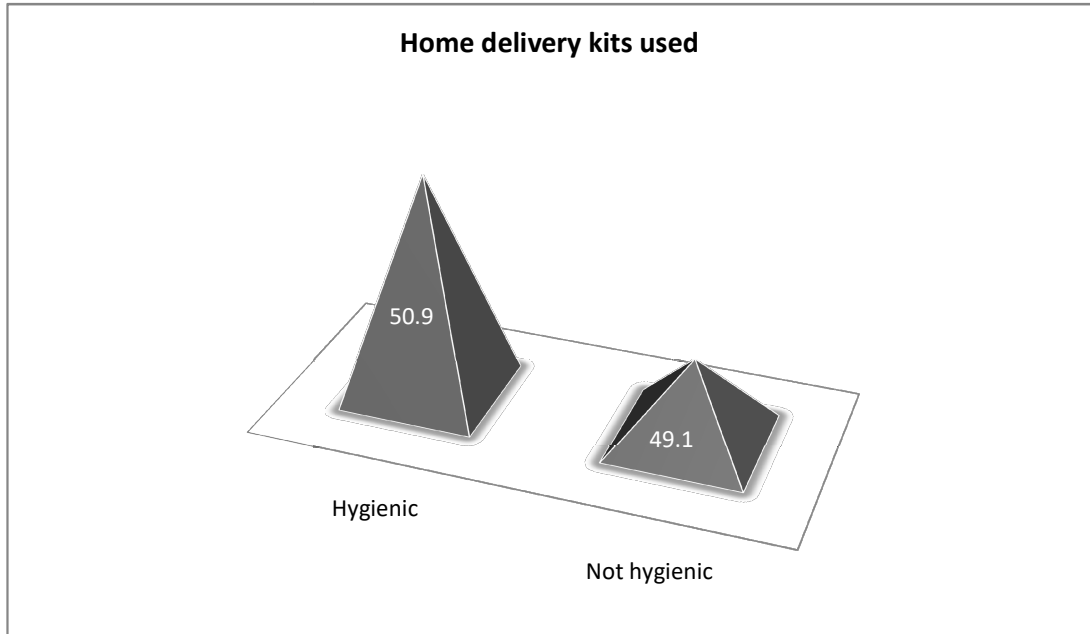


Fig. 4.4: Percentage distribution of respondents by hygiene practice of home delivery kits used by traditional and faith-based birth attendants during last delivery

Most of the traditional and faith-based birth attendants rightly noted that HIV/AIDS tests were usually conducted before every delivery in hospitals. Since they do not have the skill and instruments to conduct HIV/AIDS tests on pregnant clients before delivery, they had to strictly adhere to the use of gloves and instruct everyone coming to deliver in their facilities to come with a pair of hand gloves. On the occasions where pregnant adolescents came for delivery without a pair of hand gloves the midwives usually improvised if the labour occurred in the night. When it happened in the day, they asked their care-giver to buy at shop. In some instances, where the caregiver did not have money to get new gloves, the midwives were compelled to use personal new or already used gloves. More so attempting to deliver babies at the traditional midwife's facility without personal gloves exposes adolescents to non-hygiene practices. Although some of the midwives did sell hand gloves and other delivery kits, many midwives considered this non-profitable because after delivery, adolescent mothers or family members rarely pay for delivery kits. An IDI conducted with one of the traditional birth attendants revealed that:

I don't joke with the use of hand gloves during delivery. You know that HIV doesn't show in the physical look of a pregnant woman, hence prevention is better than cure... Before delivery at most hospitals, women are usually subjected to a series of tests including HIV/AIDS test. Since we cannot administer such tests due to the lack of expertise, we have to use hand gloves. (IDI/Traditional birth attendant/57years/Ikot Iyang/2018)

Perhaps some traditional and faith-based midwives would have not prioritised hygiene practices, like the use of hand gloves if they had not perceived its absence as detrimental to delivery assistants' health. The implication is that hygiene practice during delivery is helpful to both girls/women in labour as well as delivery assistants. Both are exposed to contracting infections if the delivery is unhygienic.

Another traditional birth attendant explains in an in-depth interview, that part of the requirement for delivery which she usually ask adolescent mothers and other women who are coming for delivery in her centre include; a pair of gloves, a piece of cotton cloth (baby wrapper), one laundry soap, a piece of cotton wool, and a new razor blade. In her words:

The adolescents coming to deliver at my facility are usually aware that they must come with a pair of gloves, baby wrapper, one laundry soap, cotton wool, and a new razor blade before or during labour because I do tell everyone of them during the antenatal check-ups. (IDI/Traditional birth attendant/46years/Nkana/2018)

This expression shows that some traditional birth attendants maintained the basic home delivery kits' requirement vis-à-vis delivery. The idea of pre-informing young adolescents of the basic requirements prior delivery is worth imbibing by other traditional midwives. This will help maintain hygienic practices during delivery. It will also help to minimise maternal risks.

Table 4.13 shows that 81.4 percent of the traditional and faith-based midwives used new or boiled razor blades to cut umbilical cords during delivery. As earlier illustrated, this is explained by the fact that most of the midwives pre-informed adolescents to come with new razor blades along with other delivery kits during the day of delivery. Some of the adolescents were noted to have brought some of the delivery kits to the delivery facilities days before delivery. The practice of boiled blade was mainly adopted when adolescents could not afford new razor blades or delivery took place at the night when most shops were closed or inaccessible. Knife (3.8%) was rarely used to cut umbilical cord because they rightly considered it inappropriate.

The World Health Organization (2014) recommended the use of scissors for umbilical cord cutting following the placing of a clamp on one side of the cord and the haemostat to clamp the other side. As revealed in this study, the traditional and faith-based birth attendants lack haemostat. They improvise by using their fingers to clamp the side of the cord while cutting the umbilical cord. The implication is that since traditional and faith-based midwives do not have the necessities to provide appropriate and recommended delivery, they need appropriate orientation and further education. They should also direct pregnant women to hospitals/clinics for appropriate care and delivery by trained professionals.

Table 4.13: Percentage distribution of respondents by umbilical cord cutting and caring by traditional and faith-based birth attendants

Variables/categories	(N= 562) Percent
Instrument used to cut umbilical cord	
New/boiled blade	81.4
Knife	3.8
Scissors	14.9
Substance applied on stump after umbilical cord cutting	
Olive oil	25.9
Ointment/powder	26.2
Detol	7.8
Methylated spirit	14.6
Toothpaste (Close up)	24.0
Other	1.5

Table 4.13 shows further that in an attempt to care for the umbilical cord after clamping, the respondents applied several kinds of substances on the stump. The results show that a higher percentage of the sampled adolescents applied ointment such as Vaseline and powder (26.2%), olive oil (25.9%) and toothpaste (close-up) (24%). These substances were against medical recommendations for the care of stumps. Medically, it is recommended by the World Health Organisation (2013) that the umbilical cord be kept clean and dry, to prevent infection after a cut until it falls off naturally. In doing so, it is expected that the mother or caregiver should dip a cotton swab in warm water, squeeze to remove excess water and carefully use to clean the base of the cord and the surrounding skin, while the stump is held with a clean absorbent cloth to dry completely.

In an FGD conducted among unmarried young adolescents, all the participants confirmed that they applied substances on the stump of their new-born baby's umbilical cord. Most of them agreed to have applied substances such as toothpaste, saliva, fluid from newly killed spider, ointment and powder on a daily basis. One of the members of the group had this to say:

I started to apply toothpaste immediately the umbilical cord was cut. That enabled the stump to dry faster and make the child to experience less pains. (FGD/Adolescent mother/16years/EsoEfa/2018)

This shows the extent of ignorance among young adolescent mothers in the study area. The respondent was either unaware of the right umbilical cord care or lacked the financial capability to afford mentholated spirit. Whatever the case may be, it is medically wrong to apply toothpaste on the stump of an umbilical cord because we do not know the chemical composition of toothpaste and how compatible it is with a new-born's umbilical cord. The statement further depicts the cultural beliefs and practices that influence delivery and postpartum activities in the study location.

Another participant noted that in her own case, her grandmother who was a midwife advised her to apply the fluids from a freshly killed spider on the stump until it was healed. According to her, that was to enable the stump to dry and the umbilicus (navel) to remain flat or hollow without protruding into a bigger belly button when the stump was healed. In her words:

My grandmother who is also a traditional midwife advised me to apply the fluid gotten from a newly killed spider on the umbilical cord until the wound was healed. When I applied it, it was very effective and it made the wound to dry up without the stump protruding to give a bigger belly button after the wound was healed. (FGD/Adolescent mother/13years/EsoEfa/2018)

The statement depicts the desire of the people to maintain hollow belly button. It shows the extent to which a caregiver can influence the actions of adolescents at prenatal period. Whether the efficacy of the substance applied on the umbilical cord is not contention, the effect of such a substance on the health of the baby is harmful. The application of such substances as a result of long-standing cultural beliefs and practices could be harmful to babies. There is a need for urgent laboratory research, in order to prevent health hazards.

Another discussant mentioned that she applied her saliva on the umbilical cord so that it could dry up and fall off at appropriate time. According to her, it was believed that saliva had a strong chemical composition which was capable of keeping the umbilical cord clean and dry just like mentholated spirit. According to her, she was advised by her midwife to use it (saliva) for positive results since she could not afford mentholated spirit. In her words:

I used my saliva on the umbilical cord on a daily basis after the cut. My midwife advised me to do so. We believe that saliva is a powerful agent capable of performing the same function as mentholated spirit. (FGD/Adolescent mother/14years/EsoEfa/2018)

This shows that young adolescents applied different substances on the cut umbilical cord. This FGD participant linked her source of advice and substance to a midwife. Her statement reveals that she used saliva on the umbilical cord of her baby on a daily basis after the cut. Just as discussed, this might be connected with the cultural beliefs and practices of the study community. However, it is medically unacceptable because saliva can be harmful to the umbilical cord of babies. The chemical composition of human saliva includes water, electrolytes, antibacterial compounds, mucus and enzymes. It is yet to be proven that saliva is appropriate for umbilical cord care, hence the need to avoid its application on umbilical cords.

Table 4.14 presents the distribution of unmarried young adolescents by kangaroo mother care practice by traditional and faith-based birth attendants. The Kangaroo care, sometimes called 'Kangaroo mother care' refers to techniques whereby new-born babies are kept skin-to-skin with parent, especially their mother. The technique is medically recommended especially for low birth-weight preterm babies, who are more likely to suffer from hypothermia. The practice is recommended to keep the baby warm and support early breastfeeding. Medical evidence showed that the practice is effective in reducing infant mortality and the risk of facility or hospital-acquired infection. Kangaroo is usually practiced by placing the new-born on the belly/breast of the mother (or father, in a situation where the mother is unavoidably absent) and covered with a dry cloth after delivery. Table 4.15 shows that 34.3 percent of the respondents experienced such during delivery. The implication is that traditional and faith-based care providers were less likely to have knowledge of kangaroo care or its importance to the health of new-borns.

It is also recommended that a new born baby's head be covered with a cap or cloth after delivery. Table 4.14 further shows that nearly all the traditional and faith-based providers (98.1%) covered the new-born head with a cap or cloth to in order to regulate its body temperature. This was not a surprise. Most of the traditional midwives had similar experiences of delivery; hence nearly all covered the new-born's head. This depicts that the people already have an existing traditional practice of covering a newborn head and body to regulate his/her body temperature. What is needed is to the consciousness of appropriate and timely kangaroo care practice to midwives to appreciate its usefulness.

Table 4.14: Percentage distribution of respondents by kangaroo care practice and temperature regulation following delivery by traditional and faith-based birth attendants

Variables/categories	(N=562) Percent
Child placed on belly/breast & covered with dry cloth after delivery	
Placed	34.3
Not placed	65.7
Child head covered with cap or cloth after delivery	
Covered	98.1
Not covered	1.9

More so, the first bathe of a new-born largely affects his/her survival. PAHO and USAID (2007) recommend delaying routine procedures such as bathing for a minimum of one hour after delivery to permit the mother and the new-born to remain in unbroken skin contact. Table 4.15 shows that 23.1 percent of the adolescent sampled whose delivery assistants were traditional and faith-based health providers had their baby first bath in less than 1 hour after delivery. All traditional and faith-based providers bathed the new-borns in 2 hours or more after delivery. Some had their babies bathed for the first time in two days or more due to complications during delivery.

The Table 4.15 indicates that the traditional and faith-based birth attendants are yet to practice the recommended delay of a new-born child's bath for a minimum of one hour post-delivery. This could be associated with the ignorance. By implication, the practice is not a cultural norm; hence the need to make the midwives appreciate its importance in maternal health.

Table 4.15: Percentage distribution of respondents by time at 1st bath of new-born by delivery assistants

Time at 1 st bath	Delivery assistants (N=562)	
	Professionals	Traditional and faith-based attendants
Immediately/Less than 1 hour after birth	-	23.1
Hours/ a day after delivery	47.3	44.2
2-6 days after delivery	52.7	23.8
7 days+ after delivery	-	8.9

The qualitative aspect of the study presents additional information on the time of first bathing of new-born and what was applied on the new-born until the time of first bathing. An in-depth interview with a traditional midwife reveals that the new-born babies were usually bathed immediately after delivery to remove all the unhygienic blood stains and dirt from their bodies. To her, washing the baby with water and soap permitted her to dress the baby with appropriate clean dry clothes. In her words:

What I do immediately after the umbilical cord is cut is to wash the baby with water and soap, so that the baby would be clean, before being dressed with napkins, wrapped and kept in good condition. (IDI/Traditional birth attendant/61years/Ikot Ukpung/2018)

The statement depicts that most traditional birth attendants were ignorant the practice of the delay in bathing a newborn for an hour after delivery. To this midwife, bathing a baby immediately after cutting the umbilical cord is the best practice. From her expression, the midwife is proud of her midwifery because she believes that she is doing right. Her statement shows that the people's culture encourages bathing a newborn with soap and water in order to make the baby clean and acceptable for guests to appreciate. The idea of delaying baths for an hour will require re-orientation in order to balance the difference in opinion between cultural beliefs and expert opinion

Another traditional birth attendant in an IDI conducted revealed that what sometimes prevented her from bathing babies immediately after delivery are birth complications. She explained that if the baby encounters complication during delivery, what she does is to clean the body of the baby with olive oil so that the baby can look attractive while she attends to the complication affecting the new-born until it is okay for bathing. According to her, if the complication persists, it may lead to a delay in bathing the baby for the first time. In her words:

I do bath new-born babies I delivered immediately after delivery. In cases which I do not have to do so, then the baby must have had serious complications which I felt bathing would worsen the situation. In such cases, I usually used olive oil to clean the body of the baby while I set him/her aside for careful examination in order to understand what the complication is and what should be

done to remedy the health problem. (IDI/Traditional birth attendant/59years/Onion/2018)

The statement of the traditional midwife depicts that complications influence the first bath of a new-born post-delivery. The use of olive oil is associated with spiritual implications among people from Akwa Ibom State and other Christians in Nigeria. It is used in churches for anointing, deliverance and the protection against spiritual attacks. The use of olive oil to clean a new-born's skin could be therefore be cultural and spiritual in the sense that olive oil is believed to heal complications and repel spiritual attacks.

The results of logistic regression for effects of selected characteristics on the choice of delivery assistance for the last birth among young adolescents are shown in Table 4.16. Table 4.16 shows that with other variables under control, age at last birth did not significantly affect choice of delivery assistance in Model 1. It negatively influences the choice of delivery assistance after the inclusion of males responsible for pregnancies of young adolescents' characteristics in Model 2. The effect disappeared after the addition of choice factors in Model 3. The model 2 indicates that adolescents at last birth (aged 14 to 16) were 0.5 times less likely to choose skilled birth assistants.

Religion exerts significant negative effects on the choice of delivery assistance across the three models. Other Christians were 0.3 times or less unlikely to opt for skilled birth attendance compared to Catholics (Model 1 through 3). This was explained on the basis that churches other than Catholic were more likely to have faith-based midwives who believed that delivery service was a gift from the Holy Spirit to Churches, which did not require special training. Members of these Churches were more likely to also patronise faith-based birth assistants in their church because they believed that the Holy Spirit was with them. As a matter of fact, most of the midwives were pastor's wives. As a result, the midwives were more likely to be trusted by church members than midwives from other churches or hospitals/clinics.

Parents' living status significantly influenced the choice of delivery assistance across the three models. While Model 1 and 2 indicated that adolescents with both parents alive were 3 times more likely to have delivery assistance from trained providers, the inclusion

Table 4:16 Coefficients from binary logistic regression analysis assessing the effects of selected characteristics on choice of delivery assistance during last birth among respondents

Characteristics	Model 1	Model 2	Model 3
	Odds ratio	Odds ratio	Odds ratio
Individual:			
Age at last birth			
≤13 (RC)	1.00	1.00	1.00
15-16	0.624	0.496*	1.513
Occupation			
Student (RC)	1.00	1.00	1.00
Other	0.993	1.198	1.844
Religion			
Catholic	1.00	1.00	1.00
Other Christian	0.303**	0.370*	0.154***
Parent's living status			
Both parents alive	3.732***	3.199***	4.234***
Otherwise (RC)	1.00	1.00	1.00
Household's wealth index			
Poor (RC)	1.00	1.00	1.00
Middle	4.473***	4.327***	3.291***
Rich	5.420***	6.186***	6.600***
Characteristics of males responsible for pregnancies of adolescents:			
Education			
< Secondary (RC)		1.00	1.00
Secondary+		3.833***	0.628
Age			
≤20 (RC)		1.00	1.00
21-25		1.257	0.650
26 +		2.075*	2.156*
Choice factors:			
Other (RC)			1.00
Financial cost			0.842***
Distance from functional health facility			0.532***
Partner/family Preference			4.945***
Model chi-square	125.379***	150.947***	232.234***
Negelkerke R Square	0.280	0.330	0.474
2 Log Likelihood	577.950	552.382	471.096

Significant at p<0.05*, p<0.01**, p<0.001***, RC - reference category

of choice factors in Model 3 shows an increase in the number of times, from 3 to 4 times. This demonstrated that adolescents with both parents alive were 4 times more likely to enjoy the services of trained providers during delivery than those with one parent or none. This implies that parents played important roles in the choice of delivery assistance. This is not a surprise as parents or guardians of adolescents were more likely to be responsible for delivery bills, hence have decisive power on choice of providers.

Households' wealth index significantly influenced the choice of delivery assistance. Adolescents from middle wealth index family were 3 or 4 times more likely to have assistance from trained provider during delivery than adolescents from poor households (Model 1 through 3). The rich index shows an increase in the likelihood of having skilled assistants during delivery. The results indicate that the rich household index were 5 or more times likely to have the assistance of trained provider during delivery compared to those in the poor household index. The implication is that the richer the household, the more likely they are to have delivery assistance from a trained provider. Education of males responsible for pregnancies of young adolescents significantly influenced the choice of delivery assistance after the inclusion of males responsible for pregnancies characteristics but disappeared after the addition of choice factors.

While the financial cost was 0.8 times less likely to influence the choice of trained delivery assistance, distance from functional health facility was 0.5 times less likely to influence the same choice variable (Model 3). This implies that the distance from functional health facility was less likely to negatively influence the choice of trained providers during delivery than financial cost. This also indicates that there were some people who were ready to pay hospital/health centre's bill for delivery but were unable to access functional health facilities in the study location because of the lack of such facilities. As a result, adolescents who experienced labour at night were compelled to receive assistance from traditional and faith-based attendants.

4.5 Postnatal Care Practices among Unmarried Young Adolescents

Postnatal care is important for the young adolescent mother and her baby because they may develop serious health threatening complications in the period following delivery. Evidence shows that a large number of maternal and neonatal mortality occurs in the first 48 hours after delivery. On this note, WHO Guidelines Review (2013) recommended that in a situation where delivery occurs in health facilities (i.e. hospitals or clinics), mothers and children must be provided with the first postnatal care in the health centre, 24 hours after delivery. However, in a situation where the delivery takes place at home, the first postpartum services have to be as timely as possible (within 24-hours of delivery). To measure the extent of postnatal care received by adolescent mothers and children, a number of questions were asked about the time of first postnatal care received, the provider of the postnatal care and the place where the care was received.

Figure 4.5 presents responses on the questions about the adolescent receiving postnatal care within the first two days after delivery for the most recent birth. It is recommended that if a mother is unable to get her first postpartum care within the first day of delivery, she should receive the next day given that it may likely fall within 24 hours following delivery. The results show that 74.4 percent of the adolescent sampled received postnatal check up within the first two days of delivery. This indicates a high proportion of postnatal check-ups in the study area.

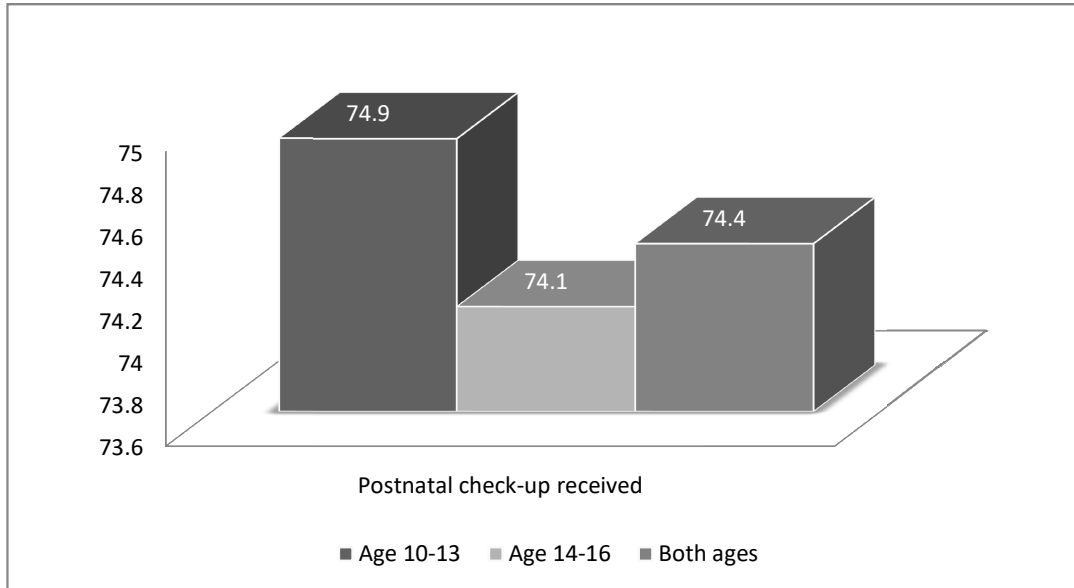


Fig. 4.5: Percentage distribution of respondents by mothers' postnatal check-up in the first two days after delivery

The time of the first postnatal check-up is crucial to the survival of mother and newborn baby (NPC and ICF International, 2014). Table 4.17 shows that more than half of the respondents (67.8%) received postnatal check up on the first day or within 24 hours of delivery. Early adolescence were more likely to receive postnatal check-up (73.3%) when compared to the middle adolescence sub-group (65.3%). The explanation is that it is a cultural norm that the delivery assistant must check on the mother and baby before midnight of the day of delivery. In a situation where the mother has returned home before the end of the day, the delivery assistant must visit her before midnight hour. Table 4.17 also shows that 77.3 percent of the respondents had their first postpartum check-up assisted by non-health professionals such as traditional birth attendants, friends or relatives. This implies that since the majority of the deliveries were assisted by traditional and faith-based providers, most adolescents were likely to receive postnatal care from their delivery assistants.

