

# Teenage Pregnancy And Adverse Birth Outcomes In Calabar, Nigeria

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## Abstract

**Objective:** To compare the incidence of adverse perinatal outcomes in nulliparous teenagers and nulliparous women aged 20-24 years.

**Material and Method:** The study compared maternal characteristics and rates of adverse perinatal outcome for 110 primiparous teenagers who delivered in UCTH with a control group of 297 primiparous women aged 20-24 years.

**Results:** The teenagers were associated with significantly higher incidences of preterm deliveries ( $p=0.000$ ), low birth weight infants, birth asphyxia ( $p=0.027$ ) and perinatal deaths ( $0.0006$ ), but not with birth defects ( $p=0.636$ ). About 46 % of the teenagers were admitted from spiritual/traditional birth outfits with complications. The teenagers were also less likely to be married ( $p=0.000$ ), to be educated ( $p=0.001$ ), to have had an intended pregnancy ( $0.000$ ) or to have received antenatal care ( $0.000$ ). They were also less likely to commence antenatal care in the first trimester ( $0.048$ ) or to achieve the least recommended number of antenatal clinic visits ( $p = 0.028$ ).

**Conclusion:** Teenage pregnancy is associated with higher rates of adverse perinatal outcomes in Calabar. The adverse socio-demographic background of the teenagers and their poor utilization of health care services in pregnancy and childbirth are likely to be responsible. Adolescent friendly health services should be provided in pregnancy and at childbirth at minimal cost.

## INTRODUCTION

It has been estimated that the teenage birth rate in Nigeria is 113 per 1000 women aged 15-19 years.<sup>1</sup> This is exceedingly high compared to figures of 3-71 per 1000 quoted for most countries of the world outside sub-Saharan Africa.<sup>1</sup> It is also on record that the incidence of adolescent pregnancies has been on the decline in many of these countries, while it continues to remain a common occurrence in Nigeria.<sup>1</sup> Early marriage, particularly in the Northern part of the country, poverty and low utilization of contraceptive services are some of the factors contributing to this high rate.<sup>2</sup>

Adolescent pregnancy has been recognized globally as a social problem with medical consequences. Studies have suggested that infants of younger mothers have an increased risk of being delivered preterm, having low birth weight, low apgar scores and are at increased risk of neonatal death while some studies did not reach similar conclusions.<sup>3-12</sup> The conflicting reports may be explained by the fact that young maternal age is also a marker for maternal risk factors associated with adverse birth outcomes.<sup>8</sup> These include low socioeconomic status, unmarried status, sexually transmitted

infections, substance abuse and inadequate prenatal care.<sup>8,13</sup>

The extent to which these factors exist in a particular study population may well determine the eventual obstetric outcome. For instance, in a series in Saudi Arabia, a predominantly Moslem population where all the participants were married and had antenatal care, there were no differences between the adolescent and older mothers for many of the outcome variables studied.<sup>10</sup> A similar picture was obtained in Jos, Northern Nigeria where 96% of the teen mothers were married.<sup>7</sup>

The socio-cultural background of pregnant adolescents in the predominantly Christian south of Nigeria is however at variance with the predominantly Moslem north of the country. In Calabar, Southern Nigeria, early marriage is uncommon so that more than two-thirds of teenage births are out of wedlock births and in 70% of cases, the mothers of the teenagers are also single.<sup>14</sup> This study therefore seeks to identify if pregnant teenagers are associated with higher frequencies of adverse perinatal outcome than older mothers in this environment.

**MATERIALS AND METHODS**

Calabar, the capital of Cross River State where this study was carried out is in the south- south region of Nigeria. It has an estimated population of 328,877 people<sup>15</sup>. The University of Calabar Teaching Hospital (UCTH) is the only tertiary health institution in the state and its maternity unit caters for the obstetric needs of women in the state and its environs regardless of whether the women are referred from other health facilities or not. Following delivery, the women are admitted into either the postnatal or amenity ward for observation or further management and sick neonates are admitted into the neonatal unit.

Consenting primiparae aged < 20 with singleton deliveries who were admitted into these wards from June 2006 to December 2007 were registered for the study after approval from the ethical committee of the hospital. The control group consisted of all consenting primiparae with singleton deliveries aged 20-24 years who were also admitted during the same period the study group was recruited. Primiparae with singleton deliveries were chosen since they are in the majority and also to eliminate the influence of parity and multiple gestations on birth weight. Also, only the women who could provide their date of birth and last menstrual period (LMP) were included in the study. Socio-demographic data and other information such as age in completed years at delivery, contact phone number, marital status, highest educational level attained, recreational drug use in pregnancy, booking status number of antenatal clinic visits, centers referred from, the LMP, and if the pregnancy was intended were recorded on a pre-coded data form by research assistants. The booking status was based on the WHO 1993 criterion.<sup>16</sup> The gestational age (G.A.) at delivery (number of weeks completed from the last normal menstrual period) was calculated and information on adverse fetal outcome were gathered from each woman

**RESULT**

There were 2,667 deliveries in the hospital during the study period. Teenagers accounted for 152 (5.7%) of the births and 141 (92.8%) of them were nulliparous, while women aged 20-24 accounted for 424 (15.9%) of the births and 332 (78.4%) of them were nulliparous. The age range of the teenagers understudied was 14-19 years and the mean ages of the study and control groups were 17.5 SD 1.48 and 22 SD 1.48 respectively. Mothers aged <16 years accounted for 18.2% of the study group while 81.8% were ? 16 years old.

Table 1 shows the characteristics of the subjects in the two

groups. The teenagers more likely to be unmarried (p= 0.000), to be uneducated (p=0.0013) and their pregnancies were more likely to be unintended (p=0.000). They were also less likely to have booked to receive antenatal care (p = 0.000), or to commence antenatal care in the first trimester (p=0.048) or to achieve four antenatal clinic visits (p = 0.028) which is the recommended number of visits by WHO.<sup>19</sup>

**Table 1**  
Characteristics of subjects in the two groups

Variable	Study group n = 110 (100%)	Control group n = 297 (100%)	X <sup>2</sup>	P value
Marital status				
Married	36 (32.7)	215 (72.4)		
Unmarried	74 (67.3)	82 (27.6)	53.42	0.000*
Education				
Educated	51 (46.4)	190 (64.0)		
Uneducated	59 (53.6)	107 (36.0)	10.31	0.0013*
Intended pregnancy				
Yes	21 (19.1)	193 (65.0)		
No	89 (80.9)	104 (35.0)	67.8	0.0000*
Booking status				
Booked	50 (45.5)	223 (75.1)		
Unbooked	60 (54.5)	74 (24.9)	31.91	0.000*
Gestational age at booking visit				
≤13 weeks	5 (4.5)	50		
>13 weeks	45 (40.9)	173	3.92	0.048*
Antenatal clinic attendance				
≥4 visits	37	193		
1-3 visits	13	30	4.85	0.028*

Fifty one teenagers (46.4%) came from spiritual and traditional birth attendants

**DISCUSSION**

This study reveals that in Calabar, there is a higher incidence of preterm births, low birth weight infants, birth asphyxia and perinatal deaths among the teenage population compared with women aged 20-24 years, but there may be no difference in the rates of congenital anomalies. Close to half (46.4%) of the teenagers came to the hospital from traditional and spiritual birth attendant

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