

Outcome of Teenage Pregnancies in Ilorin, Nigeria.

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Abstract

Context: - Adolescent pregnancy is a high-risk pregnancy associated with complications arising from adverse physiological, anatomical and socio-economic factors.

Objectives:- To determine the pattern and obstetric outcome of adolescent pregnancies.

Study Design, Setting And Subjects:- A retrospective analysis of teenage pregnancies at the university of Ilorin Teaching Hospital, Ilorin, Nigeria was carried over a 5 years period, 1997 to 2001. A total of 180 teenage Pregnancies were analyzed and compared with 170 controls.

Main Outcome Measures:- pregnancy complications in teenagers compared with controls.

Results: There were statistically significant differences between adolescent mothers and mature mothers in the rate of unemployment (58% vs. 27%, $p < 0.001$), anaemia (48.8% vs 27.0%, $P < 0.01$), preterm labour (26.6% vs 11.8%, $P < 0.01$), booking status (56.7% vs 78.8% $P < 0.001$), unsure of last menstrual period (44.5% vs 16.5%, $P < 0.001$), Caesarean section (10.0% vs 8.2%, $P < 0.05$), CPD as indication for caesarian section (6.7% vs 4.3% $P < 0.05$), low birth weights (33.3% vs 8.2%, $P < 0.01$), and Apgar score at 1 minute (88.9% vs 40% $P < 0.001$). There was no significant difference between the incidence of pregnancy induced hypertension and antepartum Hemorrhage.

Conclusions:- Adolescent pregnancy was found to have higher chances of being complicated by anaemia, breech delivery, caesarean section, cephalopelvic disproportion, low birth weight and low apgar score at one minute when compared to adult pregnancy. Improved medical care will reduce the complications apart from measures to prevent adolescent pregnancy such as socio-educational advancement and contraceptive services

Key Words: - Teenagers; Pregnancy; Pregnancy Outcome.

Introduction

Adolescent pregnancy is a problem of children having children and assuming the responsibilities of parenthood before becoming adults. Adolescent girls who are pregnant are physically, psychologically and physiologically as well as socially disadvantaged when compared to their older counterparts. Their pregnancy is often unplanned and may be unwanted, and unusually result from an unstable relationship. Such social disadvantage may significantly influence the outcome of pregnancy. Pregnancy outcome is improved when there is a satisfactory care of the adolescent mother^{1,2}.

Adolescent pregnancy is a worldwide issue and recent studies have demonstrated that sexual activity occurs at early age with increased fertility among adolescents¹. The factors responsible for these teenage problems include the inherent emphasis on sexual activities in contemporary society, early sexual maturation with decreasing age at menarche, a breakdown in cultural bonds, lack of parental guidance and peer pressure^{3,4,5,6}.

Several studies have demonstrated an increase in pregnancy complications associated with teenage pregnancy. These include anaemia, preterm labour, hypertensive disorders of pregnancy, low birth weight babies and cephalopelvic disproportion^{7,8,9,10} resulting in high incidence of operative deliveries^{1,11}. These complications have been attributed to the relative physical immaturity of the adolescent mothers. However, it appears that the adverse social and economic factors that accompany pregnancy at an early

age may have a greater role to play in these complications. Since most such pregnancies are unplanned and unwanted, antenatal care is often inadequate. Social support is also lacking^{11,12,13}. Moreover, good results have been reported in teenagers who had meticulous antenatal care, intensive nutritional counseling and attention to social problem¹⁴.

The problem of adolescent pregnancy requires special attention in Nigeria and other developing countries where about 75% of the world's young people reside. In Africa today, about half of the population is less than 15 years old¹⁵ and represents an economically dependent, non-productive group.

Nigeria is a country with wide variations in socio-economic, social and religious status as well as educational standard. These factors greatly influence the incidence and outcome of teenage pregnancy. Such factors should have implications for allocating resources to achieve government targets¹⁶ thus the need for this study in Ilorin with its own peculiarities.

The objective of this study was to analyze adolescent pregnancies managed at the University of Ilorin Teaching Hospital, Ilorin, especially with regards to complications during pregnancy labour and puerperium. Our aim was to highlight these complications so that practitioners can plan the care of adolescent pregnant mothers in anticipation.

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Materials And Methods.

This is a retrospective study conducted on all adolescent pregnant women aged less than 20 years compared with mature mothers aged 20-34 years who carried pregnancy to 28 completed weeks and above and delivered at the University of Ilorin Teaching Hospital between January 1997 and December 2001. Each 'mature' control was the next woman who delivered after an adolescent mother who fulfilled the inclusion criteria. In all, one hundred and eighty Adolescent mothers were comparing with one hundred and seventy mature mothers.