Table 4.17: Percentage distribution of respondents by timing of first postnatal check-up for the mother and newborn

Variables/categories	Young Adolescents		
	Early stage 10-13 (N=179)	Middle stage 14-16 (N=383)	All (N=562)
Time at 1st postnatal check-up			
≤ 1 day/24 hours	73.3	65.3	67.8
2-6 days	20.0	29.9	26.7
7 days +	6.7	4.8	5.4
Type of health provider			
Health professional	24.9	21.7	22.7
Non health professional	75.1	78.3	77.3

An in-depth interview conducted with an unmarried young adolescent of 14 years old, who was a mother of a low-weight, eight months old baby, revealed that the adolescent mother had her postnatal check less than 24 hours after delivery. This was because the traditional midwife who assisted her delivery was nearby and always checked on her and her baby to know how they were doing. According to her she has never taken the baby to any orthodox medical health facility for immunization or check-up:

I didn't have any problem that made me go far for postnatal care after the birth of my eight months baby. The traditional birth attendant who helped my delivery is just nearby. She has been the one checking on my baby and I... I have never been to any health centre for immunization after her birth. (IDI/Adolescent mother/14years/Ikot Mfon/2018)

The above shows that young adolescent mothers have wrong notions about postnatal care and immunization. They believe that immunization is only for sick babies. That is to say, if the baby is not sick, then there is no reason for immunization at an orthodox health facility. The adolescents also have a wrong impression about untrained traditional midwives. They believe that whatever care a midwife is given to them is equivalent to hospital/clinic immunization. As such there is no need for check-up at a professional health facility. Owing to the proximity of the traditional and faith-based midwives, young adolescents believed that maternal health related risks could be managed with the aid of traditional and faith-based birth attendants.

The FGD conducted among unmarried young adolescents whose majority had home delivery, assisted by traditional midwives arrived at the consensus that someone who provides delivery is more likely to provide the first postnatal check-up. Hence, since they were mainly assisted by traditional birth attendants, they were more likely to receive the first postnatal care from traditional birth attendants. They noted that in a situation where they had to visit medical health care centre, it was for immunization purpose or because of severe illnesses that demanded the attention of a doctor or nurse. One of the discussants captured the groups' opinion thus:

I had my first postnatal check up by our church midwife. She assisted my delivery... After delivery, the midwife usually checks on us and our baby before we leave for our homes. Also, while at our homes, the midwife would further visit to check for our health and that of our babies for at least the first three days following delivery... I only go to the primary health care for immunization on routine immunization days. (FGD/Adolescent mother/16years/Ikot Iyang/2018)

The above discussant is referring to a faith-based midwife who assisted her delivery. The statement reveals that some adolescents visit primary health care centres to receive immunization on routine immunization days after being delivered by a traditional midwife. Her statement demonstrates the importance of immunization among those who could not afford to be delivered in the hospital/clinic. It also indicates the culture of regular post-delivery checks on adolescent mothers by traditional midwives.

The first postnatal check-up is essential to the health of a new-born baby (NPC and ICF International, 2014). The place of visit for check-up may determine the check-up provider, either trained or untrained. Visiting health facilities for postnatal check-up is recommended because it is conducted by trained professionals. Figure 4.6 presents the percentage distribution of unmarried young adolescents by place of first postnatal check-up for new-borns after delivery. Overall, more than half of the new-borns received their first postnatal check-up from traditional birth attendants. While 18.1 percent visited public health facilities for check-up, 4.6 percent visited private health facilities. This implies that the few respondents who received check-up from health facilities were more likely to receive check-up from public facilities than private facilities. This could be associated with the high cost of check-ups at private facilities.

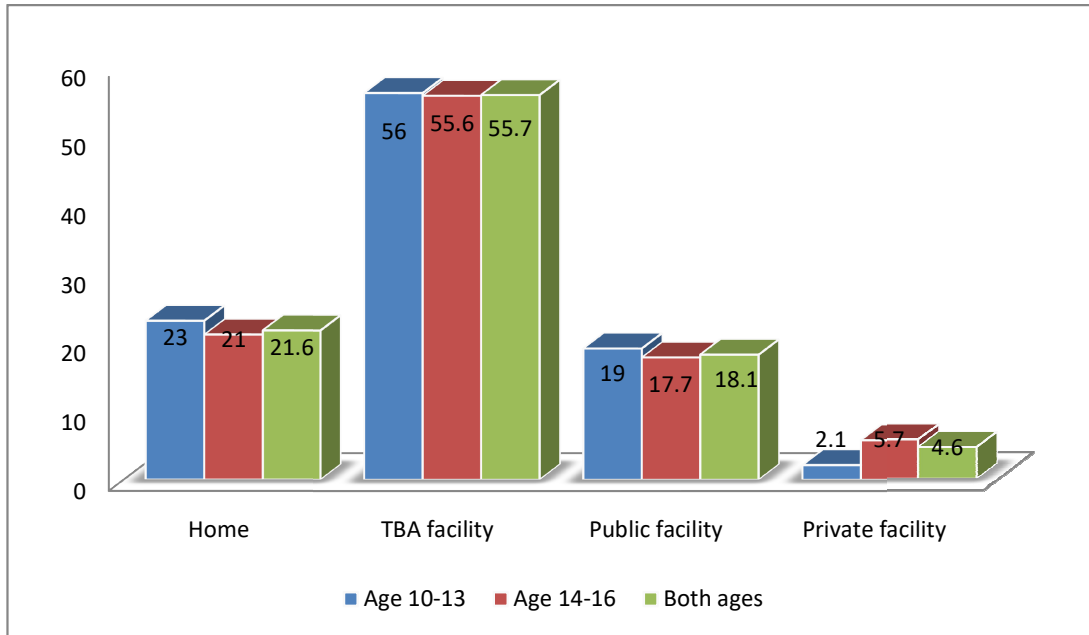


Fig. 4.6 Percentage distributions of respondents by place of 1st postnatal check-up for the newborn

The non-institutional type of health providers were noted to offer a number of postnatal check-ups to adolescent mothers and their children. The composition of the check-up is essential to determining the effectiveness of such checks. The recommended composition of postnatal check-ups includes the check for the state of umbilical cord, (especially the stump), breastfeeding practice, temperature, and symptoms of sickness of the newborn. Early postnatal check-ups are recommended to identify the likely health challenges that may threaten the lives of babies (WHO and UNICEF, 2009). Table 4.18 shows that the 93.6 percent of the traditional and faith-based providers checked for umbilical cord of the new-born to detect likely complications. About 81 percent examined the breastfeeding practice of the mother to ensure that the milk is flowing well and that the baby is receiving the breast milk. About 12 percent of the traditional and faith-based postnatal providers did not check the temperature of the baby to examine regulation.

It is important to note here that the 80.9 percent of the traditional and faith-based postnatal providers who checked the temperature of the new-born did not use recommended scientific instrument called thermometer for this screening. Instead they used their hands and years of experience. The American Academy of Paediatrics (AAP) holds that the normal body temperature for a healthy baby is between 97- and 100.3-degrees Fahrenheit, and if a baby's rectal temperature is 100.4 degrees or higher, he/she has a fever. The use of hand and years of experience to detect the body temperature of a new-born without thermometer by traditional and faith-based midwives would likely lead to inaccurate prediction.

Table 4.18 shows that 87.7 percent of the traditional and faith-based postnatal providers examined newborn babies for related symptoms of sicknesses. The early examination of the health of new-borns helps in identifying complications and referrals to professional health providers (NPC and ICF International 2014).

Table 4.18: Percentage distributions of respondents by composition of checks at 1st postnatal check-ups of new-born by non-institutional healthcare providers

Composition of checks (N=562)								
Umbilical cord		Breastfeeding		Temperature		Symptoms of sickness		
Not Checked	Checked	Not Checked	Checked	Not Checked	Checked	Not Checked	Checked	
6.4	93.6	18.6	81.4	19.1	80.9	12.3	87.7	

Interviews with traditional midwives and young adolescent mothers confirm that with traditional midwives, the composition of postnatal checks include umbilical cord checking, breastfeeding practice, body temperature checking and a general examination for symptoms of likely illnesses. An IDI conducted with a traditional midwife revealed that she made the aforementioned checks whenever she visited her patients. She noted that:

It is a common practice among us traditional birth attendants that whenever we provide delivery assistance, we must do follow-up to ensure that both mother and baby are in good health. Whenever, I am on such a visit, I ensure that I check the hygienic condition of the umbilical cord and the stump to know whether it has fallen off... I examine how the mother is breastfeeding her baby and how she is positioning the baby during breastfeeding to ensure that no harm is caused to the baby. I also check both mother and her baby's body temperature using my hands to ensure normality and regularity. I basically check the general health of both mother and new-born to ensure that they are healthy. (IDI/Traditional birth attendant/64years/EkotEsen Oku/2018)

The statement made by the traditional midwife demonstrates that the traditional birth attendants undertake basic postnatal check-ups without the use of modern technological devices which are necessary for accuracy. As a result, the midwives are likely to make errors in the prediction of health status since years of experience is not enough.

An IDI conducted with a young adolescent of 15 years old revealed that the traditional birth attendant who assisted her delivery checked on her and her baby regularly to ensure that they are in good health after delivery. She claimed that the traditional birth attendant taught her several things that she needed to know in order to keep herself and the baby healthy. Some of the things she was taught include how to keep the baby's umbilical cord clean and dry, symptoms of sickness in new-born babies, breastfeeding practices and how often she should breastfeed her baby. In her words:

Whenever the traditional midwife came, she usually checked on how I breastfed my baby, the flow of the breast milk, the eating habit of the baby, the temperature of the baby, the healing state of the umbilical cord and the general health status of my baby. (IDI/Adolescent mother/15years/AnyamEfa/2018)

The above affirms the statement of the traditional midwife on postnatal check-ups. Knowing that the adolescent mothers are more likely to be naive about child care, the supervision by the midwives is a welcome initiative. Although their guidance may not be orthodox, it has contributed to good health care, especially in an environment where access to professional health care is limited.

Table 4.10 shows percentage distribution of unmarried young adolescents by timing of initial breastfeeding and new-born feeding other than breast milk in the first 3 days after delivery for the last birth. Breast milk is essential to the health of a new-born baby. The first phase of breast milk after birth provides colostrums, nutrient-rich milk for the new-born. Although, medical experts have reported that traces of colostrums may still be found in small quantity until six weeks following delivery, the first phase is highly nutritious and rich in immune factors. It provides new-born with immunoglobulin, protein, minerals and other antibacterial enhancing substances. Medically, experts recommend that breastfeeding of new-borns should take place within the first hour of delivery.

Table 4.10 presents results on the timing of initial breastfeeding and new-born feeding other than breast milk in the first 3 days after delivery for the last birth. Overall, while 3.6 percent of the adolescents sampled- breastfed their new-born babies within the first hour of delivery, more than half of the samples (53.9%) breastfed the second day. About 38 percent breastfed babies after two days of delivery. This indicates that most of the adolescents sampled did not breastfeed within the first hour of delivery.

The qualitative findings also revealed that some young adolescents did not have breast milk in the first day of delivery. This may have resulted from the fact that most of the adolescents sampled were on their first delivery experience, and women, especially adolescents who are delivering for the first time are more likely to encounter a delay in the flow of breast milk. Qualitative interviews reveal that most of the adolescents sampled had to drink large quantities of coconut fluid, palm wine, warmed water, warmed tea and/or hot pepper soup meals prior to and after delivery to quicken the flow of breast milk. Focus group discussions among group of unmarried young adolescents revealed these points. One of the participants revealed that:

I couldn't breastfeed the very first day after delivery because my breast milk didn't flow on time. The flow

started on the third day after delivery. I was given coconut 'water' and palm wine to drink immediately after birth so that the breast milk could flow... I was also given hot tea, pap, water and pepper soup to drink on a regular basis to increase the flow of breast milk. (FGD/Adolescent mother/14years/Iwo Etor/2018)

The statement shows that cultural beliefs and practices influence the periods of pregnancy, delivery and post-delivery. It demonstrates that the culture of the people considers coconut fluid, palm wine, warmed water, warmed tea and/or hot pepper soup meals as panaceas to delayed breast milk after delivery. The statements depict that the health implications of those substances were rarely given a consideration in as much as they are effective and keep mother and newborn alive.

Contrary to the experience of other discussants, a participant indicated that she breastfed her new-born within 24 hours of delivery. According to her, the traditional birth attendant who assisted her during antenatal and delivery earlier instructed her to drink the fluid gotten from coconut prior to delivery in order to quicken breast milk flow. She took the midwife instruction and her flow of breast milk was quickened:

I didn't have delay in breastfeeding for the very first time. My midwife who had been checking on me before and after delivery had earlier instructed that I drink the coconut 'water' on regular basis, especially on my eighth and ninth months of pregnancy. She asked me to do that as it would cause my breast milk to flow quickly after delivery. Otherwise I may find it difficult to breastfeed on time. To avoid any delay, I took her instruction, and I was able to breastfeed the very first day I delivered. (FGD/Adolescent mother/16years/Iwo Etor/2018)

The above shows that it was rare for breast milk to flow within 24 hours of delivery for females delivering for the first time. Although the chemical composition of the ingested coconut fluid which quickened the flow of breast milk is unknown, its acceleration of the flow of breast milk flow is worthy of academic examination. The implication is that although the traditional midwives may not be professional biochemists, years of experience and intuition influence their actions and suggestions. This progressively becomes part and parcel of the people's culture and practice across generations of traditional midwives.

Table 4.19 also indicates the percentage distribution of unmarried young adolescents by new-born feeding other than breast milk in the first 3 days after delivery. This was essential because what mothers or caregivers feed new-born babies while waiting for breast milk is equally important to the health and survival of the babies. Experts suggest exclusive breastfeeding for the first six months after birth. However, due to the fact that most of the adolescents sampled had delayed flow of breast milk, the babies were given some substances other than breast milk out of ignorance.

Table 4.19 shows that less than nine percent of the sample breastfed babies within 24 hours of delivery. Nearly all the respondents gave water to their new-born babies the first three days after delivery. The highest percent of the samples (49.3%) fed babies with non-distilled water which is classified harmful to the health of new-born babies, while 36.7 percent fed their new-borns with distilled water. Distilled water is a form of water that has been boiled into vapour and condensed backed into liquid in a different container, while the impurities are left in the original container, hence distilled water is one form of purified water.

Table 4.19: Percentage distribution of respondents by timing of breastfeeding and new-born feeding in the first 3 days of delivery

Variables/categories	Young Adolescents		
	Early stage 10-13 (N=179)	Middle stage 14-16 (N=383)	(%) All (N=562)
Time of breastfeeding			
Immediately	3.0	3.8	3.5
1-23 hours	10.0	7.8	8.5
2 nd day	51.9	49.3	50.1
After 2 nd day	35.1	39.1	37.9
Newborn feeding (first 3 days)			
Breast milk alone	6.2	7.4	7.0
Milk (other than breast milk)	2.2	8.9	6.8
Distilled water	38.6	36.1	36.9
Water from other sources	53.0	47.6	49.3

The qualitative findings shed light on the reason adolescent mothers fed their children with substances other than breast milk within the first three days of delivery. The interviews with adolescents and traditional birth attendants identified the delay in the flow of breast milk and providing respite for constant breastfeeding as common factors for feeding new-borns with other substances. A traditional birth attendant in an in-depth interview explained that they cannot allow the new-born to die or keep crying for breast milk when it is obvious that the breast milk may likely take two or more days to flow since the mothers were giving birth for the first time. Hence, they had to feed the baby with water or infant milk formula. She stated:

We cannot allow new-born babies to die or cry excessively for lack of food because of delay in the flow of mothers' breast milk. For some young adolescents who were giving birth for the very first time, they may not have breast milk flow for first three days or more following delivery. In that situation, should we keep the new-born hungry for three days or more? We have to improvise by giving the baby water or milk formula. (IDI/Traditional birth attendant/68years/Ikot Mfon/2018)

The statement shows that the traditional midwife was certain that adolescent breast milk may not flow within 24 hours of delivery especially among adolescents who are giving birth for the first time. To avoid starving the new-borns, she had to feed them with other substances besides breast milk. There is no doubt that breast milk may be delayed among young adolescents who are mothers for the first time, however, traditional midwives and young mothers need to be educated on effects of non exclusive breastfeeding.

An IDI conducted with an unmarried young adolescent of 14 years old further identified ignorance and lack of money as associated factors for the use of non-distilled water to feed her baby for the first three days following delivery:

First of all, I was not aware that I am to feed my child with only breast milk for the first six months of birth. Secondly, I didn't have money to buy distilled bottle water to feed him while await breast milk. As a result, I have to feed my baby with the stream water which is our usual source of drinking water. (IDI/Adolescent mother/14years/Ikot Nte/2018)

This indicates that some people in the study community are so poor that they cannot afford basic needs of life, including distilled water. Experts classify streams among the unimproved sources of water. Feeding a new-born with un-distilled stream water could be harmful to its. Organising educative programmes and rendering financial assistance to pregnant adolescents and mothers would go a long way in improving maternal health in the study location.

Table 4.20 presents percentage distribution of unmarried young adolescents by baby's age and current breastfeeding status. This was considered important because the duration of breastfeeding practice of young adolescents was more likely to be associated with the cultural beliefs of the people. Some cultures may not encourage exclusive breastfeeding, but practice prolonged breastfeeding. The World Health Organization recommends exclusive breastfeeding for up to six months of age, and continued breastfeeding with a combination of complementary food for two years of age or beyond. Table 4.24 shows that all adolescent respondents with babies less than six months were currently breastfeeding at the time of study. Fifty-five percent of the adolescents sampled breastfed babies for one year or more. The implication is that although they all breastfed for six months and some probably beyond, they were less likely to practice exclusive breastfeeding.

Table 4.20: Percentage distribution of unmarried young adolescents by baby's age and current breastfeeding status

Current breastfeeding status	Baby's age (months)			χ^2	Df	p-value
	0-6 months	7-12 months	13 months +			
Not breastfeeding	-	21.2	45.0	80.319	2	0.000***
Breastfeeding	100.0	78.8	55.0			

The qualitative findings depict that young adolescents were less likely to practice exclusive breastfeeding beginning at postpartum. As a matter of fact, none of the respondents interviewed indicated that they practiced exclusive breastfeeding prior to the survey. An IDI conducted with a young adolescent of 13 years old who gave birth at 12 years of age revealed that she breastfed her baby for more than one year but never practiced exclusive breastfeeding from the neonatal stage. In her words:

I have breastfed for more than a year now but I have not practice exclusive breastfeeding for once, because I started giving my baby watery pap after two weeks of age. Since then I have been complementing breast milk with other forms of foods until date. More so, I was told that exclusive breast feeding makes a baby unattractive and weightless (IDI/Adolescent mother/13years/Ikot Umiang Ede/2018)

The account of the above adolescent mother is likely to be the experience of many others. Adolescents who visited professional health facilities may have been informed of exclusive breastfeeding. Others may have heard from friends, neighbours, families or schools. Adolescents have failed to practice exclusive breastfeeding because of cultural beliefs and orientation. It is a common belief in the study community that a new-born must be well-fed to be attractive and weightier. To achieve this goal, the people shun exclusive breastfeeding because they believe that it makes a baby less attractive and weightless.

The focus group discussion among group of unmarried young adolescents further reveals that none of the participants practiced exclusive breastfeeding as at the time of the survey. Each participant was noted to have provided the baby with food other than breast milk commencing from the neonatal period. The interview showed that all the discussants were still breastfeeding as at the time of the discussion. It also showed that the adolescent mothers had wrong notions about exclusive breastfeeding and attributed their inability to practice it to the lack of nutritious food. Nutritious food was believed to keep the mother healthy and able to undergo the rigour of exclusive breastfeeding. One of the participants stated that:

You will hardly find anyone who is practising exclusive breastfeeding in this community. I am not practicing it... What we were told is that we should breastfeed our

children for a long period of time and that with that it would boost their intelligence. To feed the child with only breast milk is not practicable. Although, we have heard of exclusive breastfeeding but not giving the child anything other than breast milk is out of it, otherwise both mother and baby will die of malnutrition because we don't always eat balanced diet in this part of the world. (FGD/15years/Adolescent mother/EkotEsen Oku/2018)

The above statement affirms that exclusive breastfeeding is not new to the people. They are afraid of practising it for fear of losing both mother and child to malnutrition, given that they rarely eat good meals. It indicates that the inability to afford good meals is key to the rejection of exclusive breastfeeding. Therefore, in the course of promoting exclusive breastfeeding as an integral aspect of maternity in this part of the world, there is a need to consider the influence of cultural beliefs and orientation.

Culture further plays an essential role in the reproductive health of young adolescents. The beliefs and practices which are embedded in cultural milieu shape the maternal healthcare behaviour of adolescents. Cultural influence on adolescents' maternity begins from the time of conception, through antenatal, delivery and post-delivery periods. The beliefs and cultural practices of a people largely determine the duration of abstinence from intercourse before and after delivery. Although, there is no required waiting period before resuming intercourse after delivery, a good number of health providers recommend waiting until six weeks after delivery whether the delivery was vaginal, caesarean or via any other method (Dillner, 2013; Friedman, 2018).

Sexual abstinence in this context is meant to keep the mother's body away from infections since her body may not be completely healed prior to six weeks. Medical evidence reveals that the risk of having complications after delivery is high within the first six weeks (Dillner, 2013). Six weeks abstinence will permit the body of the woman to have been examined during postnatal care and advice given on when sexual intercourse is safe. The cultural beliefs of a people may not allow medical suggestions to hold in some instances because of the inherent practices attached to early or late resumption of sex after delivery and sumptuous effects on mother and new-born health and breastfeeding practices.

Table 4.21 presents the percentage distribution of unmarried young adolescents by months or duration waited without sexual intercourse after delivery and the reason for

not having sex during those periods of waiting. The results show that none of the respondents had sexual intercourse before six weeks after delivery. Apart from medical recommendations for abstinence, it was a cultural anomaly in the study area for a mother to have intercourse as early as six weeks after delivery. The culture encourages the mother to wait for at least six months. Table 4.22 shows that the highest percent of the adolescent sampled waited for more than six months. They began to have sex in the 7-12 months (39.1%).

Notwithstanding, 13.7 percent had sex before the end of three months. Qualitative interviews reveal that waiting for six months period is cultural but the choice lies on the mother and her partner. About 48 percent of the respondents indicated that the reason for not having intercourse for the number of months waited after last delivery was because the body was not ready for penetration largely because of injuries sustained during delivery. About 17 percent attributed their reason to breastfeeding while 24.7 percent claimed their partners' absence was responsible. The implication is that the traditional belief that sexual intercourse during breastfeeding is harmful to new-born babies no longer holds water in the study area, especially among adolescent mothers.

Table 4.21 Percentage distribution of respondents by months not had sexual intercourse and the reason for not having in those periods after last delivery

Variables/categories	Young Adolescents		
	Early stage	Middle stage	
	10-13 (N=179)	14-16 (N=383)	All (N=562)
Duration not had intercourse			
Less than 6 weeks	-	-	-
6 weeks - 3 months	10.1	15.4	13.7
4-6 months	20.1	23.0	22.1
7-12 months	49.7	34.2	39.1
13 months +	20.1	27.4	25.1
Reason not had intercourse			
Body not physically ready	54.9	44.0	47.5
Was still breastfeeding	18.3	16.3	16.9
Fear of another pregnancy	24.8	4.3	10.8
Partner's absent	2.0	35.3	24.7

Interviews with respondents further explicated the reasons why young adolescents waited for a period of time before initiating another intercourse after the last delivery. Their responses show the weakening influence of culture on behaviours with regard to duration of abstinence from sexual intercourse. Many of the respondents' reasons bordered on, the body not being completely healed for penetration and partner's absence. An IDI conducted with an unmarried young adolescent of 16 years revealed that she waited for seven months after her last delivery before intercourse. In her statement she indicated that the absence of her partner was the reason for the 7 months, given that her body was healed of delivery injuries after three months. She added that the fear of becoming pregnant for the second time was not her concern. In her words:

My body was set for intercourse after three months of delivery, but I waited for seven months before another affair because my partner travelled out of the town following the outbreak of my pregnancy. He returned on the seventh month of my delivery...It was in the month when he returned that I had another affair. (IDI/Adolescent mother/16years/Ikot Obio Eka/2018)

The statement does not indicate the period of abstinence alone. It also demonstrates that the adolescent pregnancy was unplanned. As a matter of fact, her partner had to travel out of town to escape communal and familial reactions to the young adolescent's pregnancy. The statement by the adolescent mother reveals that she would have had post-delivery affairs earlier than she did and would not have waited for seven months if her partner was available

A life history interview with a young adolescent mother of 13 years old presented a contrary view about the duration of abstinence after her last delivery. The adolescent mother explained that she waited for one year and six months before having another affair. She noted that her body was not set for penetration due to serious injuries sustained during her last delivery. She stated that:

Involving in another affair was the last thing in my mind. The complications and injury I sustained during my last delivery were serious. I suffered from the injury for more than one year. The delivery nearly changed my moving steps and standing position. It affected my waist and my urinary tract... It was recently when the injury was healed

and I stopped breastfeeding that I had the urge for sex. Last month was the first time I had sex after my delivery. It was exactly one year and six months following my last delivery. (Life history/Adolescent mother/13years/Oniong/2018)

The above demonstrates that delivery complications and its attendant consequences can restrict a mother from having early vaginal sex. It shows that breastfeeding alone was not what discouraged the adolescent mother from involving in an early vaginal penetration but her body, which was not physically fit for post-delivery sex. The indicates that the urge for sex after delivery may likely increase after breastfeeding is stopped and the body of the mother is healed and ready for penetration.

The results of logistic regression for effects of selected characteristics and interaction effects on the choice of postnatal care provider for the last birth among young adolescents are shown in Table 4.22. The results show that with other variables under control, age at last birth exerts a negative influence on choice of postnatal care provider for the last birth among young adolescents (Model 2). The results show that adolescents aged 14 through 16 were 3 times less likely to be assisted by a skilled health provider compared to adolescents aged 13 or below during postnatal check-up for the last birth. The first model did not exert a significant influence on the dependent variable but the second model did after including education and age of males responsible for pregnancies of young adolescents. The implication is that the education and age of males responsible for pregnancies of adolescents played role in the choice of postnatal care provider. This significant effect disappeared in the last model after including interactive variables of males responsible for pregnancies of young adolescents by adolescents' characteristics. This indicates that with other variables under control, the choice of postnatal care provider for both the new-born and mother could be well explained by taking into consideration the effects of other variables.

Religion of young adolescent mothers shows significant negative effect on choice of postnatal check-ups (Model 1 through 3). Other Christians were 0.4 times less likely to visit skilled provider for postnatal check-ups than Catholics. This significant negative effect appeared lesser with additive variables in subsequent Models (Models 2 and 3). The explanation for this is that other Christians in the study area were more likely to visit prayer houses or churches for delivery than Catholics; hence the latter were more

likely to patronise faith-based midwives than Catholics, especially with regard to postnatal care.

Table 4.22: Coefficients from binary logistic regression analysis assessing the effects of selected characteristics on choice of postnatal care provider for the last birth among unmarried young adolescents

Characteristics	Model 1	Model 2	Model 3
	Odds ratio	Odds ratio	Odds ratio
<u>Individual:</u>			
Age at last birth			
≤13 (RC)	1.00	1.00	1.00
14-16	0.646	0.378**	0.189
Occupation			
Student (RC)	1.00	1.00	1.00
Other	1.323	0.043***	0.009***
Religion			
Catholic	1.00	1.00	1.00
Other Christian	0.370*	0.016***	0.001***
Parent's living status			
Both parents alive	2.513***	1.534	2.132*
Otherwise (RC)	1.00	1.00	1.00
Household's wealth index			
Poorest (RC)	1.00	1.00	1.00
Wealthiest	2.513***	2.204**	2.621**
<u>Characteristics of males responsible for pregnancies of adolescents:</u>			
Education			
< Secondary (RC)		1.00	1.00
Secondary+		0.038***	0.067
Age			
≤20 (RC)		1.00	1.00
21-25		4.340***	5.570***
26 +		4.907***	6.890***
Wealth index			
Poor (RC)		1.00	1.00
Middle		4.874**	5.965**
Rich		5.994***	7.825***
<u>Interactive factors:</u>			
Interaction: Wealth index of males responsible for pregnancies * age at last birth			
Poor * ≤13 (RC)			1.00
Middle * 14-16			3.965**
Rich * 14-16			5.835***
Interaction: Education of males responsible for pregnancies * age at last birth			
< Secondary * ≤13 (RC)			1.00
Secondary+ * 14-16			0.089**

Model chi-square	21.882***	107.475***	137.182***
Nagelkerke R Square	0.078	0.343	0.422
2 Log Likelihood	455.861	370.267	340.560

Significant at $p < 0.05^*$, $p < 0.01^{**}$, $p < 0.001^{***}$, RC - reference category

Parents' living status of unmarried adolescents significantly influences choice of postnatal care. Adolescents with both parents alive were 3 times more likely to enjoy postnatal check-ups from skilled providers relative to others (Model 1). After the inclusion of males responsible for pregnancies of young adolescents' characteristics in Model 2, this influence disappeared. It reappeared after the additive value of interactive factors in Model 3. Household's wealth index influences choice of postnatal check-ups. Wealthiest households were 2 or 3 times more likely to enjoy postnatal care from health professionals than poorest families (Model 1 through 3). This was expected, given that rich households could afford the services of skilled providers.

Education of males responsible for pregnancies of young adolescents exerts significant negative effects on adolescent mothers' choice of providers for postnatal check up. Adolescents with males responsible for their pregnancies whose level of education was secondary or more were 0.038 times less likely to receive postnatal check-ups from skilled providers (Model 2). This was unexpected. One should have expected education of males responsible for pregnancies of young adolescents to positively influence adolescents' choice of skilled providers for postnatal care. However, this effect disappeared in Model 3 after including males responsible for pregnancies of young adolescents and adolescent mothers' interactive factors. The implication is that the negative effects of education of males responsible for pregnancies of young adolescents on choice of postnatal care provider may in fact be explained by other factors. Age of males responsible for pregnancies of young adolescents significantly influences young adolescents' choice of provider for postnatal care. While adolescents with males responsible for pregnancies aged 21-25 years old were 4 times more likely to receive postnatal check-ups from skilled providers, those with aged 26 and above were 5 times more likely to do same. This increased with the addition of interactive factors in Model 3.

The effects of males responsible for pregnancies of young adolescents' wealth index on adolescents' choice of provider during postpartum period was statistically significant in Model 2 and increased significantly in Model 3 after the addition of interactive

factors, controlling for the influence of other factors. This was expected due to the influence of wealth on choice of health care. While adolescents with males responsible for pregnancies in middle wealth index were 4 times more likely to receive postnatal care from skilled attendants, those with males responsible for pregnancies in the rich wealth index were 5 times more likely to do same (Model 2). After the addition of interactive factors, those with males responsible for pregnancies of young adolescents within the rich wealth index became 7 times more likely to visit skilled providers for postnatal check-ups.

The inclusion of interactive factors further enhances the explanatory power of the independent variables. With the existence of significant interactions in any of the additive variable, the implication is that the effect of predictor variable on the dependent variable varies at different values relative to other predictor variables. The results in Table 4.22 show that the interaction of males responsible for pregnancies of young adolescents' wealth index by age at last birth of adolescents significantly affects the choice of postnatal care provider at middle and rich indexes by age at birth 14-16 years for middle and rich indexes relative to poor households. That is, adolescent mothers who associated with males of middle wealth index were 12 times more likely to visit skilled providers for postnatal check-ups when compared to adolescents from poor households. The statistical effect increases alongside wealth increase.

The rich wealth index by age at birth (14-16) gave an odd ratio of 4 times likelihood. This indicates that decision making on maternity increases with the age of adolescents. Despite interaction between males responsible for pregnancies of young adolescents' education by age at last birth, the results show that the education of males responsible for pregnancies of young adolescents were less likely to significantly influence the choice of postnatal care provider by young adolescent mothers (Model 3). This further suggests that the negative effect of males responsible for pregnancies of young adolescents' education on choice of postnatal care provider may in fact be explained by other interactive factors. The analyses confirmed the variability in maternal healthcare practices among young adolescents in the study area and the dynamics that characterised the entire process.

4.6 Discussion

On the determinants of premarital pregnancy among adolescents, the study found that the factors that motivate premarital sexual activity among young adolescents in the study area include the desire for sexual experimentation, peer pressure, parental negligence, and financial inadequacy. Among the identified factors, the desire for sexual experiment and peer pressure stands out. This indicates that in addition to peer pressure, most of the adolescents sampled actually opted to explore their sexuality. The financial inadequacy of adolescents accounts for less influence on premarital sex. It demonstrates that although, some adolescents were from poor homes with financial difficulties, peer pressure and the desire to experiment sex, instigates early, premarital sex among adolescents. The findings corroborate a study by Badaki and Adeola (2017) which advances that peer pressure significantly influences premarital sexual behaviour among secondary school students in Kaduna State, Nigeria. It further supports the subcultural theory's assumption that young adolescents are subcultures that partake in constituents of the mainstream culture, but at the same time distinct from it (Brake, 1987). It illustrates that premarital early sex and pregnancy are deviant behaviours generated by subcultures with normative values converse to that of the main culture of Akwa Ibom State.

The study found that the young, unmarried adolescents mostly obtained information about sexual and reproductive health from their school teachers, friends and social media. Given the fact that most of the adolescents were in secondary school, it was not a surprise that they identified their teachers as their main source of information about reproductive health. School teachers are more likely to educate adolescents on the right attitude towards sex and probably, encourage abstinence from sexual activity. Despite the fact that young adolescents identified teachers as their main source of information on reproductive health, orientation from friends strongly influence their exposure to early sex. The findings are consistent with a study by Amoran, Onadeko and Adeniyi (2005) which advances that adolescents who sought information from peers are more sexually experienced than those who seek information from teachers, parents, and social media among other sources. Onuegbu and Salami (2017) also assert that the early exposure of adolescents to sex in Nigeria is mainly associated with improper and incomplete information about reproductive health.

The study found that parental factors interplay with adolescent sexuality. Parents/guardians who do not monitor their children firmly nor support them financially are more likely to have adolescent children who are involved in early sex. Nearly half of the adolescents sampled replied that their parents/guardians never knew what they were doing with their free time as parental monitoring was higher among the older adolescents than it was for the younger adolescents. The study traced the lax supervision of early adolescence to common beliefs that middle adolescence are more likely to be exposed to premarital sex than early adolescence. The study found that shielding early adolescence from reproductive health discussion greatly exposed many early adolescence to early sex. The findings contradict the study by Rocca, Doherty, Padian, Hubbard and Minnis (2010) which advances that parental monitoring is not associated with pregnancy intention of teenagers among the Latinas.

The study found that nearly all adolescent respondents consented to their last sexual encounter notwithstanding age category. The study noted a very low rate of non-consensual sexual occurrence in the study area. It also revealed that although adolescents were too young for consensual sex, they were not coerced into sexual activity. For the fact that the sampled adolescents were below the legal age of consensus and some of them were in relationships with males of their age group, consent in this context was debatable. The study revealed that although young adolescents believed that they consented to sexual encounters, they never wanted to be pregnant at the time of pregnancy. Unplanned pregnancy was higher among the early adolescence than the middle adolescence. This supports Nwagwu (2007) assertion that in Nigeria, the adolescent girls are more susceptible to unplanned pregnancy than their adult counterparts, however, showed that there are differences among adolescent categories, with early adolescence encountering unplanned pregnancy than middle adolescents.

The study found that attempted abortion was less recorded among the adolescents sampled although, early adolescence attempted more abortions than middle adolescence largely because of societal perception and stigmatization. The findings corroborate an assertion by the WHO (2014) that pregnancy among unmarried adolescents is more likely to be unintended, however, refutes the WHO's position that pregnancies are more likely to end up in abortion. The reason is that less than 18 percent of the adolescents sampled for this study, indicated an attempt at abortion.

The study found that more than half of the adolescent who attempted abortion utilized self-prescribed drugs. Self-prescribed drugs are dangerous to health and are against medical recommendations. The use of self-prescribed drugs was higher among middle adolescence when compared to early adolescence. The self-prescribed drugs included over the counter drugs, left over home drugs which was prescribed for other purpose, drugs given by relatives/friends, and drugs sought from Internet or books. Very few of the adolescents patronised medical doctor/nurse (17%) and traditionalists (27.2%) for abortions. One-third of the respondents sourced abortion from traditionalists, although it is a potentially harmful practice. This corroborates the views of the Women's Refugee Commission, Save the Children, UNHCR and UNFPA (2012) that two million girls aged below 15 delivered each year while about three million adolescents seek abortion yearly.

Despite the number of unplanned pregnancies, intention was a good measure of premarital pregnancy among the adolescents. Rocca, Doherty, Padian, Hubbard and Minnis (2010) in their study found that pregnancy intention was an independent risk factor for pregnancy among teenagers. This study found that occupation, household, wealth index of males responsible for pregnancy of adolescents, parent living and consensual union significantly varied in both the early and middle adolescence categories. The study further found that while education and age of males responsible for pregnancy of young adolescents significantly varied among early adolescence, marital status of males responsible for pregnancy of adolescents, religion and attempted abortion significantly varied among middle adolescence. The study found that early adolescents with secondary school education were less likely to desire pregnancy than those with less education. This is attributed to the fact that adolescents with secondary education are more likely to be in school, hence less likely to have intentions of pregnancy than those with less education. Those with lower education are more likely to consist of adolescents with no formal education, school drop-outs and those in the awaiting admission category, hence more likely to lack academic pursuit and desire childbearing.

The occupation of young adolescents significantly determines childbearing intentions for both sub-groups. While none of the early adolescence sample students had intention for childbearing, a few adolescents who were either trainee artisans or businessmen had higher intention for childbearing. Within the middle adolescence sub-

group, nearly all the students had no intention for pregnancy. One-third of the adolescents within the middle adolescence who were not students wanted children. This indicates that studentship has a way of discouraging adolescents from desiring childbearing and thus acts as a mechanism of birth control.

The study found that early adolescence from poor household wealth index were more likely to desire pregnancy (13.5%) than those in middle and rich households (11.0%). Among the middle adolescence, less than one-third desired pregnancy. This indicates that poverty influences the early adolescence the most, into desiring childbearing than the middle adolescence. This is attributed to ignorance and the belief that being pregnant for a man would provide an escape from poverty. A greater number of early adolescence who associated with partners from poor households did not have intentions of childbearing (84.5%). Among the middle adolescence, while majority (78.4%) did not intend to be pregnant notwithstanding the wealth index of the household they were associated with, less of the adolescents (26.5%) who associated with the rich and middle households did. Although, the percentage seems low, it indicates that the middle adolescence were more likely to bear children with partners from middle/rich households than the early adolescence. This corroborates Rocca, Doherty, Padian, Hubbard and Minnis (2010) study that familism was sturdily connected with pregnancy happiness, but not with pregnancy intention.

The study found that age of males responsible for pregnancy of adolescents significantly varied among early adolescence with regard to intention of childbearing. Adolescents were more likely to have intention of pregnancy if their male partner was aged 26 or above. The explanation is that older male partners are more likely to be financially stable, responsible and capable of providing for the family's upkeep than younger male partners. Less than one percent of the adolescents who had relations with married men or men who cohabited had intentions of childbearing. This portrays the effects of stigma attached to an unmarried adolescent having sexual relationship with a married man. The stigma increases the moment the adolescents become pregnant for the married man. This is because pregnancy under this condition does not only occur outside wedlock but involves an individual who is too young to give birth. This aligns with the assumption of the subcultural theory that young adolescent pregnancy is within the cultural enclave of delinquency (Brake, 1987).

The study found that unmarried young adolescents with both parents alive were less likely to have childbearing intentions. The desire to bear children was relatively high among orphans or adolescents with single parents. This demonstrates the importance of having parental protection, guidance and provision that having both parents alive, affords. This finding is consistent with the observation by Amoran et al (2005) that the loss of one or more parents was associated with early sexual encounter. Young adolescents who have cohabited were more likely to want children than those who have not. This cuts across both early and middle adolescence alike. The implication is that cohabitation largely exposes adolescents to unwanted pregnancies. This reveals that the adolescents who opt for pregnancy are more likely to associate with unmarried males than married males, especially when pregnancy intention is involved.

On the antenatal care practices among unmarried young adolescents, the study found that most adolescents received ANC for their last birth. The middle adolescence were less likely to receive ANC than the early adolescence. Although, the percentages for both stages of adolescents were high, some adolescents received care from traditional and faith-based providers, despite the fact that antenatal care from trained health providers is highly recommended. The study revealed that more than half of the adolescents sampled received ANC from faith-based birth attendants. WHO and UNICEF (2003) recommend modern health facility which would enhance the antenatal check-ups and provide the comprehensive care needed to prepare the foetus for effective delivery. The study found that about two-third of the adolescents sampled did not visit modern health facilities for ANC; rather, they visited faith-based and traditional maternity centres. This finding is consistent with the study by Lawrence, Jimmy, Aluye-Benibo and Igbans (2015) that pregnant women in Nigeria prefer faith based and traditional birth attendants to professional birth attendants.

The current study found that about one-third of the adolescent sampled did not receive antenatal care from any source but remained at home until delivery. The middle adolescence were more likely to remain without antenatal care when compared to early adolescence. The Nigeria Demographic and Health Survey of 2013 showed that more than half a percent of pregnant women in Nigeria delivered at home without any antenatal care visit (NPC and ICF International, 2014). The first ANC visit influences subsequent antenatal care visits. The study found that over half of the adolescents' sampled contacted faith-based birth attendants first for the antenatal care of their last

birth/pregnancy. The early adolescence were more likely to visit nurses/midwives for their first antenatal care when compared to middle adolescence. This resulted from the parents or guardians' fear for their daughters' health, given their tender ages. This supports the rational choice theory's assumption that individuals do not act on the basis of accident, but carefully weigh the benefits and costs of an intended action considering available resources (Ritzer 2008; Charles 2010).

The antenatal care policy in Nigeria is aligned with the WHO (2016b) antenatal care recommendations of at least four ANC visits for women without complications. The recommended schedules include: the 1st visit at the end of 16 weeks of pregnancy, the 2nd visit between 24 and 28 weeks of pregnancy, the 3rd visit at 32 weeks, and the 4th visit at 36 weeks. The recommendations include women with complications, special needs, or conditions beyond the normal scope of basic care. The current study found that the number of months at the time of the 1st ANC visit and number of ANC visits significantly varies by the age of adolescents. The highest percent of the respondents went for first ANC visit at 4-5 months of pregnancy (the second trimester), which contradicts the recommended period for the first ANC visit of not more than 16 weeks of pregnancy (the first trimester). In other words, it is expected that a pregnant adolescent should go for her first ANC visit at least once during the first three months (also called the first trimester) of her pregnancy. The study found that only 11.9 percent of the sample met this expectation. Others had delayed ANC visits. This finding is consistent with the view by Nwokocha (2012a) that most pregnant women in Nigeria begin antenatal care visits in their second trimester.

Early visit for ANC is particularly important in the Nigeria context as it provides the opportunity for the early detection of complications so as to prepare for early referral where necessary, considering the physical barriers encountered by rural dwellers in accessing health care. However, beyond the number of months of pregnancy at the first antenatal visit the number of visits is equally important. A pregnant woman is expected to visit a health facility at least four times for ANC services before delivery. The study found that more than half of the respondents, especially those in the middle adolescence category had four or more ANC visits before delivery. Notwithstanding the high number of ANC visits, the quality of ANC is also important as it determines the health status of pregnant adolescents and their babies. To ascertain this, the study examined components of ANC received by unmarried adolescents for the last birth.

The component of ANC is essential for quality antenatal care services. It helps to monitor pregnant adolescents for complications and provide counselling that will lead to safe delivery. To examine the component of ANC received by adolescents, they were asked a number of questions about the services they received during the pregnancy of the last birth. The study found that nearly half of the adolescent respondents did not have their blood pressure measured (45.8%), urine (46.1%) and blood (46.1%) samples taken or malaria infection (43.3%) tested for, during ANC visits. The study found that during antenatal care visits by adolescents, nearly all the traditional birth attendants massaged the adolescents to free the womb and position the foetus well. Lawrence et al (2015) in an earlier study identified massaging as a common service of traditional birth attendants during antenatal check-ups in Southern Nigeria.

With an emphasis on the components of ANC, the NPC and ICF International (2014) opined that while malaria is a leading cause of death for pregnant women and adolescent girls in the developing countries, neonatal tetanus is the primary cause of neonatal death in the same region. A high proportion of deliveries occur at home or at non-professional facilities like prayer houses and the facilities of traditional birth attendants where hygiene is likely to be poor. Tetanus toxoid injections are supposed to be provided to pregnant girls/women to prevent mortality arising from neonatal tetanus (NPC and ICF International, 2014). Neonatal tetanus is most likely to occur when the cutting of the umbilical cord following delivery is not done hygienically. Adolescents who have not received any tetanus injections prior to pregnancy are advised to take two doses of tetanus toxoid to be fully protected during pregnancy (NPC and ICF International, 2014). Hence, the question on tetanus toxoid injection was essential to assessing the components of antenatal care in this study. The study found that 44.5 percent of the adolescents sampled did not receive tetanus toxoid injection at least once during last birth's pregnancy.

Given that some of the recommended components of antenatal care were being administered by non-professional midwives during the pregnancy check-ups of adolescents in the study area, the study examined the components of ANC received by place of ANC visits for the last birth or current pregnancy. This was to ascertain the personnel or health providers who administered each component of the ANC services. The study found that non-professionals also provided some ANC services which are

supposed to be exclusive to trained health practitioners. For instance, 35.7 percent of traditional/faith-based midwives measured the blood pressure of their adolescent clients during antenatal check-up. Some adolescents had their urine sample (31.8%) and malaria infection (49.7) tested by non-professionals while some also received tetanus toxoid from the traditional midwives (25.7%). The findings corroborate the findings by Lawrence et al (2015) that some traditional attendants provide tetanus toxoid to pregnant women who visit them for antenatal care in Yenagoa, Nigeria.

The current study also found that some of the traditional midwives were retired nurses while others had informal training and so were able to perform these services on pregnant women or adolescents. By implication, the study found that most of the traditional and faith-based practitioners were quack midwives whose antenatal and delivery functions were contrary to medical ethics. This indicates that the non-professionals utilise the opportunity provided by the country's dysfunctional health care system to deliver maternal health care services in the study area.