In both groups, the exclusion criteria were as follows: multiple pregnancy, previous caesarian section, previous uterine surgery, those requiring caesarian section for recurrent cause such as CPD, gestational or insulin dependent diabetes, and grandmultiparity. The cases notes of the patients were retrieved and analyzed with respect to their age, educational level, occupation, booking status, pregnancy complications, labour and delivery. Social class was determined using a combination of patient's educational status and husbands' occupation ³. Anaemia was taken as packed cell volume of less than 30% at any stage of pregnancy. Hypertension was present when two blood pressure reading of 90mmhg diastolic or above were recorded at least six hours apart. Patients who are first seen in labour are regarded as unbooked whether they were referred from another medical unit or not. Preterm labour was identified with onset of labour at less than 37 weeks of gestation calculated from the last menstrual period (L.M.P).

Result.

A total of 12,756 deliveries were conducted during the study period, among which the deliveries of 246 adolescent pregnant women represented 9.93% of all deliveries. Ten out of the study group (5.3%) were aged 12 to 16 years, while one hundred and eight (94.7%) were aged 17 to 19 years. Mean aged was 18.2 years.

Table 1 compares the educational and job status of the patients and the occupation of their husbands, with those of mature pregnant mothers. A significant number of adolescent mothers belong to low socio-economic class as 74 (43%) of them had no education at all or attended only primary school, compared with 32 (19%) of mature mothers; none of the husband of adolescent mothers belonged to the group of professionals, top civil servants, politicians or business men compared with 22 (21.9%) of the mature mothers. Moreover, 104 (58%) of the adolescent patients had no job compared with 36 (21%) of mature mothers. The

Difference was statistical significant (P<0.001).

Table 1: Educational and job status of the patients and occupation of husbands.

	Adolescent mothers <20 years		Mature mothers 20-34 years		
	No	(% total)	No	(% total)	
Educational Status					
1. No schooling or up to primary level only	74	(43)	32	(19)	
2. Secondary or Tertiary level below the University	104	(58)	108	(63)	
3. Education up to University Level	0	(0.0)	30	(18)	
Occupation					
No Job	104	(58)	36	(21)	
Job	76	(42)	134	(79)	
Husbands occupation					
1. Professional, top civil servant, politician and businessmen	0	(0)	22	(13)	P<0.0001
2. Middle level bureaucrats, technician skilled artisan and well to do traders,	128	(71)	138	(81)	
3. Unskilled workers and those in general whose income would be below the national minimum wage	52	(29)	10	(6)	P<0.001

Table 2: Gestational Age at delivery, parity, ANC attendance Of adolescent mothers and those of mature mothers

	Adolescent Mothers		Mature Mothers		
	No	(%)	No	(%)	
Gestational Age					
< 37 weeks	46	(26.7)	20	(11.8)	P<0.01
37-42 weeks	128	(71.0)	136	(80.0)	
> 42 weeks	6	(3.3)	14	(8.2)	
Parity					
0	168	(93.3)	72	(42.4)	P<0.001
1	10	(5.6)	32	(18.8)	
2-3	2	(1.1)	56	(32.9)	
4	0	(0.0)	10	(5.9)	
Antenatal Care					
Yes	102	(56.7)	134	(78.8)	P<0.001
No	78	(43.3)	36	(21.2)	
Sure of Date					
Yes	100	(55.5)	142	(83.5)	P<0.001
No	80	(45.5)	28	(16.5)	

Compares the gestational age at delivery and ANC attendance of adolescent mothers with mature mothers. Twice the number of adolescent mothers, 46 (25.6%) had preterm deliveries compared with 20 (11.8%) of mother. The difference between the two groups was statistically significant

($p < 0.01$). Only 102 (56.7%) of adolescent mothers attended antenatal clinic compared with 134 (78.8%) of mature mothers, with statistically significant difference ($p < 0.001$). Moreover, 80 (44.5%) of adolescent mother were unsure of their last menstrual period while only 28 (16.5%) of mature mothers were unsure of their last menstrual period. ($P < 0.001$). Pregnancy complications are shown in Table 3. 88 (48.8%) of mothers had anaemia

Table 3: Complications of pregnancy in Adolescents and mature mothers

Complications	Adolescent mothers No (% Total)	Mature Mothers No (% Total)	
Ancemia	88 (48.8)	46 (27.0)	$P < 0.01$
Preeclampsia	12 (6.7)	12 (7.0)	NS
Eclampsia	2 (1.1)	0 (0.0)	NS
Antepartum Hemorrhage	6 (3.3)	4 (2.4)	NS

compared with 46 (27.0%) of mature mothers during pregnancy ($p < 0.01$). The incidence of pregnancy induced hypertension and antepartum hemorrhage showed no statistically significant difference between the two groups (adolescent and mature).

Table 4 compares modes of deliveries of adolescent

Table 4: Modes of Delivery in adolescent mothers and those in mature mothers.