The findings of the logistic regression showed that adolescents aged 14-16 were less likely to choose modern health care facilities for ANC services when compared to adolescents aged 13 and below. The study found that education exerts significant influence on the choice of ANC provider across all models. For instance, adolescents with secondary education were more likely to access modern health care facilities than those with lower education for antenatal care. The study found that living status parent significantly influences the choice of ANC services. Adolescents whose parents were alive were more likely to receive ANC from trained providers than those whose parent(s) were dead. The addition of males responsible for pregnancy of adolescents' characteristics in the model weakened the probability of receiving ANC from trained professionals, although it was still significant. This finding corroborates the observation by Woldemicael (2005) that adolescent mothers are more likely to receive worst prenatal care than adult mothers.

The study found that with the insertion of decision-making factor in the model, adolescents with both parents alive were more likely to access modern health care for ANC than those who lost one or more parent(s). The study found that adolescents' household index significantly affects the choice of health care provider during pregnancy. Adolescents from rich wealth index households were more likely to access

modern health care facilities for ANC services than those with poor wealth index. The addition of males responsible for pregnancy of adolescents' characteristics to the model did not exert a significant influence on adolescent pregnancy. The study found that the rich household wealth index significantly influences the choice of ANC services. This demonstrates the relevance of household wealth index in the health seeking behaviour of adolescents. It also indicated that the higher the household wealth index, the higher the chances of adolescents receiving ANC services from health professionals. This is consistent with Singh, Rai, Alagarajan and Singh (2012) position that lower utilization of modern health care is associated with poor households because they rank health care low in priority over other basic needs.

The study found that although, the educational level of the males responsible for pregnancy of adolescents is important for antenatal check-ups, it did not influence the adolescents' choice of ANC services. The reason for this was partly associated with fact that some males responsible for pregnancies of adolescents escaped or travelled out of community after impregnating their adolescent partners. More so, some males responsible for pregnancies of adolescents were noted for denying pregnancies in the qualitative aspect of the study. This partly explains why the education of males responsible for pregnancy of adolescents was not significant. In addition to the circumstances surrounding adolescents' pregnancy, community's negative stance on premarital and early pregnancy also interplayed in the process. The study found that whether a male responsible for pregnancy of adolescent was married or not did not influence the adolescent's choice of ANC provider.

The study found that decision making factor significantly influences the unmarried adolescent's choice of ANC services. Adolescents whose males responsible for their pregnancies made all the decisions on the choice of ANC were more likely to choose professional care providers for antenatal care when compared to adolescents who made all the decisions concerning their lives. However, the study found that the probability of seeking trained provider for ANC drastically increased when adolescents and males responsible for their pregnancies jointly decided on choice of ANC provider. This corroborates Ghuman, Lee and Smith (2006) position that women autonomy influences reproductive health matters.

On the delivery practices among unmarried young adolescents, the study found that nearly half of the adolescent mothers' place of first visit for delivery was the faith-based facilities (47.9%). This was associated with the religious belief that the supernatural controls delivery. The study found that a lot of faith-based birth attendants operate in churches and prayer houses. Hence, it was common to combine traditional birth attendants and faith-based midwives who were also less skilled providers as non-professionals.

The study found that the adolescents in the middle stage of classification were more likely to visit first the faith-based birth attendants for delivery. Although, the faith-based midwives also provide delivery services to early adolescence, they were more likely to encounter anxieties due to the tender age of early adolescence; hence more likely to refer early adolescence to skilled care providers if symptoms of delivery complications are detected. Kramer and Lancaster (2010) asserted that pregnancy at tender age is usually associated with adverse health outcome.

In addition to the place of first visit for delivery which is essential to maternal health outcome, assistance during delivery is equally important to the health of the mother and new-born health. This was considered unavoidable in maternal discourse, because the skills and actions of the person providing delivery assistance largely determine the management of complications and hygiene practices during delivery. The study found that more than half of the unmarried young adolescents received delivery assistance from traditional and faith-based birth attendants. This was connected to the fact that the very few primary healthcare centres available in the area did not operate on a daily basis. They also did not operate at night, but closed in the evening while its staff returned home. As a result, pregnant adolescents whose labour occurred in the night could not be assisted by skilled care providers. The traditional birth attendants or faith-based midwives were always accessible hence their high patronage.

The study found that any attempt to go to the city for delivery was usually discouraged due to distance and lack of transportation. Those who tried were more likely to put to birth on the way before reaching the health facility. Moreover, the study found that because of the terrain, it was insecure to travel in the night from the local area to city in the night in search of hospital or clinic for delivery. As a matter of fact, the study revealed that people went to bed very early in the study area because of its rural nature

and the lack of electricity and street lights. The study further revealed that pregnant adolescents found it difficult to access public transportation that would convey them to health facilities in city, especially when labour occurred in the night. The motorcycle was the most common means of transportation in the study area, besides bicycles. The researcher found that the distance from the nearest professional health facility to the home of the pregnant adolescents revealed that the distance was more than the United Nations five-kilometre estimates for maternal health issues (Nwokocha, 2012a).

The study found that those who were educated and wished to be delivered by skilled care providers were compelled to seek assistance from traditional midwives. The study found that the early adolescence were less likely to deliver at home when compared to middle adolescence. This was explained by the level of care provided to early adolescence because of their tender age and negative past experience of complications associated with early adolescence childbearing. The study found that nearly two-third of the adolescent respondents stayed at a place of delivery after delivery for 2-6 days. Overall, less than 26 percent of the adolescents sampled stayed at place of delivery for a day or less. The early adolescence were more likely to stay longer at the place of delivery than the middle adolescence. Staying longer at place of delivery was mainly associated with complications encountered during delivery. The findings reveal that most adolescents were from poor homes and had to pay for delivery bills. In cases where they and their families were unable to pay the delivery bills on time, the adolescents were asked to stay at the place of delivery.

The study found that the non-opening of health facilities during the night and sometimes during the day was the highest determinant of adolescents not delivering in health facilities. The study found that this was closely followed by partner/family preference and cost of delivery. The implication was that the closure of health centres in the area enhances delivery by traditional birth attendants. The findings corroborate a study by Nwokocha (2012a) which advances that poverty, distance and a dysfunctional health care system contribute to the lack of access to health facilities for delivery.

The study found that half of the traditional birth attendants used clean home delivery kits during the most recent birth with. This indicates that some of the traditional birth attendants were knowledgeable about hygiene practices in delivery. The study found that most of the traditional midwives adhered to the use of hand glove rule because of

the fear of contracting HIV/AIDS even as they noted that in professional health facilities HIV/AIDS tests were usually conducted before every delivery. Since they did not have the skills instruments to test pregnant patients before delivery, they had to strictly adhere to hand glove use thus instructed everyone that came to deliver a child at their facilities to come with a pair of hand gloves.

The study found that in such cases where unmarried pregnant adolescents came for delivery without a pair of hand gloves the midwives would improvise, especially when labour occurred at night. When it happened in the day, they asked care-givers to buy hand gloves from pharmaceutical shops. The study also found that in those instances where the caregivers could not afford new gloves, the midwives were compelled to use personal hand gloves, either new or old. The study revealed that the adolescents attempt at delivering a child at such facilities without personal hand gloves exposed many of them to non-hygienic practices. Although some midwives sold hand gloves and other delivery kits, many midwives considered it non-profitable because after delivery, some adolescent mothers and their families rarely pay for them.

The study found that most traditional and faith-based midwives used new or boiled razor blades to cut umbilical cords during delivery. Most midwives pre-informed adolescents to come with new blades along with other delivery kits on the day of delivery. Some adolescent mothers were found to have brought the required set of delivery kits to the delivery facilities day(s) before delivery. The practice of boiled blade was mainly employed when adolescents could not afford new blades or in those cases where delivery took place in the night when access to kiosks or stores was limited. As part of care for the umbilical cord, the study found that some traditional birth attendants used black tread to tie the new-born babies' cord. The study also found that knives were rarely used to cut umbilical cords because the people considered it inappropriate. This is consistent with the findings by Lawrence et al (2015) that traditional midwives used razor blade for umbilical cord cutting and thread for cord tying.

The World Health Organisation (2014b) recommends the use of scissors to cut umbilical cords after placing a clamp on one side of the cord and the haemostat on the other. The study revealed that in an attempt to care for the umbilical cord after a clamp, nearly all the adolescent mothers had applied a number of substances that were

against medical recommendations, on the stump. The study found that the highest percent of the adolescents sampled applied ointments such as Vaseline, powder, olive oil, toothpaste (close-up), saliva and fluid from dead spider on the cut umbilical cord so that it could dry and heal. Very few applied methylated spirit. It is recommended by experts that the umbilical cord be kept clean and dry, until it falls off naturally. This is in order to prevent infection. It is expected that the mother or caregiver, dip a cotton swab in warm water, squeeze to remove excess water and carefully clean the base of the cord and the surrounding skin, while the stump is held with a clean absorbent cloth to dry completely. These findings slightly deviate from the study by Lawrence et al (2015) that methylated spirit was mainly applied on the umbilical cord.

The study also revealed its findings on the kangaroo mother care practice by traditional and faith-based birth attendants among unmarried adolescents. Kangaroo care, sometimes called 'Kangaroo mother care' refers to a practice wherein new-born babies are kept skin-to-skin with their parents, especially the mother. The technique is medically recommended especially for low birth-weight preterm babies, who are more likely to suffer from hypothermia. It keeps the baby warm and supports early breastfeeding (WHO 2014b). The medical evidence shows that the practice is effective in reducing infant mortality and the risk of facility or hospital-acquired infection. Kangaroo care is usually practiced by placing the new-born on the belly/breast of the mother (or father, in a situation where the mother is unavoidably absent) and covering with dry cloth after delivery (Boundy, 2016). In the current study, a few adolescent respondents (34.3%) indicated that they practiced kangaroo care during the last delivery. This implies that traditional and faith-based birth attendants are less likely to have knowledge of kangaroo care and its importance to the health of new-borns.

It is also recommended that a new born baby's head be covered with a cap or cloth after delivery (WHO 2014b). The study found that in this aspect nearly all the traditional and faith-based delivery assistants covered the new-born head's covering with a cap or cloth to regulate its body temperature. This is not a surprise as most of the traditional midwives have similar delivery practices and it is part of the people's culture.

The time of the first bath of a new-born largely contributes to the survival of the baby. PAHO and USAID (2007) recommend delaying routine procedures such as bathing for

a minimum of one hour after delivery to permit the mother and the new-born to remain in an unbroken skin contact. The current study found that nearly all the adolescents sampled whose delivery assistants were traditional and faith-based birth attendants had their baby first bathed in less than 1 hour after delivery, while all those assisted by skilled providers had their baby first bathed in 2 hours or more after delivery. However, among more and less skilled care providers, some had their babies bathed for the first time in two days or more due to complications following delivery.

The results of logistic regressions for the effects of selected characteristics on choice of delivery assistance for the last birth among young adolescents were in three models. As explained earlier, this was adopted to determine the net effect of each explanatory factor on the likelihood of choice of delivery assistance after controlling for the influence of other factors. The study found that with other variables under control, age at last birth did not significantly influence choice of delivery assistance in the first model. It however, negatively influenced the choice of delivery assistance after the inclusion of males responsible for pregnancies of adolescents' characteristics in the second model. This effect disappeared after the addition of choice factors in the third model. The second model indicated that adolescents aged 14 through 16 were less likely to choose skilled birth assistants. This finding corroborates Perera (2015) assertion that young mothers are more likely to deliver at home than older mothers aged 20 or above. However, the study advances that there are differences among categories of young mothers, with early adolescence more likely to be assisted by skilled birth attendants.

The study found that religion exerts significant negative effects on the choice of delivery assistance across the three models. Other Christians were more likely to opt for faith-based birth attendants when compared to Catholics. This is explained on the basis that churches other than Catholic are more likely to have faith-based midwives who believe that delivery service was a gift from the Holy Spirit to churches, hence require no special training. Members of these Churches were more likely to also patronise their churches' faith-based birth providers because they trusted the Holy Spirit in them. As a matter of fact, it was found that most of the midwives were pastor's wives. With this hierarchical placement, the midwives were more likely to receive trust from church members than midwives of other churches or hospitals/clinics.

Parents living status significantly influences the choice of delivery assistance across the three models. While the study indicated that adolescents with both parents alive were more likely to have delivery assistance from trained providers, the inclusion of choice factors in the later model further affirmed the finding by increasing the number of its probability. This demonstrates that adolescents with both parents alive are more likely to enjoy the services of trained providers during delivery than those with one or both parents dead. This further implies that parents play important roles in the choice of delivery assistant. This is not a surprise as parents or guardians of adolescents are more likely to be responsible for their children's delivery bills, hence have the final say on who should provide delivery assistance to their children.

The study found that household wealth index significantly influenced the choice of delivery assistance. Adolescents who from middle wealth index family were more likely to get assistance from trained provider during delivery than adolescents from poor households. The rich index also showed an increase in the likelihood of having skilled assistants during delivery. The findings indicate that the rich household index is more likely to have the assistance of trained providers during delivery when compared to those in the poor household index. The implication is that the higher the household's wealth, the more likely they are to have delivery assistance from trained providers.

The study found that education of males responsible for pregnancies of adolescents significantly influenced the choice of delivery assistance in the earlier model. However, after the inclusion of males responsible for pregnancies of adolescents' characteristics into the later model as a choice factor, the significant level disappeared. The findings showed that males responsible for pregnancies of adolescents with secondary education or more were more likely to have delivery assistance from trained providers than those with lower education. The implication is that education of males responsible for pregnancies of adolescents has a way of influencing the choice of delivery assistance when other choice factors are controlled, notwithstanding that an addition of other choice factors lowered the influence of education of males responsible for pregnancies of adolescents. This finding corroborates Mekonnen and Mekonnen (2002) position that greater awareness of health supportive programmes enhances utilization of healthcare services.

The study found that age of males responsible for pregnancies of adolescents exerts significant influence on the choice of delivery assistance. Adolescents with males responsible for their pregnancies aged 26 or above were more likely to have delivery assisted by trained providers than those with lower ages. The implication is that the older the males responsible for pregnancies of adolescents, the more likely their influence on the choice of delivery assistance. The study found that while financial cost was less likely to influence choice of trained delivery assistance, distance from operational health facility was more likely to influence the rejection of trained delivery assistance than financial cost. This indicates that there are people who were ready to pay the hospital/health centre's bill for delivery but are unable to access operational and functional health facilities. As a result, adolescents whose labour occurred in the night are automatically compelled to receive assistance from traditional and faith-based birth attendants. This finding is consistent with the observation of Fotso (2007) that access to electricity, sanitization and transportation enhance better maternal healthcare choices.

On the postnatal care practices among unmarried young adolescents, the WHO Guidelines Review (2013) recommends that in a situation where delivery occurs in modern health facilities (i.e. hospitals or clinics), mothers and children must be provided with the first postnatal care in the health centre before 24 hours after delivery. However, in situations where delivery takes place at home, the first postpartum services have to be as timely as possible: within 24-hours of delivery (WHO, 2013). In order to measure the extent of postnatal care received by unmarried adolescent mothers and their children, a number of questions were asked about the time of first postnatal care received, the provider of the postnatal care, and the place where it was received.

In order to ascertain the postnatal care practices of unmarried young adolescents, the adolescents were asked whether they received postnatal care within the first two days after delivery for the most recent birth. This was hinged on the recommendation that when a mother is unable to get her first postpartum care within the first day of delivery because of distance, she should receive it the next day given that it may likely fall within 24 hours following delivery. The study found that 67.8 percent of the adolescents sampled received postnatal check up in the 24 hours of delivery. By implication, this indicates that a high proportion of postnatal check up in the study area, with care mainly provided by non-health professionals. Studies indicated that in

2013, 2.8 million new-borns died in the first month of delivery while 1 million of them died on the first day of delivery (UNICEF 2014; Lawn *et al.*, 2014). Given that the time at first postnatal check-up is crucial to the survival of mother and new-born; especially when it occurs within 24 hours after delivery, the current study also found that the early adolescence mothers were more likely to receive postnatal check-up when compared to middle adolescent mothers within 24 hours following delivery.

The early adolescence mothers were more likely to receive postnatal check-up when compared to middle adolescent mothers. The explanation for the high proportion of postnatal care in the study area is that it is a common culture in the area for delivery assistants to check on the mother and baby before the midnight of delivery. In a situation where the mother has returned home before the end of the day, the delivery assistant was to visit her before midnight. The study further revealed that 77.3 percent of the respondents had their first postpartum check-up assisted by non-health professionals like traditional birth attendants, friends and relatives. The study found that since majority of the adolescent delivery were assisted by traditional and faith-based care providers, they were more likely to receive the first postnatal care from their delivery assistants.

Similarly, check-ups of new-borns reduce neonatal morbidity and mortality; hence its recommendation within the postpartum period by experts. The recommendation suggests that new-borns must receive their first postnatal check-up within 24 hours after delivery and have at least three postpartum check-ups within 7 days of delivery (WHO and UNICEF, 2009). This is to assist in the early recognition of neonatal health challenges and to produce better health outcome. Overall, 68 percent of new-borns received their first postnatal check-up within 24 hours of delivery. While 73.3 percent of the new-borns of early adolescence received their first postnatal check-up within 24 hours, 65.3 percent of middle adolescence' new-borns received theirs' within the 24 hours period. Overall, 22.7 percent of the new-borns received postnatal check-up from skill birth attendants. The implication is that while most of the new-borns received postnatal check-up from traditional and faith-based care providers, very few of them received check-up from health professionals. More so, those assisted by traditional and faith-based birth attendants were less likely to also receive postnatal check-up from health professionals.

The place of first postnatal check-up is essential to the health of mother and new-born. The place of visit for check-up may determine the check-up provider: trained or untrained. The visiting of health facilities for postnatal check-up is recommended by the World Health Organisation (2014b) because of its examination by health professionals. The study found that overall, less than half of the new-born received first postnatal check-up from medical health facilities. While 18.1 percent visited public health facilities 4.6 percent visited private health facilities for postnatal check-up. This implies that the few respondents who receive postnatal check-up from medical health facilities are more likely to access public facilities than private facilities. The study found that the disparity was associated with the cost of care. This supports the assertion of Ezeonwu(2011) that low utilization of orthodox health care services is associated with low socioeconomic status.

The study found that the non-institutional health providers offered a higher number of postnatal check-ups to new-borns when compared to the institutional health providers. Hence, the composition of check-up is essential to determine the effectiveness of such check-ups to babies. The recommended composition for postnatal check-ups includes the check of the umbilical cord, especially the stump, the check of breastfeeding practice, the check for body temperature of the baby and the check for symptoms of sicknesses among the new-borns. The WHO and UNICEF (2009) recommends early postnatal check-up to identify the likely health challenges that may threaten the life of the babies. The study found that nearly all the traditional and faith-based care providers checked the umbilical cord of the new-born for any likely complications. About 81 percent examined the breastfeeding practice of the mother to check whether the breast milk was flowing well and if the baby was suckling. More than 80 percent of the traditional and faith-based postnatal care providers checked the body temperature of the baby for regulation. However, it is important to note that the 80.9 percent of the traditional and faith-based postnatal care providers who checked the temperature of the newborns did not use recommended scientific instrument called thermometer for this exercise. They used hands, skin and past years of experience alone for the screening exercise.

The American Academy of Paediatrics (AAP) suggested that a normal body temperature for a healthy baby is between 97 and 100.3 degrees Fahrenheit, and if a baby's rectal temperature is 100.4 degrees or higher, he/she has a fever. The study

found that although the traditional and faith-based postnatal care providers did not use a thermometer to examine the body temperature of new-born, they were able to relatively predict the temperature of new-borns as either normal or otherwise. The study further found that nearly all the traditional and faith-based postnatal providers examined new-born body for related symptoms of sicknesses during postnatal check-up, without laboratory equipment. This indicates that regardless of the capacity of the traditional and faith-based care providers, their postnatal care services were relatively essential to the health of new-borns because it provides access to the early detection of complications. The NPC and ICF International (2014) assert that early examination of new-borns helps in identifying complications and enhances referrals to professional health providers.

Culture further plays an essential role in the reproductive health of unmarried young adolescents. The beliefs and practices which are embedded in a cultural milieu shape the maternal healthcare behaviour of adolescents. Cultural influence on adolescents' maternity begins from the time of conception, through antenatal to delivery and post-delivery periods. The beliefs and cultural practices of a people largely determine the duration of abstinence from intercourse before and after delivery. Although, there is no required waiting period before resuming intercourse after delivery, a good number of health providers recommended waiting until six weeks after delivery regardless of the type of delivery: vaginal, caesarean or any other method. Sexual abstinence serves to keep the mother's body away from infections since her body may not be completely healed prior to six weeks. Medical evidence shows that the risk of having complications after delivery is high within the first six weeks. Within these six weeks of abstinence, the woman would have been examined during postnatal care and should have received advice on when it is safe to have sexual intercourse. The cultural beliefs of a people may not allow medical suggestions to hold in some instances because of the inherent practices attached to early or late resumption of sex after delivery and the effects on mother and new-borns health and breastfeeding practices.

The study found that none of the adolescent participants or respondents had sexual intercourse before six weeks after delivery. Apart from the medical recommendation for abstinence the study found that it was a cultural anomaly in the study area for a mother to have intercourse before six weeks after delivery. The culture encourages the mother to wait for at least six months. The study found that the highest percent of the

adolescents sampled waited for more than six months before intercourse. They began to have sex by the seventh month. Notwithstanding, 13.7 per cent of the adolescents had sex before the end of three months. The study reveals that waiting for six months period or more before intercourse was cultural but the choice relied on the mother and her partner.

The study found that nearly half of the respondents indicated that the reason for not having intercourse for the number of months waited after last delivery was due to their physical body not being ready for penetration largely because of injuries sustained during delivery. About 17 percent attributed their reason to breastfeeding while 24.7 percent partners' absence. The implication is that the traditional belief that sexual intercourse during breastfeeding is harmful to new-borns and hence should be avoided has drastically dwindled in the study area, especially among unmarried adolescent mothers.

Breast milk is essential to the health of new-borns. The first phase of breast milk after birth provides colostrum or nutrient-rich milk for the new-borns. Although, medical experts have reported that traces of colostrum may still be found in small quantities six weeks following delivery, the first phase is highly nutritious and rich in immune factors. It provides new-borns with immunoglobulin, protein, minerals and other antibacterial substances. Medically, experts recommend that the breastfeeding of new-borns should take place within the first hour of delivery (WHO, 2014). The current study found that overall, while 3.5 percent of the samples breastfed their new-born within the first hour after delivery, half of the samples (50.1%) breastfed the second day. About 38 percent breastfed their babies two days after delivery. This implies that most of the samples did not breastfeed within the first hour of delivery.

The study revealed that some young adolescents could not lactate or produce breast milk in the first day of delivery. It noted that this may have resulted from the fact that most of the sampled adolescents were having their first children and lactation issues are common in such cases. The study revealed that most of the samples had to drink large quantities of coconut fluid, palm wine, warm water, warm tea and/or hot pepper soup prior to and after delivery, in order to quicken the flow of breast milk. The study further examined new-born feeding other than breast milk in the first 3 days after delivery among unmarried adolescent mothers. This was essential because what

mothers or caregivers feed new-born babies with while waiting for breast milk is equally important to the health and survival of babies.

Experts advise against feeding new-borns with baby food or liquids other than breast milk for the first six months after birth. They recommend exclusive breastfeeding (NPC and ICF International, 2014). However, the study found that due to the fact that most of the adolescents sampled experienced a delay in the flow of breast milk, the babies were given some substances other than breast milk out of ignorance. The findings showed that nearly all the respondents gave water to their new-born babies in the first three days after delivery. The highest percent of the adolescents sampled fed their babies with non-distilled water which is considered harmful to the health of new-borns. Thirty-seven percent of the adolescents fed their new-borns with distilled water in the first three days after delivery. Distilled water is a form of water that has been boiled into vapour and condensed backed into liquid in a different container, while the impurities are left in the original container, hence distilled water is one form of purified water.

The study further examined unmarried adolescents by age of new-born and current breastfeeding status. This was considered important because the duration of the breastfeeding practice of unmarried adolescents was more likely to be associated with the cultural beliefs of the people. Some cultures may not reinforce exclusive breastfeeding, but practice prolonged breastfeeding (Michael and Scent. 2017). The World Health Organization (2016) recommends exclusive breastfeeding for up to six months of age, and continued breastfeeding with a combination of complementary food for two years of age or more. The study found that all adolescent samples with babies less than six months were currently breastfeeding at the time of study. Fifty-five percent of the samples breastfed babies for one year or more. However, the study found that although, all the adolescents sampled breastfed their babies for six months or more, they were less likely to practice exclusive breastfeeding. The finding supports the assertion by Michael and Scent (2017) that long breastfeeding is a common practice among women in Nigeria, especially those who dwell in the rural areas.

The results of logistic regression for the effects of selected characteristics and interaction effects on the choice of postnatal care provider for the last birth among unmarried young adolescents were presented in three models. The integration approach

was also chosen because disintegration gave redundant variables. The integration permits models to receive additional explanatory variables such as characteristics of males responsible for pregnancies of adolescents and interactive effects. The concern here was not only the association between adolescents and males responsible for pregnancies of adolescents' characteristics, but how wealth index of males responsible for pregnancies of adolescents and education interact with age at last birth of adolescents to achieve changes and interaction effects while accounting for other explanatory variables.

Hence, the first model showed the simple influence of individual adolescent characteristics on postnatal care. The second model showed what happens when characteristics of males responsible for pregnancies of adolescents were added to the first model, and the third model showed the significant effects that occurred when interactive variables were added to the model. The study found that with other variables under control, age at last birth exerts negative influence on choice of postnatal care provider for the last birth among unmarried young adolescent mothers. The study found that adolescents of age 14 through 16 were less likely to be assisted by skilled care provider when compared to adolescents of age 13 or below at postnatal check-up for last birth. The first model did not exert significant influence on the dependent variable but the second model did after including education of males responsible for pregnancies of adolescents and age. The implication is that the education and age of males responsible for pregnancies of adolescents plays a role in the choice of postnatal care provider. The study found that the significant effect disappeared in the last model after including interactive variables of males responsible for pregnancies of adolescents and that of adolescents. This indicates that with other variables under control, the choice of postnatal care provider for both new-born and mother could be well explained by other variables.

The study found that the occupation of adolescents exerts significant negative effect on the choice of postnatal care provider. Adolescents who were not students by occupation were less likely to receive postnatal care from skilled providers when compared to adolescents who were students. The study found that after the addition of interactive factors, the negative effect of age on the dependant variable reduced significantly. The implication is that students are more likely to enjoy postnatal care services from trained professionals than non-students regardless of age.

The study found that the religion of young adolescent mothers had a significant negative effect on the choice of postnatal check-ups in all models. Other Christians were less likely to visit skilled provider for postnatal check-ups than Catholics. The significant negative effect of religion on postnatal care appeared less with the addition of variables in subsequent models. The explanation for this was that other Christians in the study area were more likely to visit prayer houses or churches for delivery than Catholics; hence the later were more likely to patronise faith-based midwives than Catholics, especially with regard to postnatal care.

The study found that the living status of parents of unmarried adolescents significantly influences the choice of postnatal care. Adolescents with both parents alive were more likely to enjoy postnatal check-ups from skilled providers relative to others. The study found that after the inclusion of males responsible for pregnancies of adolescents' characteristics in the second model, this influence disappeared, but reappeared after the additional value of interactive factors in the third model. The study found that household's wealth index influences the choice of postnatal check-ups. Rich households were more likely to enjoy postnatal care from health professionals than poor families. This was expected because the rich households are financially capable of affording the services of skilled care providers. This finding supports the assertion by Haldre et al (2009) that familial characteristics influence teenage sexual and reproductive health behaviour.

The study found that education of males responsible for pregnancies of adolescents exerts significant negative effects on adolescent mothers' choice of providers for postnatal check-up. Adolescents with males responsible for their pregnancies whose level of education was at the secondary level or more were less likely to receive postnatal check-ups from skilled providers. This was unexpected. One should have expected the education of males responsible for pregnancies of adolescents to positively influence the adolescents' choice of skilled care providers for postnatal care. However, this negative effect disappeared in the third model after including males responsible for pregnancies of adolescents and adolescent mothers' interactive factors. The implication is that the negative effects of education of males responsible for pregnancies of adolescents on the choice of postnatal care provider may in fact be explained by other factors.

The study found that age of males responsible for pregnancies of adolescents significantly influenced adolescents' choice of provider for postnatal care. While adolescents with males responsible for pregnancies aged 21-25 years old were more likely to receive postnatal check-ups from skilled providers, those with aged 26 and above were far more likely to do same. The study found that the influence of the age of males responsible for pregnancies of adolescents on postnatal care increased with the addition of interactive factors in the third model. This finding is consistent with the observation of Mkhwanazi (2014) that age, gender and other related characteristics have influence on early childbearing.

The study found that the effects of males responsible for pregnancies of adolescents' wealth index on the adolescents' choice of provider for postpartum care was statistically significant in the first model and increased significantly in the third model after the addition of interactive factors and controlling for the influence of other factors. This was expected due to the influence of wealth on the choice of health care. The study found that while adolescents with males responsible for pregnancies of adolescents of middle wealth index were 5 times more likely to receive postnatal care from skilled attendants, those with males in the rich wealth index were 5 times more likely to do same. After the addition of interactive factors, those with males responsible for pregnancies of adolescents within the rich wealth index became 3 times more likely to visit skilled provider for postnatal check-ups.

The study found that the inclusion of the interactive factors in the logistic regression analysis further enhanced the explanatory power of the independent variables. With the existence of significant interaction in the additional variable, the implication is that the effect of the predictor variable on the dependent variable varies at different values relative to other predictor variables. The interaction of males responsible for pregnancies of adolescents' wealth index by adolescents' age at last birth was also found to significantly influence the choice of postnatal care provider at middle and rich wealth index by age at last birth (14-16 years) relative to poor wealth index. That is, adolescent mothers who associated with males of middle wealth index were 3 times more likely to visit skilled providers for postnatal check-ups when compared with adolescents from poor households. The statistical effect increases alongside wealth increase. The rich wealth index by age at birth (14-16) gave an odd ratio of 6 times likelihood. Middle wealth index by aged 14-16 giving odd ratio of 4 times likelihood

indicates that decision making on maternity increases with age of adolescents. This finding corroborates Neal, Chandra-Mouli and Chou (2015) position that poor wealth status is associated with poor maternal check-ups.

The study also revealed that despite the interaction between education of males responsible for pregnancies of adolescents by age at last birth, the education of males responsible for pregnancies of adolescents were less likely to significantly influence the choice of postnatal care provider by adolescent mothers in the third model. This suggests that the negative effect of education of males responsible for pregnancies of adolescents on the choice of postnatal care provider may in fact be explained by other interactive factors. This finding supports the assertion of Neal et al (2015) that lack of disaggregated data on young adolescent childbearing contributes to hidden fact in policies and programmes pertaining to adolescents.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter presents a summary of the major findings of the research conducted. It also includes recommendations made for policy effectiveness and the study's conclusion. Other aspects include the limitation encountered during the study and suggestions for further research.

5.1 Summary of Major Findings

The study examines the factors that determine pre-marital pregnancy among young adolescents, the antenatal care practices, the activities associated with child delivery, and the postnatal care practices that influence maternal healthcare activities of unmarried young adolescents in Akwa Ibom State. A total of 621 unmarried

adolescents of ages 10-16 with at least one child or currently pregnant characterised the data used.

The study found that the major determinants of premarital pregnancy in the study area include the desire for sexual experimentation, peer pressure, parental negligence, and financial inadequacy. The study advanced that while adolescents have identified teachers as their main source of information for reproductive health, orientation from friends strongly influenced their exposure to early sex. The study found that adolescents whose parents were alive were more likely to receive ANC from trained providers than those whose parent(s) were dead. With the insertion of the decision-making factor in the model, adolescents with both parents alive were more likely to access modern health care for ANC than those without both parents alive. Adolescents' household index significantly effects choice of health care provider during pregnancy. Adolescents from rich wealth index households were more likely to access modern health care facilities for ANC services than those from poor wealth index. The addition of characteristics of males responsible for pregnancies of adolescents in the model did not exert significant influence on adolescent pregnancy.

The study found that although, the educational level of males responsible for pregnancies of adolescents is important to antenatal check-up, it did not influence the adolescents' choice of ANC services. Whether the males were married or not did not influence adolescents' choice of ANC provider. The decision-making factors significantly influences choice of ANC services among unmarried adolescents. Adolescents whose males responsible for pregnancies of adolescents made all decisions on choice of ANC were more likely to choose professional care providers for antenatal care when compared to adolescents who made such decisions themselves. The study found that nearly half of the adolescent mothers' (47.8%) first visited the faith-based birth attendants for delivery. This was associated with people's religious beliefs that the supernatural controls delivery. The study found that a lot of faith-based birth practitioners operated in churches and prayer houses in the study location.

The study further revealed that 77.3 percent of the respondents had their first postpartum check-up assisted by non-health professionals like faith-based and traditional birth attendants, friends and relatives. The study found that since the majority of the adolescent delivery were assisted by traditional and faith-

based providers, they were more likely to receive the first postnatal care from their delivery assistants.

5.2 Conclusion

Premarital sexual activity influences pregnancy in the study area. Reducing the rate of young adolescents' exposure to factors that increase premarital sexuality would contribute largely towards reducing adolescent pregnancy in Akwa Ibom State. Beyond the fact that early and premarital pregnancies unfavourably increase fertility rates of the society, they equally expose young adolescents and their babies to maternal health related risks. Regardless of the deducible worth of faith-based and traditional birth attendants in the provision of antenatal, delivery and postnatal care services in an area characterized by lack of access to functional health care facilities, such services can be detrimental to maternal health care when practiced by traditional and faith-based care providers without a timely referral of maternal health related complications to a orthodox health based facility. The study contends that there is a need for appropriate orientation, training and defined responsibilities among midwives to upgrade the alternatives that faith-based and traditional birth attendants afford their constituencies.

5.3 Recommendations and Policy Implications

Following the various findings from the study, the following recommendations are advanced for policy makers and the general public. These include:

1. The teaching of sexual education in schools should be encouraged and implemented. Most teachers often feel discomfort in teaching adolescents about sexual and reproductive health probably because of its sensitive nature and the socio-cultural perceptions of the open discussion of such matters. Yet adolescents need to know about their reproductive health systems. In order to achieve this, teachers should be regularly sensitized on the need to teach young adolescents about reproductive health.
2. Parents and guardians should be incorporated into the struggle and provided with orientation on the need to teach their adolescent children sexual and reproductive health issues regardless of their age or the belief that teaching them would expose them to engage in sexual activities early. The parents should be made to know that most adolescents have access to wrong information about sexual and reproductive health

from social media and their peers. This may be detrimental to their sexual life as it is capable of exposing them to early sexual activities and the attendant negative effects. Thus, it is important that parents educate children on sexual and reproductive health issues as soon as possible.

3. Children who are victims of early sexual activities and childbearing should be encouraged to participate in the mobilization and sensitization programmes targeted at reducing early sexual behaviour among young adolescents. They should be educated on the need for sexual self-concept and assertiveness. They should also be encouraged to educate others by using themselves as examples. This could discourage other young adolescents from engaging in early sexual activities especially without the use of contraceptives.

4. Routine training of traditional birth attendants should be encouraged to enable them improve on midwifery practices and to educate them on the need to timely refer pregnant adolescents to health facilities for delivery. Since most of the adolescents trust the traditional midwives and are familiar with them, these traditional birth attendants should be encouraged with incentives for referring or accompanying pregnant adolescents to health facilities for antenatal, delivery and postnatal care.

5. Health staff should be given regular orientation on the need to treat pregnant adolescents well when they visit the health facility for antenatal, delivery and postnatal. They should also desist from all forms of unethical behaviour. This is essential because some adolescents were of the opinion that the health workers usually exchange or sell babies in the hospital without the knowledge of their mothers. They opined that some health workers usually exchange boy child with girl child of another person who has paid a nurse to carry out the exchange and who is in dire need of a male child. They added that in some instances, the exchange is done by exchanging the living baby with the dead baby of another client.

6. Functional clinics and hospitals should be built in such a way that rural people do not have to travel long distances to access health care services in general and maternal health services in particular. This would go a long way in reducing maternal health related morbidity and mortality which are associated with the location of health facilities.

7. In addition to access to health care, quality of care is equally important. The health facilities, including the new ones that may be built in the study area should be well equipped with needed apparatus, experienced and competent staff that are ready to provide selfless and devotional services. The health centres should operate on shifts and should be open day and night to discourage people from patronising traditional and faith-based birth attendants for delivery, especially when the labour starts at night.

5.4 Contribution to Knowledge

Poor maternal healthcare practices are a major cause of morbidity and mortality among unmarried young adolescents, especially in sub-Saharan Africa. Previous studies on childbearing among adolescents largely lumped adolescence together as a seemingly non-categorisable cohort and focussing mainly on the biomedical aspects, with little attention given to younger adolescents aged 16 years and below who are at greater risks of maternal mishaps. This study, therefore, investigated the maternal healthcare practices among unmarried young adolescents in Akwa Ibom State, Nigeria, classified in literature among areas with high prevalence of ever-pregnant unmarried young adolescents in Southern Nigeria. It also expanded existing literature on maternal health care practices of adolescents by identifying the key determinants of premarital sex among adolescents, the role of parents/guardians, teachers, and friends on sexual and reproductive health of adolescents, as well as the cultural and behavioural activities influencing periods of antenatal, delivery and postnatal care practices among unmarried young adolescents.

5.5 Limitation of the Study

The major limitation of this study was the unavailability of national data on unmarried adolescents of age 16 and below. The lack of national representative data on the under studied subject instigated primary data collection through field survey. The absence of national estimates for the variables interrogated constitutes a limitation because a more representative data may have enriched the study's result. More so, inadequate information about socio-demographic characteristics of parents/guardians of young adolescents accounts for another limitation to the study given that most adolescents live with parents/guardians and also depend largely on them for

livelihood. Nonetheless, these limitations portray the insightfulness which the study has brought to the fore while its findings are very relevant to policy formulation.

5.6 Suggestions for Future Research

Addressing the limitations of the current study will be an important improvement upon this study. It is expected that future research on this subject should extend the variables used in the study to a more holistic outcome measure by extending the sample of the study to include a nationwide representative sample while examining maternal health care practices among unmarried young adolescents to precisely estimate the national outlook. Another direction for future research should examine the influence of parental socio-demographic factors on adolescent sexual and reproductive health. Furthermore, a dimension for future research should be an analysis of a group of adolescents aged 17-19. This would enable the analysis to examine the late adolescence category in order to check for differences across early, middle and late adolescence.

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APPENDIX 1 (A)

CONFIDENTIAL

Questionnaire No.....

**Department of Sociology
Faculty of the Social Sciences - University of Ibadan**

**QUESTIONNAIRE FOR HOUSEHOLD SURVEY
(YOUNG ADOLESCENTS ONLY)
ON
MATERNAL HEALTHCARE PRACTICES AMONG UNMARRIED YOUNG
ADOLESCENTS IN AKWA IBOM STATE OF NIGERIA**

Consent Form

My name is _____.
(Interviewer)

I am a student of the above institution. Also, I am researching on maternal healthcare practices among adolescents of age 16 or below who are pregnant or have ever given birth. The results of this study will be used to improve maternal health.

You have been purposively selected for this study. Please, I would like to ask you some questions. You are free to answer or skip any question. You may terminate this interview at your wish. You may also decline from participating in this study wholly. The interview will last for about 40 minutes. The information I received from you will be kept secret from anyone else.

If you have enquiries about this study, you can contact the Social Sciences and Humanities Research Ethics Committee of the University of Ibadan.

May I continue with the interview? YES/NO

Date _____.

SECTION 1: RESPONDENT'S BACKGROUND CHARACTERISTICS

Q. NO.	QUESTION	VALUES AND CODING S	GO TO
--------	----------	---------------------	-------

101	How old are you, now?	AGE IN COMPLETED YEARS <input type="text"/> <input type="text"/>	
102	Are you currently pregnant or have ever given birth?	YES, CURRENTLY PREGNANT.....A YES, EVER GIVEN BIRTH.....B NONE OF THE ABOVE.....C	→103 →105 →STOP
103	Is this your first pregnancy?	YES.....1 NO.....2	
104	How many month/week old is your pregnancy?	_____	
105	What ethnic group do you belong?	HAUSA/FULANI.....1 YORUBA.....2 IGBO.....3 IBIBIO.....4 ANANG.....5 ORON.....6 OTHER _____ 8 (SPECIFY)	
106	What religion do you practice?	CATHOLIC.....1 OTHER CHRISTIAN.....2 ISLAM.....3 TRADITIONALIST.....4 OTHER _____ 5 (SPECIFY)	
107	Current marital status	SINGLE.....1 MARRIED/IN UNION.....2 WIDOWED.....3 DIVORCED/SEPARATED.....4 OTHER _____ 5 (SPECIFY)	
108	Are both your mother and father alive?	BOTH ALIVE.....1 MOTHER ALONE ALIVE.....2 FATHER ALONE ALIVE.....3 BOTH NOT ALIVE.....4 DON'T KNOW8	
109	Have you ever lived together with a man as if married?	YES, LIVED WITH A MAN.....1 NO.....2	→111
110A	Are you currently living with the same man or you are living elsewhere?	LIVING WITH THE MAN.....1 LIVING ELSE WAY.....2	
110B	Is the man the father of your last child or unborn baby?	YES, FATHER OF LAST CHILD.....1 YES, FATHER OF UNBORN BABY.....2 NONE OF THE ABOVE3 DON'T KNOW.....8	
111	Does the father of your last child or unborn baby have a wife or live with another woman as if married?	YES, HAS A WIFE.....1 YES, LIVE WITH ANOTHER WOMAN...2 NONE OF THE ABOVE.....3 DON'T KNOW.....8	
112	What is the highest level of school you attended?	NO SCHOOL.....1 PRIMARY.....2 SECONDARY.....3 TERTIARY.....4 OTHER _____ 5 SPECIFY	
113	What is the highest level of education of your last child's or unborn baby's father?	NO SCHOOL.....1 PRIMARY.....2 SECONDARY.....3 TERTIARY.....4 OTHER _____ 5 SPECIFY	
114	What is the age of your unborn baby's or last child's father?	IN YEARS _____	
115	What is the age of your unborn baby's or last child's father to yours?	OLDER THAN YOU.....1 YOUNGER THAN YOU.....2 SAME AGE.....3 DON'T KNOW.....8	
116	What is the wealth index of your unborn baby's or last child's father?	POOREST.....1 POORER.....2 MIDDLE.....3 RICHER.....4 RICHEST.....5	
117	What is the wealth index of your (parents)	POOREST.....1 POORER.....2 MIDDLE.....3	

	household?	RICHER.....4 RICHEST.....5	
118	What is your major occupation?	STUDENT.....1 EMPLOYED.....2 OTHER.....3 SPECIFY	
119	How many children have you ever had?	_____	
120	How many are currently living with you?	_____	
121	How many are currently living else way?	_____	
122	How old were you at last birth/current pregnancy?	_____	
123	How old were you at first sexual experiment?	_____	

SECTION 2: FACTORS THAT DETERMINE PRE-MARITAL CHILDBEARING

Q. NO	QUESTION	CODING CATEGORIES	GO TO
201	Thinking about your last/current pregnancy, what can you say was <i>really</i> responsible for your involvement in the sex that resulted to it? NB. YOU MAY CIRCLE MORE THAN ONE OPTION IF APPLICABLE	PEER PRESSURE.....1 PARENTAL INFLUENCE.....2 LACK OF MONEY.....3 DESIRE FOR EXPERIENCE.....4 EXPOSURE TO PORNOGRAPHY.....5 USE OF SOCIAL MEDIA.....6 CULTURAL BELIEF & PRACTICE.....7 KNOWLEDGE OF CONTRACEPTION.....8 USE OF CONTRACEPTION.....9 NONE.....10 OTHER.....11 (SPECIFY)	
202	Prior to your last/current pregnancy, what has/have been your important source of information on sexual and reproductive health issues?	SCHOOL TEACHER.....1 PARENT.....2 SIBLING.....3 OTHER FAMILY MEMBER.....4 FRIENDS.....5 HEALTH PROFESSIONALS.....6 BOOKS/MAGAZINES.....7 FILM/VIDEO.....8 TV/RADIO.....9 INTERNET.....10 NONE.....11 OTHER.....12 (SPECIFY)	
203	Prior to your last/current pregnancy, how often did you communicate about sexual and reproductive health issues with your parents/guardians?	NEVER.....1 RARELY.....2 SOMETIMES.....3 MOST OF THE TIME.....4 ALWAYS.....5	
204	Prior to your last/current pregnancy, how often did your parents/guardians <i>really</i> know what you were doing with your free time?	NEVER.....1 RARELY.....2 SOMETIMES.....3 MOST OF THE TIME.....4 ALWAYS.....5	
205	Did you consent to the sex that resulted to your last/current pregnancy?	YES, I CONSENTED TO IT.....1 NO, I DIDN'T CONSENT TO IT.....2	
206	Did you <i>really</i> want to be pregnant when your last/current pregnancy occurred?	YES, I WANTED.....1 NO, DIDN'T WANT.....2	
207	Did you make any attempt to terminate your last/current pregnancy?	YES.....1 NO.....2	301
207A	What attempt did you make?	USED SELF PRESCRIBED DRUG.....1 USED HOSPITAL PRESCRIBED DRUG.....2 USED TRADITIONAL MEDICINE/HERBS.....3 NONE OF THE ABOVE.....4 OTHER.....5 (SPECIFY)	

SECTION 3: ANTENATAL CARE PRACTICES

Q.NO.	QUESTION	CODING CATEGORIES	GO TO
	Health checks before your last child delivery.		

301	LAST BIRTH HISTORY	AGE <input type="checkbox"/> LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>
301	Did you visit any healthcare provider for antenatal care for your last/current pregnancy?	YES 1 NO 2 (SKIP TO 302) ←
301A	Whom did you visit? Whom else? NB. IDENTIFY EACH AND CIRCLE ALL VISITED.	DOCTOR.....A NURSE/MIDWIFEB AUXILIARY MIDWIFEC TRADITIONAL BIRTH ATTENDANT... D CHURCH MIDWIFE.....E OTHERX (SPECIFY)
301B	Who among your selected options in <i>Question 301A</i> above was the 1 st person visited for your antenatal care?	DOCTOR.....A NURSE/MIDWIFEB AUXILIARY MIDWIFEC TRADITIONAL BIRTH ATTENDANT... D CHURCH MIDWIFE.....E OTHERX (SPECIFY)
302	Where did you receive antenatal care for your last/current pregnancy? NB. YOU MAY CIRCLE MORE THAN ONE PLACE IF APPLICABLE	YOUR HOME1 OTHER HOME2 GOVT. HOSPITAL.....3 GOVT. HEALTH CENTRE.....4 PRIVATE HOSPITAL/ CLINIC5 TRADITIONAL BIRTH ATTENDANT.....6 NONE.....7 OTHER8 SPECIFY
303	How many months was your last/current pregnancy when you were first given the antenatal care?	MONTHS <input type="text"/> <input type="text"/> DON'T KNOW 8
304	How many times were you given antenatal care during your last/current pregnancy?	NUMBER OF TIMES <input type="text"/> <input type="text"/> DON'T KNOW 8
305	As part of antenatal care within your last/current pregnancy, which of these was done at least once: Was your blood pressure measured? Did you give a urine sample? Did you give a blood sample? Did you receive malaria drug(s)? Did you receive tetanus injection in the arm to stop baby from having tetanus?	YES NO BP..... 1 2 URINE 1 2 BLOOD.....1 2 MALARIA.....1 2 TETANUS INJECTION.....1 2
308	What other practice that is peculiar to you or your culture did you do during your last/current pregnancy?	PLEASE SPECIFY _____

SECTION 4: CHILD DELIVERY CARE PRACTICES

Q. NO.	QUESTION	CODING CATEGORIES	GO TO Q.
Health checks during delivery. (Please, we will talk about each of your child separately, if more than one.)			
401	DELIVERY HISTORY	LAST DELIVERY HISTORY AGE <input type="checkbox"/>	NEXT-TO-LAST DELIVERY HISTORY AGE <input type="checkbox"/>
402	Who assisted with the delivery of your child? Anyone else? <i>ASK FOR THE TYPE(S) OF PERSON(S) AND REGISTER ALL MENTIONED.</i> IF RESPONDENT SAYS NO ONE ASSISTED, ASK TO KNOW WHETHER ANY ADULTS WERE PRESENT AT THE DELIVERY.	HEALTH PERSONNEL DOCTOR A NURSE/MIDWIFE B AUXILIARY MIDWIFE.....C HEALTH WORKER.....D OTHER PERSON TRADITIONAL BIRTH ATTENDANT.....E RELATIVE/FRIEND F OTHERX (SPECIFY) NO ONE ASSISTEDY	HEALTH PERSONNEL DOCTOR A NURSE/MIDWIFE B AUXILIARY MIDWIFE.....C HEALTH WORKER.....D OTHER PERSON TRADITIONAL BIRTH ATTENDANT.....E RELATIVE/FRIEND F OTHERX (SPECIFY) NO ONE ASSISTEDY
403	Where did you deliver your baby? <i>PROBE TO IDENTIFY THE PLACE.</i> IF UNABLE TO IDENTIFY	YOUR HOME 1 OTHER HOME 2 TRADITIONAL BIRTH ATTENDANTS' HOME.....3 GOVT. HOSPITAL/HEALTH CENTRE.....4	YOUR HOME 1 OTHER HOME 2 TRADITIONAL BIRTH ATTENDANTS' HOME.....3 GOVT. HOSPITAL/HEALTH CENTRE.....4

	IF PUBLIC OR PRIVATE SECTOR, RECORD THE NAME OF THE PLACE. (NAME OF PLACE)	PRIVATE HOSPITAL/ CLINIC5 OTHER _____ 8 (SPECIFY)	PRIVATE HOSPITAL/ CLINIC5 OTHER _____ 8 (SPECIFY)												
404	Which was your mode of delivery?	NORMAL/VAGINAL DELIVERY1 CAESAREAN SECTION/OPERATION.....2 PULLED OUT BY HAND.....3 OTHER _____ 8 (SPECIFY)	NORMAL/VAGINAL DELIVERY1 CAESAREAN SECTION/OPERATION.....2 PULLED OUT BY HAND.....3 OTHER _____ 8 (SPECIFY)												
405	How long after delivery did you stay in your place of delivery? <i>IF LESS THAN ONE DAY, WRITE HOURS.</i> <i>IF LESS THAN ONE WEEK, WRITE DAYS.</i>	HOURS1 <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> DAYS..... 2 <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> WEEKS..... 3 <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> DON'T KNOW8													
406	Did healthcare giver check on your health while you were still in your place of delivery?	YES 1 NO 2													
407	Thinking on your last delivery, which was your first place of visit for delivery?	TRADITIONAL BIRTH ATTENDANTS' HOME.....1 CHURCH/PRAYER HOUSE.....2 GOVT. HOSPITAL/HEALTH CENTRE . . 4 PRIVATE HOSPITAL/ CLINIC5 NONE.....6 OTHER _____ 8 (SPECIFY)													
408	What can you say <i>really</i> influenced your choice of <i>first</i> place of visit for delivery of your last child? <i>PROBE FOR ANY OTHER REASON</i> <i>RECORD ALL MENTIONED.</i>	FINANCIAL COST OF DELIVERYA HEALTH FACILITY NOT OPENB DISTANCE FROM HEALTH FACILITY... C QUALITY OF SERVICE D NO FEMALE PROVIDER AT FACILITY.. E PARTNER/FAMILY PREFERENCE.....F CUSTOM/TRADITIONAL SUPPORT.....G BABY CAME SUDDENLYH NONE.....I OTHER _____ X (SPECIFY)													
409	Were clean delivery kits (.i.e. sanitary gloves, soap, razor blade, umbilical cord tie, & clear plastic sheet) used on your last delivery? <i>SHOW CLEAN DELIVERY KIT</i>	YES 1 NO 2 DON'T KNOW 8													
410	When your last child was born, what instrument was used to cut the umbilical cord?	NEW/BOILED BLADE 1 USED BLADE 2 KNIFE 3 SICKLE 4 SCISSORS 5 OTHER _____ 6 (SPECIFY) DON'T KNOW 8													
411	What was applied on the stump after the umbilical cord was cut?	OIL A ASH B OINTMENT/POWDER C ANIMAL DUNG D TURMERIC E DETOL F METHYLATED SPIRIT G NONE.....H OTHER _____ X (SPECIFY) DON'T KNOW Z													
412	Was the child placed on your belly/breast and covered with a dry warm cloth/towel immediately after delivery?	YES.....1 NO2 DON'T KNOW... .. 8													
413	Was the child head covered with a cap or cloth immediately after delivery?	YES 1 NO 2 DON'T KNOW 8													
414	How long after delivery was your	HOURS..... 1 <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table>													

	last child bathed for the first time? <i>IF LESS THAN ONE DAY, WRITE HOURS.</i> <i>IF LESS THAN ONE WEEK, WRITE DAYS.</i>	DAYS. 2 WEEKS3 DON'T KNOW8	
--	---	--	--

SECTION 5: POSTNATAL CARE PRACTICES

Q. NO.	QUESTION	CODING CATEGORIES	GO TO															
Health checks after your last delivery.																		
501	Did any healthcare provider check on you after your last child delivery?	YES 1 NO 2 (SKIP TO 502) ←																
501A	Who checked on your health at that time? PROBE FOR MOST QUALIFIED PERSON.	HEALTH PERSONNEL DOCTOR A NURSE/MIDWIFE B AUXILIARY MIDWIFE.....C HEALTH WORKER.....D OTHER PERSON TRADITIONAL BIRTH ATTENDANT..E RELATIVE/FRIEND F OTHER _____ X (SPECIFY)																
501B	How long following delivery did the first check take place? <i>IF BELOW ONE DAY, WRITE HOURS.</i> <i>IF BELOW ONE WEEK, WRITE DAYS.</i>	HOURS.. 1 <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> DAYS.2 <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> WEEKS3 <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> DON'T KNOW8																
502	In the six weeks after your last child was born, did any health care provider or a traditional birth attendant check on his/her health (eg. check cord, baby's temperature, baby feeding well)?	YES.....1 NO2 DON'T KNOW.....8 → 507																
503	How many hours/days/weeks following delivery was his/her first check? <i>IF BELOW ONE DAY, WRITE HOURS.</i> <i>IF BELOW ONE WEEK, WRITE DAYS.</i>	HRS AFTER BIRTH 1 <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> DAYS AFTER BIRTH . . . 2 <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> WKS AFTER BIRTH 3 <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> DON'T KNOW8																
504	Who checked on his/her health at that time? <i>ASK FOR THE MOST QUALIFIED PERSON.</i>	HEALTH PERSONNEL: DOCTORA NURSE/MIDWIFEB AUXILIARY MIDWIFEC OTHER PERSON: TRADITIONAL BIRTH ATTENDANT..... D COMMUNITY/VILLAGE HEALTH WORKER.E OTHER _____ X (SPECIFY)																
505	During that check, was any of the following done? Was cord checked? Observe/counsel on how well the child was breastfeeding? Assess the child temperature? Counsel on how to recognize if child might be sick?	<table style="width: 100%; border-collapse: collapse;"> <tr> <td></td> <td style="text-align: center;">YES</td> <td style="text-align: center;">NO</td> </tr> <tr> <td>CORD</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>BF</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>TEMP</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>IF SICK</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> </table>		YES	NO	CORD	1	2	BF	1	2	TEMP	1	2	IF SICK	1	2	
	YES	NO																
CORD	1	2																
BF	1	2																
TEMP	1	2																
IF SICK	1	2																
506	Where did this first check of your child take place? <i>IF UNABLE TO DECIDE</i> <i>IF PRIVATE OR PUBLIC SECTOR, RECORD THE NAME OF THE PLACE.</i> _____ (NAME OF THE PLACE)	YOUR HOME 1 OTHER HOME2 GOVT. HOSPITAL3 GOVT. HEALTH CENTRE4 PRIVATE HOSPITAL/ CLINIC . . 5 OTHER _____ 8 (SPECIFY)																
507	In the first six weeks after delivery, did you receive a vitamin A dose like (this/any of these)? <i>SHOW COMMON TYPES OF CAPSULES.</i>	YES 1 NO 2 DON'T KNOW 8																
Q. NO.	QUESTION	CODING CATEGORIES	GO TO Q.															
	Now I would like to talk with you about the cultural beliefs and practices of the community at stages of maternity																	
	DELIVERY HISTORY	LAST DELIVERY HISTORY:	NEXT-TO-LAST DELIVERY HISTORY :															
601	CHECK 102: IS RESPONDENT PREGNANT?	NOT PREG-NANT <input type="checkbox"/> ↓ 1 ST PREGNANCY <input type="checkbox"/> OR UNSURE <input type="checkbox"/> (SKIP TO 610) ←																

602	Have you any sexual intercourse since the birth of your last child?	YES..... 1 NO..... 2	
602A	For how many months after delivery have you not had sexual intercourse?	MONTHS . . . <input type="text"/> <input type="text"/> DON'T KNOW 8	MONTHS . . . <input type="text"/> <input type="text"/> DON'T KNOW 8
602B	Why did you not have sex during that period?	TRADITION DID NOT PERMIT1 BODY WAS NOT PHYSICALLY READY.2 WAS STILL BREASTFEEDING.....3 OTHER 4 (SPECIFY)	TRADITION DID NOT PERMIT.....1 BODY WAS NOT PHYSICALLY READY.2 WAS STILL BREASTFEEDING.....3 OTHER 4 (SPECIFY)
603	Did you ever breastfed the baby?	YES 1 (SKIP TO 604) ←	YES 1 NO 2
603A	How long after delivery did you first breastfeed your baby? <i>IF LESS THAN 1 HOUR, WRITE '00' HOURS. IF LESS THAN 24 HOURS, WRITE HOURS. OTHERWISE, WRITE DAYS.</i>	IMMEDIATELY . . . 000 HOUR1 <input type="text"/> <input type="text"/> DAYS2 <input type="text"/> <input type="text"/>	
604	In the first three days following delivery, was the baby given anything to drink other than breast milk?	YES..... 1 NO..... 2 (SKIP TO 605) ←	
604A	What was given to drink? NB. YOU MAY CIRCLE MORE THAN ONE, IF APPLIED.	MILK (OTHER THAN BREAST MILK)....1 PLAIN WATER 2 SUGAR OR GLUCOSE WATER.3 GRUPE WATER 4 SUGAR-SALT-WATER SOLUTION..... 5 FRUIT JUICE 6 INFANT FORMULA..... 7 TEA/INFUSIONS 8 COFFEE 9 HONEY 10 OTHER 11 (SPECIFY)	
605	CHECK 301: IS CHILD LIVING?	LIVING <input type="checkbox"/> DEAD <input type="checkbox"/> (GO TO 608)	
606	Are you still breastfeeding?	YES..... 1 NO..... 2	
607	Did your child drink anything other than breast milk yesterday or last night?	YES 1 NO..... 2 (SKIP TO 608) ← DON'T KNOW 8	
607A	What did the child drink?	PLEASE, SPECIFY _____	
608	What sex is the baby?	BOY1 GIRL2	BOY1 GIRL2
609	Is the baby circumcised? <i>YOU MAY ASK THE MEANING OF CIRCUMCISION</i>	YES 1 NO 2 (SKIP TO 610) ←	YES 1 NO 2 (SKIP TO 610) ←
609A	What type of circumcision was done?	COMPLETE REMOVAL.....1 PARTIAL REMOVAL.....2 DON'T KNOW 8	COMPLETE REMOVAL.....1 PARTIAL REMOVAL.....2 DON'T KNOW 8
609B	Time of circumcision?	HOURS AFTER BIRTH.....1 DAYS AFTER BIRTH.....2 WEEKS AFTER BIRTH.....3 MONTHS AFTER BIRTH.....4 OTHER 5 SPECIFY	HOURS AFTER BIRTH.....1 DAYS AFTER BIRTH.....2 WEEKS AFTER BIRTH.....3 MONTHS AFTER BIRTH.....4 OTHER 5 SPECIFY
610	Are you circumcised?	YES 1 NO 2 (SKIP TO 611) ← DON'T KNOW. 8	
610A	When were you circumcised?	AT BIRTH.....1 AT PUBERTY.....2 AT PREGNANCY.....3 AT DELIVERY.....4 OTHER 5	

		SPECIFY DON'T KNOW.....8	
611	Who can you say that <i>really</i> influence the most, your decisions on choice of maternal healthcare practices of your child?	MYSELF 1 PARENT/GUARDIAN.....2 PARTNER 3 MYSELF & PARTNER JOINTLY.....4 OTHER _____ 5 (SPECIFY)	MYSELF 1 PARENT/GUARDIAN.....2 PARTNER.3 MYSELF & PARTNER JOINTLY.....4 OTHER _____ 5 (SPECIFY)
612	Please, give a reason for your choice of option in <i>Question 611</i> above.	REASON _____	REASON _____

APPENDIX I (B)
WEALTH INDEX CHECK LIST

Scale Items	Response
Type of flooring	

Type of vehicle		
Type of water supply		
Sanitation facilities		
No. of persons per sleeping room		
	Yes	No
Ownrefrigerator		
Electricity supply		
Agricultural land		
Radio		
Domestic servant		
Television		
Telephone		

APPENDIX II

In-Depth Interview/Life History Guide

(Young Adolescents Only)

SECTION A: RESPONDENT'S BACKGROUND CHARACTERISTICS

Q. No. 1	QUESTION	RESPONSE
A	How old are you?	
B	Highest level of education attained?	
C	Total number of children ever born?	
D	Total number of children living?	

SECTION B: FACTORS THAT DETERMINE PRE-MARITAL CHILDBEARING

2. What factors led to your becoming pregnant?

Probes:

- (i) Parents/peer pressures
- (ii) Community/household factor
- (iii) Age and social media factor
- (iv) Pregnancy intention/abortion
- (v) Knowledge/use of contraceptive and location.

SECTION C: ANTENATAL CARE PRACTICES

3. What experiences did you have during pregnancy?

Probes:

- (i) Neglect/abandonment
- (ii) Stigmatization
- (iii) Poverty
- (iv) Bleeding
- (v) Nutritional intake
- (vi) Antenatal care enrolment/registration
- (vii) Long distance/delay in accessing healthcare facility

4. What care did you receive during pregnancy?

Probes:

- (i) Type of care (traditional midwife care/faith based care/health professional care)
- (ii) Laboratory test (blood pressure, urine, blood sample, and malaria)
- (iii) Sensitization/orientation
- (iv) Injections/drugs and number of time received
- (v) Familial care/support
- (vi) Cultural activities (prescription/proscription).

SECTION D: CHILD DELIVERY CARE PRACTICES

5. What experiences did you have during child delivery?

Probes:

- (i) Prolonged labour

- (ii) Postpartum haemorrhage or bleeding
- (iii) Caesarean/vaginal delivery
- (iv) Massaging and placenta delivery
- (v) Newborn limp, pale or breathlessness
- (vi) Non-hygienic/inappropriate kit & instrument used for delivery
- (vii) Suffocation (difficulty in breathing)
- (viii) Loss of life (infant death)

6. What care did you receive during child delivery?

Probes:

- (i) Kangaroo care/skin-to-skin care
- (ii) Resuscitation care
- (iii) Postpartum haemorrhage or excessive bleeding care
- (iv) Routine weighing and bathing care

SECTION E: POSTNATAL CARE PRACTICES

7. What experiences did you and/or your newborn baby have immediately after delivery or the first six weeks of life?

Probes:

- (i) Post delivery pains
- (ii) Breastfeeding difficulty/challenges
- (iii) Hormonal changes (appetite, milk production)
- (iv) Postnatal depression
- (v) Stretch marks and weight loss
- (vi) Newborn health challenges
- (vii) Neglect/abandonment
- (viii) Poverty/low diet
- (ix) Circumcision

8. What care did you and/or your newborn baby receive immediately after delivery or the first six weeks of life?

Probes:

- (i) Immunization care/activities
- (ii) Kangaroo care/skin-to-skin care
- (iii) Health check up
- (iv) Drug and injection
- (x) Caesarean-section scarring care

- (xi) Food and feeding practice
- (xii) Cultural care (prescription and proscription)

APPENDIX III

In-Depth Interview Guide

(The males who are responsible for the pregnancies of adolescents only)

SECTION A: RESPONDENT'S BACKGROUND CHARACTERISTICS

Q. No.1	QUESTION	RESPONSE
---------	----------	----------

A	How old are you?	
B	Marital status?	
C	Highest level of education attained?	
D	Total number of children ever had?	
E	Total number of children ever had with female(s) aged 16 or below?	

SECTION B: FACTORS THAT DETERMINE PRE-MARITAL CHILDBEARING

2. What factor led to the adolescent becoming pregnant?

Probes:

- (i) Parents/peer pressures
- (ii) Knowledge of contraception and women's menstrual cycle
- (iii) Use/non use of contraceptive
- (iv) Pregnancy intention

SECTION C: ANTENATAL CARE PRACTICES

3. What experiences did the adolescent have during pregnancy?

Probes:

- (viii) Neglect/abandonment
- (ix) Stigmatization
- (x) Poverty
- (xi) Bleeding
- (xii) Antenatal care enrolment/registration
- (xiii) Long distance/delay in accessing healthcare facility

4. What care did the adolescent receive during pregnancy?

Probes:

- (i) Type of care (traditional midwife care/faith-based care/health professional care)
- (ii) Laboratory test (blood pressure, urine, blood sample, and malaria)
- (iii) Sensitization/orientation
- (iv) Injections/drugs
- (v) Massaging
- (vi) Familial/partner care and support
- (vii) Cultural care/activities (prescription/proscription).

SECTION D: CHILD DELIVERY CARE PRACTICES

5. What experiences did the adolescent have during child delivery?

Probes:

- (i) Prolonged labour

- (ii) Excessive bleeding
- (iii) Caesarean or vaginal delivery
- (iv) Newborn limp, pale or breathlessness
- (v) Loss of life
- (vi) Cultural ritual/practice at delivery

6. What care did the adolescent receive during child delivery?

Probes:

- (i) Kangaroo care/skin-to-skin care
- (ii) Resuscitation care
- (iii) Cultural care (prescription and proscription) at delivery
- (iv) Modern/traditional/faith-based care

SECTION E: POSTNATAL CARE PRACTICES

7. What experiences did the adolescent and her newborn baby have during the first six weeks after delivery?

Probes:

- (i) Postpartum challenges/depression
- (ii) Newborn health-challenges
- (iii) Neglect/abandonment
- (iv) Poverty/poor nutrition
- (v) Circumcision
- (vi) High temperature (baby)
- (vii) Incubator placement
- (viii) Loss of life

8. What care did the adolescent and her newborn baby receive during the first six weeks after delivery?

Probes:

- (i) Immunization care
- (ii) Kangaroo care/skin-to-skin care
- (iii) Health check up
- (iv) Breastfeeding practice/care
- (v) Drug and injection
- (vi) Sterilization
- (vii) Food and feeding practice/care
- (viii) Cultural care (prescription and proscription)

APPENDIX IV

In-depth Interview Guide

(Caregivers -Parents/Guardians Only)

SECTION A: RESPONDENT'S BACKGROUND CHARACTERISTICS

Q. No. 1	QUESTION	RESPONSE
A	How old are you?	
B	Marital status?	
C	Highest level of education attained?	
D	Relationship with the young adolescent	

SECTION B: FACTORS THAT DETERMINE PRE-MARITAL CHILDBEARING

2. What factor led to the adolescent becoming pregnant?

Probes:

- (i) Parents/peer pressures
- (ii) Community/household factor
- (iii) Age and social media factor
- (iv) Knowledge of contraceptive/menstrual cycle
- (v) Location

SECTION C: ANTENATAL CARE PRACTICES

3. What experiences did the adolescent have during pregnancy?

Probes:

- (i) Neglect/abandonment
- (ii) Stigmatization
- (iii) Poverty
- (iv) Antenatal care enrolment/registration
- (v) Long distance/delay in accessing healthcare facility

4. What care did the adolescent receive during pregnancy?

Probes:

- (i) Type of care (traditional midwife care/faith-based care/health professional care)
- (ii) Laboratory test (blood pressure, urine, blood sample, and malaria)
- (iii) Sensitization/orientation
- (iv) Injections/drugs
- (v) Familial/partner care and support
- (vi) Cultural activities (prescription/proscription).

SECTION D: CHILD DELIVERY CARE PRACTICES

5. What experiences did the adolescent have during child delivery?

Probes:

- (i) Prolonged labour

- (ii) Excessive bleeding
- (iii) Caesarean or vaginal delivery
- (iv) Newborn limp, pale or breathlessness
- (v) Cultural practices/rituals at delivery

6. What care did the adolescent receive during child delivery?

Probes:

- (i) Kangaroo care/skin-to-skin care
- (ii) Resuscitation care
- (iii) Cultural care (prescription and proscription) at delivery

SECTION E: POSTNATAL CARE PRACTICES

7. What experiences did the adolescent and her newborn baby have during the first six weeks after delivery?

Probes:

- (i) Postpartum challenges/depression
- (ii) Newborn health challenges
- (iii) Neglect/abandonment
- (iv) Poverty/poor nutrition
- (v) Circumcision

8. What care did the adolescent and her newborn baby receive during the first six weeks after delivery?

Probes:

- (i) Immunization care
- (ii) Kangaroo care/skin-to-skin care
- (iii) Health check up
- (iv) Breastfeeding care
- (v) Drug and injection
- (vi) Food and feeding practice/care
- (vii) Cultural care (prescription and proscription)

APPENDIX V

In-Depth Interview Guide

(Traditional Birth/Faith-based Birth Attendants Only)

SECTION A: RESPONDENT'S BACKGROUND CHARACTERISTICS

Q. No. 1	QUESTION	RESPONSE
A	How old are you?	
B	Highest level of education attained?	
C	Years of practice	

SECTION B: ANTENATAL CARE PRACTICES

2. What do you do to help adolescents during pregnancy?

Probes:

- (i) Sensitization/orientation
- (ii) Test and health check up (blood pressure, urine, blood sample, and malaria)
- (iii) Injections/drugs and number of times administered
- (iv) Rituals and cultural activities (prescription/proscription).

SECTION C: CHILD DELIVERY CARE PRACTICES

3. What do you do to help adolescents during delivery?

Probes:

- (i) Massaging and placenta delivery
- (ii) Newborn limp, pale or breathlessness and resuscitation
- (iii) Hygienic/appropriate kit & instrument used for delivery
- (iv) Referral services
- (v) Kangaroo/skin-to-skin care
- (vi) Object/substance applied on the stump after the umbilical cord is cut
- (vii) Prolong labour control mechanism

SECTION D: POSTNATAL CARE PRACTICES

4. What do you do to help adolescents and their newborn babies during the six weeks following delivery?

Probes:

- (i) Mother and newborn check up
- (ii) Prescriptions and proscriptions on drugs, drinks, food, sex, and breastfeeding
- (iii) Circumcision practices
- (iv) Herbs/drug administration
- (v) Immunization services

APPENDIX VI

In-Depth Interview Guide

(Medical Health Workers Only)

SECTION A: RESPONDENT'S BACKGROUND CHARACTERISTICS

Q. No. 1	QUESTION	RESPONSE
A	How old are you?	
B	Years of practice?	
C	Highest level of education attained?	
D	Designation?	

SECTION C: ANTENATAL CARE PRACTICES

2. What do you do to help adolescents during pregnancy?

Probes:

- (i) Immunization services
- (ii) Laboratory test (blood pressure, malaria, urine and blood sample)
- (iii) Sensitization programme
- (iv) Injection/drug administration.

SECTION D: CHILD DELIVERY CARE PRACTICES

3. What do you do to help adolescents during delivery?

Probes:

- (i) Kangaroo care/skin-to-skin care
- (ii) Resuscitation care
- (iii) Postpartum haemorrhage or excessive bleeding control
- (iv) Routine weighing and bathing care
- (v) Caesarean/vaginal delivery
- (vi) Massaging and placenta delivery
- (vii) Newborn limp, pale or breathlessness
- (viii) Object/substance applied on the stump after the umbilical cord is cut

SECTION E: POSTNATAL CARE PRACTICES

4. What do you do to help adolescents and their newborn babies six weeks following delivery?

Probes:

- (i) Mother and newborn check up
- (ii) Immunization services
- (iii) Injection and drug administration
- (iv) Sensitization/orientation
- (v) Circumcision practices
- (vi) Breastfeeding practices

APPENDIX VII

Focus Group Discussion (FGD) Guide

SECTION A: RESPONDENT'S BACKGROUND CHARACTERISTICS

Q. No. 1	QUESTION	RESPONSE
----------	----------	----------

A	How old are you?	
B	Marital status?	
C	Highest level of education attained?	
D	Name of religion or church?	
E	Position holds in the religion/community?	

SECTION B: FACTORS THAT DETERMINE PRE-MARITAL CHILDBEARING

2. In your opinion, what factor led to adolescents becoming pregnant in this community?

Probes:

- (i) Cultural factor (norms and values)
- (ii) Community/household factor
- (iii) Religious factor (traditional and modern)
- (iv) Urbanization/globalization factor
- (v) Parental/peer pressures

SECTION C: CULTURAL BELIEFS AND PRACTICES ON MATERNITY

3. What cultural beliefs and/or practices affect adolescents and their newborn babies during pregnancy, delivery and post delivery in this community?

Probes:

- (i) Religious beliefs
- (ii) Cultural practices
- (iii) Maternal prescriptions and proscriptions on drinks, food and sex
- (iv) Breastfeeding practices
- (v) Circumcision practices

APPENDIX VIII

Ibibio translated version of instruments

***DEPARTMENT OF SOCIOLOGY
FACULTY OF THE SOCIAL SCIENCES***

UNIVERSITY OF IBADAN

**ÑWED MBUUME AKE UFỌK
(AKE IWAAD EDOHO ISUA DOPENAÑ SIM ISUA EDIP KPỌD)
KE ADINAM USAÑA MME EDIP MME ADIMAN AYIN AKE NTƏK UBOIKPA SE
IMIDOHO EBE.
KE AKWA IBOM STED**

NWED UNYIMME

Anyiñ mmi ado.....

Ami ndoayinufokñwedkeufokñwedntaifiokIbadanukemntenañaawedkeiwuudikọabeebaami. Nko, aminnamnduñodembañansoñidemibaanumanakpanakeiwaadedohoisuaefidekeed ye mbonesehekeekan ado esañake ye idip me emakemaaman. Ntadayinakenduñodeamiabighiidadiyaawan se ekamaedippendaghansoñidemibaanuman. Ado kentakamianam yak umekfienedibọrọmbimmeifañami. Mbọknieime yak ubipmbimmeifañ. Amekemeedibọrọ me asoonusukmbimekeñwedami. Kamse, amekemeitreukedukeededibọrọ bene mbimekeed. Inimbimeamiabidaapminik aba kpọt. Afidedibọrọ se afo anno mi, abidosukami ye afokpọt. Ukpuniembimeabañakenduñodeami, mbọk, ñweditieami;
Social Sciences and Humanities Research Ethics Committee of the University of Ibadan.
Mbọk, nkaiso ye mmembume mmi? IH/IHYO
Usenofioñ _____.

AKPA IKPEGHE: S'IBAÑA ANO IBỌRỌ

IBAD	MBIME	NAÑA EKAPPA	KA
101	Ado isuaifañidahami ?	Isuanañaasim <input type="checkbox"/> <input type="checkbox"/>	
102	Ndiasaña ye idipidahaam me amemanayinakpa?	IH! NSAÑA YE IDIP IDAHAM.....A IH! MMEMAN AYIN AKPA.....B IBỌRỌ MMI ISINEKE MI.....C	→103 →105 →STOP
103	Akpaidipmfoadom?	Ih.....1 Ihah.....2	
104	Idipmfo ado afioñ me uduaiifañidaham?	-----	
105	Afoato uke?	HAUSA.....1 YORUBA.....2 IBIBIO.....3 ANAÑ.....4 ORON.....5 NTEFEN.....6 (SIK)	
106	Nsidoeduukponomfo?	AKIRISTIAN?.....1 KATERIC.....2 MUSELEM.....3	

		NTEFEN.....4 (SIAK)	
107	Nsidondahamfo ken do?	ANAM NDO.....1 IKPỌŃ.....2 EBEKPA.....3 ANWAANKPA.....4 AWOŃO NDO.....5 AFEN.....6 (SIAK)	
108	Ete ye eka mfommokeuwemeba?	IH.....1 ETE KPỌT ABA.....2 EKA KPỌT ABA.....3 AMO MBA EMAEKPA.....4 NDIOŃOKE.....5	
109	Ndiameduñakpa ye awodeennteebe ye anwan?	IH, NDODUŃ YE AWODEN IDAHAAM.....1 IHYO, NDUŃO.....2	→ 111
110A	Afoaduñ ye ufan ado me amaakpoñ?	IH, NDUŃ YE ANYE.....1 IHYO, NDUŃ KE ITIE MFEN.....2	
110B	Ete ado adoeteakpatreayinmfo, me anyeasinnekekeidip mi?	IH, ETE AKPATRE AYIN MMI.....1 IH, ETE AYIN ESIT IDIP AMI.....2 IBOORO ISINNEKE.....3 NDIOŃOKE.....4	
111	Ndieteakpatreayinmfoanianwanafen me aduñ ye awonwanafen?	IH, ANIE ANWAN.....1 IH, ADUŃ YE AWONWAN AFEN.....2 IBOORO ISINNE.....3 NDIOŃOKE.....4	
112	Aka ñwedatide moo?	NKEKAŃA ÑWED.....1 PRAIMARI.....2 SEKONDRI.....3 UFOKŃWED NTAIFIOK.....4 MFEN.....5 (SIAK)	
113	Eteakpatreayinmfo me anyeafokammake mi atremokeñwed?	NKEKAŃA ÑWED.....1 PRAIMARI.....2 SEKONDRI.....3 UFOKŃWED NTAIFIOK.....4 MFEN.....5 (SIAK)	
114	Eteakpatreayin me anyeakedip ado isuaifañ?	KE ISUA _____ (SIAK)	
115	Anyeusoñfiinisuaifañ?	USOŃ FIEN.....1 AFO AMESOŃ ANYE.....2 ISUA UKEM.....3 NDIOŃOKE.....4	
116	Ndahainieeteakpatreayinmfo me anyeakeidipadodie?	AKPOIKPOI UWENE.....1 UWENE.....2	

		ANYUÑ ANIE.....3 ANIE MKPO.....4 ATA ANIE MKPO.....5	
117	Ndahainie UFOK mbufoadodie?	AKPOIKPOI UWENE.....1 UWENE.....2 ANYUÑ ANIE.....3 ANIE MKPO.....4 ATA ANIE MKPO.....5	
118	Nsidoataubokutommfo?	ANYE UFOKÑWED.....1 ANAM UTOM.....2 AFEN.....3 (MBOK SIAK)	
119	Afoanienditoifañ?	_____	
120	Afoaduñ ye nditomfoifañ?	_____	
121	Nditomfoifañeduñkentefen?	_____	
122	Ake kmanayinisiake?	_____	
123	Isiaifakkeake ado keakpannafo?	_____	

IKPEGHE OYOHQ IBA: SE ISINAM EMAN AYIN K'IDAHA OWO M'IDOHO NDO KANÁ

201	Ukp'ukereubañaakpatreidipmfo me anyeakammake mi, akerekensoikinamafoakena ye owodeen ado maa ayomo? BO IFIOK: AMEKEME IYUKKO AKAN ITIE KEED, KPANAKPAN NAÑA ANYE UBEGHE.	MM'UFAN EKENUK..... ETE YE EKA EKE NAM..... UNA AKUK..... UDOÑ EDIDIOÑO..... USE NDISE MBON IFED..... UNAM MKPO KE INTANED..... EDINAM IDOÑ NNYIN..... IFIOK IBOK UBUÑ IDIP..... EDIDAT IBOK UBUÑ IDIP..... IBOQOQ ISINEKE..... MKPO AFEN..... (SIAK)
202	Mbemisoakpatreidip me anyeafosañake mi, mmookeakesibo upkeep abañae buanaawonwan ye awodeen me akensoñidemakeawonwanuman.	ANDIKPEEP K'UFOKÑWED..... ETE YE EKA..... NDITO EKA..... MBON UBON..... MME AKPEEP MBAÑA NSOÑIDE..... MME ÑWED..... FIIM..... AKEBE NDISE/AKEBE NTUKUBE..... INTANED..... IBOQOQ ISINEKE..... AFEN..... (SIAK)
203	Mbemisoakpatreidipmfo me anyeafosañake mi, nkañifañkeafokesinemennemeabañae wanaawonwan ye awodeen me nsoñidemawonwanuman.	NKENEMEKE..... EKESIWAKKA INEMME..... USUKINI.....

		UWAK INI..... NDINNDIN.....
204	Mbemisoakpatreidipmfo me anyeafaosañake mi, nkañifañkeete ye eka me and'ukpemefienekesidioño se afoanamkeininduokodudumfo?	TUTU AMAMA..... IKESIWAKKA INEMME..... USUKINI..... UWAK INI..... NDINNDIN.....
205	Mbøkamanyimmeanoewana ado akenammafoayommo?	IH, MMANYIMME..... IHYO, NKENYIMMEKE.....
206	Ndiamaanyemidipidahaafoadikittentekeamesañay'idipakpatreayinmfo me anyem?	IH, MMANYEM..... IHYO, NKENYEME.....
207	Ndiamaanwanaedisionoidipakpatreayinmfo me anyeanyeafaosañake mi?	IH..... IHYO.....
207A	Akenam die?	UTETEMME IBOK..... UMEN IBOK UFØKIBØK..... UWOÑ ADUÑ ME IBOK UFØK... IBØQØQØ ISINNEKE..... EFEN..... (SIAK)

IKPEGHE QYQHØ ITA: USEIDEM MBEMISO UMAN

	MBIMME	NAÑA EKAPPA	KA
301	Sibañaakpatreayinmfo.	Isuaad <input type="text"/> <input type="text"/> <input type="text"/>	
301	Ndiamaakaitieubousobobakeedkeakpatreayinmfo me anyeafaosañake mi?	IH.....1 IHYO.....2 (TAMMA KA 302) ←	
301A	Akekidanie? Aniemfen? TIM FIOK: MEK AFID SE AKEKID	DOKTO.....A NOSI/AMAM UMAN.....B ANO UNWAM AMAM UMAN.....C AMAM UMAN UFØK.....D AMAM UMAN UFØKABASI.....E AFEN.....F (SIAK)	
301B	Anieketuafoasiakkake 301A ado akpaawofoakekitte?	DOKTO.....A NOSI/AMAM UMAN.....B ANO UNWAM AMAM UMAN.....C AMAM UMAN UFØK.....D AMAM UMAN UFØKABASI.....E AFEN.....F (SIAK)	
302	Mmookeakesibousoboiniidip? TIM FIOK: AMEKEMME IYOKKO AKAN ITIE KEED KPØRO AMAAKEED AKAN ITIE	K'UFØK MFO.....1 K'UFØK AWOFEN.....2 UFØKIBØK AKOOFMEN.....3 ITIE UBOUSOBO AKOOFMEN.....4 UFØKIBØK AWO.....5	

	KEED	ABIA UMAN.....6 IBOORO ISINNEKE.....7 AFEN.....8 (SIK)	
303	Afionifañk'idipmfoakedombemisoatoño abo usobo?	AFION..... NDIONOKE.....2	
304	Nkañifañkeakebousoboakpatreayinmfo anyeasañake mi? me	IBAD NKAÑ..... NDIONOKE.....2	
305	Keabañakensoñidemanwanuman, mboknsokeatuamikeekunam? Emaudomondahaiyip? Amaanoikimmfo? Amaanoiyip? Amaaboibokutoayin? Emaukimaditibeabighiitreayinedinietitanus?	IH IHIH NKOÑKOÑ IYIP 1 2 IKIM 1 2 IYIP 1 2 UTOAYIN 1 2 TITANUS 1 2	
306	Nsoedinamafenanieghemkpoedinam ye ididmfokeakenamkeidipakpatreayin me anye mi?	MBOK SIAK.....	

QYQH QKPEGHE INAN: NTIÑ AYIN INI UMAN

	MBIMME	NAÑA EKAPPA	KA
	Edinamnsoñideminiuman (iyaitañibañanditomfonsionsioediekeaniegheakankeed).		
401	Mbukuman	AKPATRE MBUK UMAN ISUA	UDIANA AKPATRE UMAN ISUA
402	Anieikumamumana? Anieawo fen? BIP BAÑA UTO AWO NYUÑ WED NIM. ANDIBOORO MBIME AKPEBO KE AWO IKINWAMMA, BUP ME IKP AWO MMOEKEBA KE ITIE UMAN ADO?	MME ANAM UTOM NSOÑIDEM DOKITO.....A NOOSI.....B AMAM UMAN ANOUWAM.....C ANAM UTOM UFOK IBOK.....D MBON EKEN AMAM UMAN IDUÑ.....E UFAN/MBOHO IDUÑ.....F AFEN.....G (SIK) AWO IKINWAMMA.....H	MME ANAM UTOM NSOÑIDEM DOKITO.....A NOOSI.....B AMAM UMAN ANOUWAM.....C ANAM UTOM UFOKIBOK.....D MBON EKEN AMAM UMAN IDUÑ.....E UFAN/MBOHO IDUÑ.....F AFEN.....G (SIK) AWO IKINWAMMA.....H
403	Akeman moo ayin? NEKKE BUP	K'UFOK MFO.....1 K'UFOK AWO FEN.....2 UFOKIBOK AKOOFMEN.....3 ITIE UBOUSOBO AKOOFMEN.....4	K'UFOK MFO.....1 K'UFOK AWO FEN.....2 UFOKIBOK AKOOFME.....3 ITIE UBOUSOBO AKOOFMEN.....4

	<p><i>DIOÑO ITIE</i></p> <p><i>KPoro</i> <i>IDIOÑOKE ITE</i> <i>ME ADO</i> <i>AK'UKARA ME</i> <i>AKEWO. WED</i> <i>ITIE SE ANYE</i> <i>ASIAK.</i></p> <hr/> <p>ANYUÑ ITIE</p>	<p>UFOKIBOK AWO.....5</p> <p>ABIA UMAN.....6</p> <p>AFEN.....7</p> <p>(SIAK)</p>	<p>UFOKIBOK AWO.....5</p> <p>ABIA UMAN.....6</p> <p>AFEN.....7</p> <p>(SIAK)</p>						
404	akeman die ayin?	<p>MFONMFON NTO ITID.....1</p> <p>USASIAK.....2</p> <p>EKAMMA UBOK EDUD ESIO.....3</p> <p>AFEN.....4</p> <p>(SIAK)</p>	<p>MFONMFON NTO ITID.....1</p> <p>USASIAK.....2</p> <p>EKAMMA UBOK EDUD ESIO.....3</p> <p>AFE.....4</p> <p>(SIAK)</p>						
405	<p>Akekpeene die k'itieu man?</p> <p><i>AKPESIP AKAN</i> <i>USEN KEED,</i> <i>WED ME AWA</i> <i>IFAN.</i></p> <p><i>AKPESIP AKAN</i> <i>UDUA KEED,</i> <i>WED ME USEN</i> <i>IFAN.</i></p>	<p>AWA.....1</p> <p>MM'USEN.....2</p> <p>MM'UDUA.....3</p> <p>NDIOÑOKE.....4</p> <table border="1" style="display: inline-table; vertical-align: middle;"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>							
406	Ndianousoboama sebañansoñidem mfo me akebaha do?	<p>IH.....1</p> <p>IHYO.....2</p>							
407	Kebañaakpatreu manmfo, nkeidoakpaitieak ekaha?	<p>UFOK ABIA UMAN IDUÑ.....1</p> <p>UFOKABASI/UFOKAKAM.....2</p> <p>UKOKIBOK AKOOFMEN.....3</p> <p>UFOKIBOK AWO.....4</p> <p>IBOORQ ISINNEKE.....5</p> <p>AFEN.....6</p> <p>(SIAK)</p>							
408	<p>ns'ikinekkeinam aka akpaitieu man ado?</p> <p>NEKKE BUP BO IBORO.</p> <p>WED AFID SE</p>	<p>AKUK UMAN.....A</p> <p>UNA EDIBEERE ITIE.....B</p> <p>ANYAN USUÑ.....C</p> <p>UBOK UKAMMA.....D</p> <p>AWONWAN IBAHA DO.....E</p> <p>SE ADA NSAÑA/UFOK EMEK..F</p> <p>IDO/EDIMEK IDUÑ NNYIN.....G</p> <p>AYIN ADI KE IWIWA,.....H</p>							

	ASIAK.	IBOORO ISINNEKE.....I AFEN.....J (SIAK)							
409	Ndinsaanansaana mkpọkeekama umamuman(mkp onte, bia ween, ufodoubok, akadañ) <i>WUT ANYE ASASASNA MKPỌ UMAN.</i>	IH.....1 IHYO.....2 NDIOÑOKE.....3							
410	K'iniaakemanna kpaayinmfo,mbọ knsookeekam maekpikkeakopa mo?	UFA/UTETEM AKADAÑ.....1 AKAN AKADAÑ.....2 IKWA.....3 UFADMKPỌ.....4 EKEN.....5 (SIAK) NDIOÑOKE.....6							
411	nsokeekeyedkeiw uodakopayin?	ADAN.....1 NTOÑ.....2 UDUAÑ UNAM.....3 IDIDUUD.....4 DETOOD.....5 UFIOB IBOK.....6 IBOORO ISINNEKE.....7 AFEN.....8 (SIAK) NDIOÑOKE.....9							
412	Emaebenayinidu ududk'idipifukns aadafoñ?	IH.....1 IHYO.....2 NDIOÑOKE.....3							
413	Emaefukayiniwu dy'itam me afoñidahaanyeam anake?	IH.....1 IHYO.....2 NDIOÑOKE.....3							
414	Akekpeene die mbemiso eyed akpatreyinmfo idem kpaakemanna? <i>AKPESIP AKAN USEN KEED, WED MME AWA AKPESIP AKAN</i>	AWA.....1 MM'USEN.....2 MM'UDUA.....3 NDIOÑOKE.....4	<table border="1"> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> </table>						

	UDUA KEED, WED MM'USEN	
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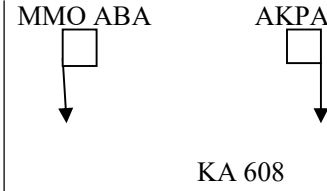
IKPEGHE QYQHQ ITION: UKAMA AKE EMAEKEMAN AYIN IMA

	MBIMME	NAÑA EKAPPA	KA						
	Nañaesaña use idem ekemanayin ema								
501	Awoitiensoñidemntekeedasaña use toñoakemanakpatreayinmfo ama?	IH.....1 IHYO.....2 TAMMA KA 502 ←							
501A	Aniewoikusefien idem idahado? <i>NEKKE BIP DIOÑO NNEN-NNEN OWO</i>	MME ANAM UTOM NSOÑIDEM DOKITO.....A NOOSI.....B AMAM UMAN ANOUWAM.....C ANAM UTOM UFQKIBQK.....D MBON EKEN AMAM UMAN IDUÑ.....E UFAN/MBOHO IDUÑ.....F AFEN.....G (SIAK) AWO IKINWAMMA.....H							
501B	Akekpenediembemisoakpandiseadaitie? <i>AKPESIP AKAN USEN KEED, WED MME AWA</i> <i>AKPESIP AKAN UDU A KEED, WED MM'USEN</i>	AWA.....1 MM'USEN.....2 MM'UDUA.....3 NDIOÑOKE.....4	<table border="1" style="width: 100px; height: 40px; margin-left: auto; margin-right: auto;"> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> </table>						
502	Kemkponteudaitiokeedamaakebooyo, aba anonsoñidem baked adiseghenaña idem ayinaba(me adiamkpọ yak afon)?	IH.....1 IHYO.....2 NDIOÑOKE.....3	507 →						
503	Mkponteawa, m'usen, m'uduafañaboyombemisoanyekediakpa? <i>AKPESIP AKAN USEN KEED, WED MME AWA</i> <i>AKPESIP AKAN UDU A KEED, WED MM'USEN</i>	MM'INI NKEMAN MMA.....1 MM'USEN NKEMAN MMA.....2 MM'UDUA NKEMAN MMA.....3 NDIOÑOKE.....4							
504	Aniewoikusefien idem idahado? <i>NEKKE BIP DIOÑO NNEN-NNEN OWO</i>	MME ANAM UTOM NSOÑIDEM DOKITO.....A NOOSI.....B AMAM UMAN ANOUWAM.....C ANAM UTOM UFQK IBOK.....D MBON EKEN AMAM UMAN IDUÑ.....E UFAN/MBOHO IDUÑ.....F AFEN.....G							

		(SIAK)	
505	Idahaekediehe, emaesekeedk'otum(emaeseakop, emaesenañaanyeawopeba, emaesenañaiweekamaba, emauwodnañaabidioño idem akpebiakayin)?	AKOP.....1 UNOEBA.....2 NDAHA IYIP.....3 IDEM AKPEBIAK.....4	
506	Kemmookeataakpa use ayinamiakedaitie? <i>KP̄RO IDIOÑOKE ITE ME ADO AK'UKARA ME AKEWO. WED ITIE SE ANYE ASIAK.</i> _____ <u>ANYUÑ ITIE</u>	K'UFQK MFO.....1 K'UFQK AWOFFEN.....2 UFQKIBQK AKOOFMEN.....3 ITIE UBOUSOBO AKOOFMEN...4 UFQKIBQK AWO.....5 AFEN.....6 (SIAK)	
507	Keakpaafioñitiokeed, amaaboibokekoodo Vitamin A anno ayin? <i>(WOD IBOK SE ABIDED IDIOÑO)</i>	IH.....1 IHYO.....2 NDIOÑOKE.....3	

IKPEGHE OYOH'ITIOKEED: EMEEDU UWEM IDUÑ KEBAÑA UMAN

	MBIMME	NAÑA EKAPPA	KA
	Nnemmeabañake se iduñenimkebañauman		
	MBUK UMAN	MBUK AKPTRE UMAN:	
601	Se 102: AB̄q̄R̄q̄ MBIME ASAÑA Y'IDIP?	IHYO <input type="checkbox"/> AKPA IDIP <input type="checkbox"/> NDIOÑOKE TAMA KA 610	
602	Amenieenwaanaawonwan ye awodentooñoakemanayin?	IH.....1 IHYO.....2	
602A	Aketiemkp̄nteafoñifañudunammaima?	MME OFIÑ..... <input type="checkbox"/> <input type="checkbox"/> NDIOÑOKE.....	
602B	Nsikinamatieudunammaima?	IDO NNYIN IKIYAKKA.....1 IDEM IKIK̄BOKE.....2 NKESUK NNO AYIN EBA....3 AFEN.....4 (SIAK)	
603	Amenoayinebaakpa?	IH.....1 (TAMA KA 604) ← IHYO.....2	
603A	Akekpenedieukunoayinebanañaamanna ama do? <i>AKPESIP AKAN USEN KEED, WED MME AWA</i> <i>AKPESIP AKAN UDUWA KEED, WED MM'USEN</i>	NDONDO ADU.....000 MME AWA <input type="checkbox"/> <input type="checkbox"/> MM'USEN <input type="checkbox"/> <input type="checkbox"/>	

604	Keakpausenita ndiemaenoayinmkpofenkebedeaba anwoñ?	ado, yak	IH.....1 IHYO.....2 TAMMA KA 605 ←	
604A	Nsookeekenooanye <i>TIM FIOK: AMEKEME IYOKKO NKAN KEED, NAÑA AKENYUÑ ATIPPE</i>		MMOÑ EBA(IDOHO AKE AWO)1 ATA MMOÑ.....2 SUKA YE MMOÑ UWEM.....3 MMOÑ UWEM.....4 MMOÑ MFRI.....5 MMOÑ EBA AYIN.....6 ATII.....7 ADAN AKWOK.....8 AFEN.....9 (SIAK)	
605	SE 301: NDI AYIN MMO K'UWEM ABA?		MMO ABA AKPA  KA 608	
606	Asukanoeba?		IH.....1 IHYO.....2	
607	Ayinmfoamaanwoñmkpofenkebedeabaak oneyomkpoñ me mkpoñ?		IH.....1 IHYO.....2 TAMMA KA 608 ←	
607A	Nsooanyeakenwoñ		MBok SIAK _____	
608	Nsooayinmfo ado?		AWONWAN.....1 AWODEEN.....2	
609	Enimayinmfombobi? <i>BIP SE ANWOÑO EDINIM AYIN MBOBI</i>		IH.....1 IHYO.....2 TAMMA KA 610 ←	
609A	Iniunimmbobi		MM'INI NKEMAN MMA.....1 MM'USEN NKEMAN MMA.....2 MM'UDUA NKEMAN MMA.....3 MME'FIOÑ NKEMAN MMA..4 AFEN.....5 (SIAK)	
610	Emaunimmbobi?		IH.....1 IHYO.....2 TAMMA KA 181 ←	
610A	Idahaakekeukunimmbobi?		K'USEN EMANA.....1 INI UNYEN MMI.....2 INI IDIP.....3 USEN UMAN.....4 AFEN.....5 (SIAK)	

611	Anieawoinekkeisioiwekkebañaafañsoñi demayinmfo m?	AMI.....1 ETE YE EKA MMI.....2 ADA NSAÑA MMI.....3 AMI YE ADA NSAÑA MMI.....4 AWO AFEN.....5 (SIAK)	
612	Mbòk, no ntakafoamekkeawoake611	NTAK_____	

**NTOTUÑO NDUÑO/ SINWAM MBUK UWEM
IWAAD KPOT
AKPA IKPEGHE: S'IBAÑA ABQQRQ MBIME**

AKPA	MBIME	IBQQRQ
A	Ado isuaifañ?	
B	Aka ñwedatide moo?	
C	Nditoifañkeanie?	
D	Ifañebak'uwem?	

IKPEGHE AYOHO IBA: S'IKINAM EYOMMO IDIP UNA NDO

2. Ns'ikinamafoayommo?

Mme mbime:

- i. Mm'ufan/Ete ye eka eke nam
- ii. Efaakekenam
- iii. Isuaemana/ Unammkpòkeintanedakenam
- iv. Udoñidip/usuñoidipakenam
- v. Ifiokibokubuñidip

IKPEGHE QYQHQ ITA: USEIDEM INI IDIP

3. Mme nsutoifiokutomkeakenieiniidipmfo?

Mme mbime:

- i. Emaesin
- ii. Emaesioñ
- iii. Uwenneamamam
- iv. Uwuoiyip
- v. Udiamfoonndidia
- vi. Usinayiñke UFQKIBQK
- vii. Anyanusuñ/edikpene uno usobo

4. Nsutontiñ-anyenkeakebooiniidip ado?

Mme mbime:

- i. Oto ntiñ-anyen (amamumaniduñ/UFQKAbasi/mmeanamutomnsoñidem)
- ii. Use idem kemmasin(ndahaiyip, ikim, iyip, uto-ayin)
- iii. Utomntadayin
- iv. Ukimibok ye inikeakeboo

- v. Uwammbonubon
- vi. Edinamiduñ

QYQHỌ IKPEGHE INAÑ: NTIÑ-ANYEN INI UMAN

5. Nsoifiokutomkeaniek'iniuman?

Mme mbime:

- i. Akp'osoñuman
- ii. Akp'osoñuwuoiyip
- iii. Umanikwa/umanitid
- iv. Unuanuak/umanabid
- v. Una nsoñidemnsekanyen
- vi. Una edikamansaanamkpouman
- vii. Ubopiweek
- viii. Mkpa

6. Ns'utounwamkeakebook'iniuman?

Mme mbime:

- i. Idem ke idem unwam
- ii. Edifiak-nnam-eduunwam
- iii. Unwamakeuwuoiyip
- iv. Edidomoudup ye uyed idem

QYQHỌ IKPEGHE ITION: MME EDINAM KE EMAEKEMAN AYIN IMA

7. Ns'ifiokutomkeafu me ayinmfoekenienkenso-nsoanyeamanakembemisoafioñitioked?

Mme mbime:

- i. Akpōsoñubiaknkema
- ii. Mfinak'unoeba
- iii. Ukpuhodeke idem(ndidia/mmoñeba)
- iv. Mfuho
- v. Uwuo idem/ndid
- vi. Una nsoñidemnsekayin
- vii. Unana/bioñ
- viii. Unimnbobi

8. Ns'utounwamkeafu ye ayinmfoekebondondo ado akemannaayin do, me akpaofioñitiokiet?

Mme mbime:

- i. Ukimaditibe
- ii. Idem ke idem unwam
- iii. Use idem
- iv. Umenibok ye ukimibok
- v. Use itieekesiaha
- vi. Ndidia me uno ndidia
- vii. Edinamiduñ

**NTOTUÑO NDUÑO/ SINWAM MBUK UWEM
AWODEEN ASINNE IWAAD IDIP KPQT
AKPA IKPEGHE: S'IBAÑA ABQQRQ MBIME**

AKPA	MBIME	IBQQRQ
A	Ado isuaifañ?	

B	Ns'idondahamfokendo?	
C	Aka ñwedatide moo?	
D	Nditoifañkeanie?	
E	Nditoibaanifañkeafanoicedohoisuaefidekeed me asukkoakan ado?	

IKPEGHE AYOHO IBA: S'IKINAM EYOMMO IDIP UNA NDO

2. Ns'ikinamanyeayommo?

Mme mbime:

- i. Mm'ufan/Ete ye eka eke nam
- ii. Udad me una edidadibok
- iii. Udoñidip/usuñoidipakenam
- iv. Ifiokibokubuñidip

IKPEGHE QYQHQ ITA: USEIDEM INI IDIP

3. Mme nsutoifiokutomkeanyeakenieiniidip?

Mme mbime:

- i. Emaesin
- ii. Emaesioñ
- iii. Uwenneamamam
- iv. Uwuoiyip
- v. Udiamfoonndidia
- vi. Usinayiñke UFQKIBQK
- vii. Anyanusuñ/edikpene uno usobo

4. Nsutontiñ-anyenkeanyeakebooiniidip ado?

Mme mbime:

- i. Oto ntiñ-anyen (amamumaniduñ/UFQKAbasi/mmeanamutomnsoñidem)
- ii. Use idem kemmasin(ndahaiyip, ikim, iyip, uto-ayin)
- iii. Utomntadayin
- iv. Ukimibok ye inikeakeboo
- v. Uwammbonubon
- vi. Edinamiduñ

QYQHQ IKPEGHE INAÑ: NTIÑ-ANYEN INI UMAN

5. Nsoifiokutomkeanyeaniek'iniuman?

- i. Mme mbime:
- ii. Akp'osoñuman
- iii. Akp'osoñuwuoiyip
- iv. Umanikwa/umanitid
- v. Unuanuak/umanabid
- vi. Una nsoñidemnsekanyen
- vii. Una edikamansaanamkpouman
- viii. Ubopiweek
- ix. Mkpa

6. Ns'utounwamkeanyeakebook'iniuman?

Mme mbime:

- i. Idem ke idem unwam
- ii. Edifiak-nnam-eduunwam
- iii. Unwamakeuwuoiyip
- iv. Edidomoudup ye uyed idem

QYQHQ IKPEGHE ITION: MME EDINAM KE EMAEKEMAN AYIN IMA

7. Ns'ifiokutomkeanye ye ayinommoekenickenso-nsoanyeamanakembemisoafioñitioked?

Mme mbime:

- i. Akposoñubiaknkema
- ii. Mfinak'unoeba
- iii. Ukpuhodeke idem(ndidia/mmoñeba)
- iv. Mfuho
- v. Uwuo idem/ndid
- vi. Una nsoñidemnsekayin
- vii. Unana/bioñ
- viii. Unimnbobi

8. Ns'utounwamkeanye ye ayinommoekbondondo ado anyeakemannaayin do, me akpaofioñitiokiet?

Mme mbime:

- i. Ukimaditibe
- ii. Idem ke idem unwam
- iii. Use idem
- iv. Umenibok ye ukimibok
- v. Use itieekesiaha
- vi. Ndidia me uno ndidia
- vii. Edinamidun

**Ntotuñonduño/ sinwambukuwem
(Ake mmeete me akammaiwaad KPQT)
AKPA IKPEGHE: S'IBANÑA ABQQRQ MBIME**

AKPA	MBIME	IBQQRQ
A	Ado isuaifañ?	
B	Ns'idondahamfokendo?	
C	Aka ñwedatide moo?	
D	Nsoanwanna ye aboikpaayommoke mi?	

IKPEGHE AYOHO IBA: S'IKINAM EYOMMO IDIP UNA NDO

2. Ns'ikinamanyeyommo?

Mme mbime:

- i. Mm'ufan/Ete ye eka eke nam
- ii. Udad me una edidadibok
- iii. Udoñidip/usuñoidipakenam
- iv. Ifiokibokubuñidip

IKPEGHE QYQHQ ITA: USEIDEM INI IDIP

3. Mme nsutoifiokutomkeiwaad ado akenieiniidip?

Mme mbime:

- i. Emaesin
- ii. Emaesioñ
- iii. Uwenneamamam
- iv. Uwuoiyip
- v. Udiamfoonndidia
- vi. Usinayiñke UFQKIBOK
- vii. Anyanusuñ/edikpene uno usobo

4. Nsutontiñ-anyenkeanyeakebooiniidip ado?

Mme mbime:

- i. Oto ntiñ-anyen (amamumaniduñ/UFQKAbasi/mmeanamutomnsoñidem)
- ii. Use idem kemmasin(ndahaiyip, ikim, iyip, uto-ayin)
- iii. Utomntadayin
- iv. Ukimibok ye inikeakeboo
- v. Uwammbonubon
- vi. Edinamiduñ

OYQHQ IKPEGHE INAÑ: NTIÑ-ANYEN INI UMAN

5. Nsoifiokutomkeanyeakeniek'iniuman?

Mme mbime:

- i. Akp'osoñuman
- ii. Akp'osoñuwuoiyip
- iii. Umanikwa/umanitid
- iv. Unuanuak/umanabid
- v. Una nsoñidemnsekanyen
- vi. Una edikamansaanamkpouman
- vii. Ubopiweek
- viii. Mkpa

6. Ns'utounwamkeiwaadakebook'iniuman?

Mme mbime:

- i. Idem ke idem unwam
- ii. Edifiak-nnam-eduunwam
- iii. Unwamakeuwuoiyip
- iv. Edidomoudup ye uyed idem

OYQHQ IKPEGHE ITION: MME EDINAM KE INI EMAEKEMAN AYIN IMA

7. Ns'ifiokutomkeanye me ayinommoekenienenso-nsoanyeamannambemisoafioñitiokeed?

Mme mbime:

- i. Akpoñubiaknkema
- ii. Mfinak'unoeba
- iii. Ukpuhodekeidem(ndidia/mmoñeba)
- iv. Mfuho
- v. Uwuo idem/ndid
- vi. Una nsoñidemnsekayin

- vii. Unana/bioñ
- viii. Unimnbobi

Ntotuñonduño
(Ake amamumaniduñ KPQT)
AKPA IKPEGHE: S'IBAÑA ABỌRỌ MBIME

AKPA	MBIME	IBỌRỌ
A	Ado isuaifañ?	
B	Aka ñwedatide moo?	
C	Isuaifañadomukotoñoumamuman,?	

IKPEGHE AYOHO IBA: MMEDINAM INI IDIP

2. Nsutontiñ-anyenkeanyeakebooutofienkeiniidip ado?

Mme mbime:

- i. Oto ntiñ-anyen (amamumaniduñ/UFQKAbasi/mmeanamutomnsoñidem)
- ii. Use idem kemmasin(ndahaiyip, ikim, iyip, uto-ayin)

- iii. Utomntadayin
- iv. Ukimibok ye inikeakeboo
- v. Uwa ye mmeEdinamiduñ

IKPEGHE QYQHỌ ITA: NTIÑ-ANYEN INI UMAN

3. Nsookeasinamanwamiwaadiniuman?

Mme mbime:

- i. Unuak idem ye usioabid
- ii. Use nsekayin idem mfiaknnamasoñ idem
- iii. Nnekennekmpoutomkenkedadmmamanyeuman
- iv. Mmannoanye aka ntefen
- v. Mmaanekekenseanye idem
- vi. Nsoakeyedkeakob
- vii. Editreakpосоñubiakuman, nsooasino?

IKPEGHE QYQHỌ INAÑ: NTIÑ ANYEN INI EMAEKEMAN AYIN IMA

4. Ns'utounwamkeanye ye ayinommoekbondondo ado anyeamannaayin do, me akpaofioñitiokiet?

Mme mbime:

- i. Use eka ye ufansekayin
- ii. Ediwedibokno se amen me akim(ibok, unwowoñmkpọ, ndidia, inaa, ye uno ayineba)
- iii. Mmedinam una mbobi
- iv. Aduñ ye edinoibok amen
- v. Ukimaditibe

Ntotuñonduño

(Ake mmeanamutomnsoñidem UFQKIBQK KPQT)

AKPA IKPEGHE: S'IBANÑA ABQQRQ MBIME

AKPA	MBIME	IBQQRQ
A	Ado isuaifañ?	
B	Isuaifañadomukotoñoummuman,?	
C	Aka ñwedatide moo?	
D	Akpọokpọefakutommfo?	

IKPEGHE AYOHO IBA: MMEDINAM INI IDIP

2. Nsutontiñ-anyenkeanyeakebooutofienkeiniidip ado?

Mme mbime:

- i. Oto ntiñ-anyen (amamumaniduñ/UFQKAbasi/mmeanamutomnsoñidem)
- ii. Use idem kemmasin(ndahaiyip, ikim, iyip, uto-ayin)
- iii. Utomntadayin
- iv. Ukimibok ye inikeakeboo
- v. Uwa ye mmeEdinamiduñ

IKPEGHE QYQHỌ ITA: NTIÑ-ANYEN INI UMAN

3. Nsookeasinamanwamiwaadiniuman?

Mme mbime:

- i. Unuak idem ye usioabid
- ii. Use nsekayin idem mfiaknnamasoñ idem
- iii. Nnekennekemkpoutomkenkedadmmλmanyeuman
- iv. Mmannoanye aka ntefen
- v. Mmaanekkenseanye idem
- vi. Nsoakeyedkeakob
- vii. Editreakpōsoñubiakuman, nsooasino?

IKPEGHE QYQHQ INAÑ: NTIÑ ANYEN INI EMAEKEMAN AYIN IMA

4. Ns'utounwamkeanye ye ayinommoekbondondo ado anyeamannaayin do, me akpaofioñitiokiet?

Mme mbime:

- i. Use eka ye ufansekayin
- ii. Ediwediboknno se amen me akim(ibok, unwowoñmkpō, ndidia, inaa, ye uno ayineba)
- iii. Mmedinam una mbobi
- iv. Ukekim ye edinoibok amen
- v. Ukimaditibe
- vi. Uno ebas

Ntotuñonduño

(mbonannemmeabegheke KPQT)

AKPA IKPEGHE: S'IBANA ABQQRQ MBIME

AKPA	MBIME	IBQQRQ
A	Ado isuaifañ?	
B	Ndhamfokendo?	
C	Aka ñwedatide moo?	
D	Edu ukpōno Abasi?	
E	NdhamfokeUFQKAbasi	

IKPEGHE AYOHO IBA: S'IKINAM EYOMMO IDIP UNA NDO

2. Keek'ikeremfo, nsoois'inamayommoidip una ndo?

Mme mbime:

- i. Mm'eduwemiduñ
- ii. Ntakefaak/UFQK
- iii. Ntakeduukpōno
- iv. Udoñmeete me mm'ufan

IKPEGHE QYQHQ ITA: IDO IDUÑ KE ABAÑA NTIÑAYIN INI IDIP

3. Nsoombd me idoiduñafinamneedunsoñoideminiidip?

Mme mbime:

- i. Ntakeduukpōno
- ii. Idoiduñ
- iii. Nañaetañenyunenammkpōebañauwowoñmkpō, ndidia ye inaa
- iv. Edu uno ayineba
- v. Edu una mbobi

APPENDIX IX



**SOCIAL SCIENCES AND HUMANITIES RESEARCH ETHICS COMMITTEE (SSHREC)
UNIVERSITY OF IBADAN**

Chairman: Prof. A. S. Jegede, B.Sc, M.Sc (Ife), MHSc (Toronto), Ph.d (Ibadan)

Tel: +234-8055282418

E-mail: sajegede@yahoo.com

sajegede@gmail.com

as.jegede@mail.ui.edu.ng

NOTICE OF FULL APPROVAL AFTER FULL COMMITTEE REVIEW

**RE: MATERNAL HEALTHCARE PRACTICES AMONG UNMARRIED YOUNG ADOLESCENTS
IN AKWA IBOM STATE, NIGERIA**

UI/Social Sciences Ethics Committee assigned number: **UI/SSHEC/2018/0005**

Name of Principal Investigator: **Otu Michael TURNWAIT**
Address of Principal Investigator: Dept. of Sociology,
Faculty of the Social Sciences,
University of Ibadan.

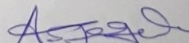
Date of receipt of valid application: **26/03/2018**

Date of meeting when final determination on ethical approval was made: **6th June, 2018.**

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 full approval by the SSHE Committee.

This approval dates from **06/06/2018 to 05/06/2019**. If there is delay in starting the research, please inform the SSHE 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 SSHE Committee assigned number and duration of SSHE Committee approval of the study. It is expected that you submit your annual report as well as an annual request for the project renewal to the SSHE Committee early in order to obtain renewal of your approval to avoid disruption of your research.

Note: 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 SSHEC. No changes are permitted in the research without prior approval by the SSHEC except in circumstances outlined in the Code. The SSHE reserves the right to conduct compliance visit to your research site without previous notification.


Prof. A.S. Jegede

**COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI PROGRAM)
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 • **Institution Affiliation:** West African Bioethics Training Program (ID: 667)
 • **Institution Email:** informationofficer@pgschool.ui.edu.ng
 • **Institution Unit:** Sociology
 • **Phone:** +23408066846425

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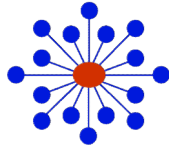
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 • **Expiration Date:** 28-Mar-2020
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SBE Refresher 1 – Privacy and Confidentiality (ID: 15035)	29-Mar-2018	2/2
(100%) SBE Refresher 1 – Assessing Risk (ID: 15034)	29-Mar-2018	
2/2 (100%) SBE Refresher 1 – Research with Children (ID: 15036)	29-Mar-2018	
2/2 (100%) SBE Refresher 1 – International Research (ID: 15028)	29-Mar-2018	
2/2 (100%) Biomed Refresher 2 - Instructions (ID: 764)	29-Mar-2018	
No Quiz SBE Refresher 1 – History and Ethical Principles (ID: 936)	29-Mar-2018	
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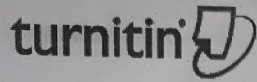
Course Completion Date: 18 December 2017

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Tracee Williams, Training Coordinator
NIDA Clinical Coordinating Center

This training has been funded in whole or in part with Federal funds from the National Institute on Drug Abuse, National Institutes of Health, Department of Health and Human Services, under Contract No. HHSN2720120100024C.

APPENDIX XII

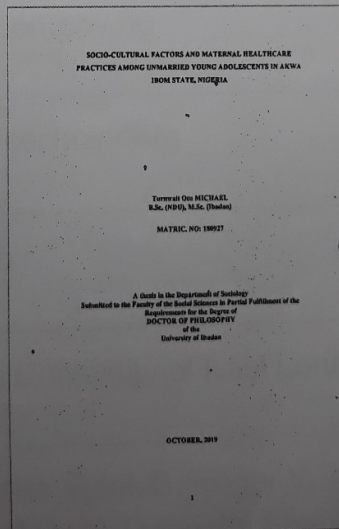


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