Mode of Delivery	Adolescent Mothers NO (% total)	Mature Mothers NO (% total)	
SVD	152 (84.5)	146 (85.9)	
Breech	4 (2.2)	6 (3.5)	NS
Forceps/ vacuum	6 (3.3)	4 (2.4)	$P < 0.05$
Caesarian Section	18 (10.0)	14 (8.2)	NS
<i>Indication for caesarian section</i>			$P < 0.05$
CPD	12 (6.7)	6 (4.3)	
Foetal distress	-	2 (14.3)	$P < 0.05$
PIT complications	2 (1.1)	-	
Footling Breech			
Failed induction/uterine inertia	2 (1.1)	2 (14.3)	
	2 (1.1)	4 (28.6)	

Adolescent mothers with mature mothers. The incidence of vaginal delivery was similar in the two groups (adolescent and mature mothers). Caesarean section occurred in 18 (10.0%) and 14 (8.2%) of adolescent and mature mothers'

respectively ($p < 0.05$). CPD as indication for caesarean was 12 (66.7%) in adolescent deliveries and 6 (42.9%) in mature mothers ($p < 0.05$). Table 5 illustrates pregnancy outcome of adolescent mothers and mature mothers. 60 (33.3%) of adolescent mothers delivered low birth weight babies compared with 14 (8.2%) of mature mothers ($p < 0.001$). The one-minute Apgar score was less than 7 in 106 (58.9%) of babies of adolescent mothers compared with 68 (40.0%) of mature mothers ($p < 0.001$). The perinatal mortality and still birth rate were in both groups similar.

Table 5: Pregnancy of outcome of adolescent mothers and mature mothers

	Adolescent mothers No (% Total)	Mature mothers NO (% Total)	
Birth weight			
< 250 grams	60 (33.3)	14 (8.2)	$P < 0.001$
2500-3999 grams	118 (65.6)	2 (1.2)	
> 4000 grams	2 (1.1)		
Apgar score at 1 minute			
< 7	106 (58.9)	68 (40.0)	
> 7	74 (41.1)	102 (60.0)	$P < 0.001$
Condition at Birth			
Alive	170 (94.5)	162 (95.3)	
Stillbirth	8 (4.4)	8 (4.7)	NS
Congenital malformation	2 (1.1)	-	

Discussion

From the 1980s to the 1990s, the difference in the rate of teenage pregnancy between more affluent and more deprived areas have widened¹⁶, with more pregnancies occurring in less developed areas and countries and more teenage pregnancies occurring overall than even before^{3,5,9}. This trend has far reaching implications for community services and also has adverse effects on the education and/or employment of the young mothers, especially in developing countries. Reports from these developing countries stress that premarital adolescent pregnancy and childbearing place a heavy economic and social burden on the family¹⁷.

The overall incidence of teenage pregnancy obtained in this study is 1.93% or 19/1,000. This incidence is much lower than the previous incidence of 13.1% reported by Aboyeji in this center³. This disparity may be due in part to the general reduction in deliveries in our centre resulting from proliferation of private clinics and mission houses in the town. There is also a possibility that a true reduction in the incidence of teenage pregnancies has taken place because of increased awareness for education in the populace.

The low socio economic status of adolescent mothers in this study is attributable to the fact that a high proportion of them, 43% were uneducated or attended only primary

school, 58% had no job and none of their husbands belong to the class of professionals, top civil servants or businessman. This finding agrees with report of other workers^{7,14,15,18}.

This study revealed a comparatively low attendance of antenatal clinic by adolescent mothers compared with mature mothers. Other workers have reported this poor or no antenatal care^{7,19}. The reasons advanced for this problem include ignorance of the importance of ANC, lack of family and social support, non-availability of ANC services and poverty. These reasons pose similar effects in this study. However some other authors have reported a high or better rate of antenatal attendance among adolescent mothers, when compared with mature mothers^{20,21}.

The documented complications of adolescent pregnancy such as low birth weight, preterm deliveries, anaemia and Caesarean section rate^{7,10,19,21} are in agreement with the result of this study. Low birth weight, preterm deliveries and anaemia are all effects of poor social economic conditions and possible prevalence of medical illness like malaria.

But regarding hypertensive disorder of pregnancy and antepertum hemorrhage, no significant difference has been observed. Essential hypertension and renal disease may be common in this environment leading to an equally high incidence of hypertension in pregnancy amongst mature mothers. The incidence of pregnancy induced hypertension was said to be high in a previous study in this centre³, but there was no control in that study. The main indication for caesarean section was cephaloplvic disproportion (6.7%) adolescent mothers compared with 6(4.3%) of mature mothers.

The incidence of low Apgar scores (<7) among adolescent mothers was 58.9% compared with 40.0% in mature mothers. These low Apgar scores among babies of adolescent mothers suggest foetal hypoxia or distress and may relate to poor economic status or lack of social support during pregnancy. This is apart from possible poor relaxation at second stage which may be worse in teenagers, most of whom are likely to be primigravidae without experience of labour conduct and behaviours.

Conclusion

Adolescent mothers appear to be at a higher risk during child bearing with poor obstetric outcome and increased perinatal mortality. This is especially true in most developing countries where high level of illiteracy, poverty and inadequate medical facilities abound. There is the need to raise community awareness about teenage pregnancies and the attendant complications so that pregnant teenagers will avail themselves of available antenatal services. Proper family life education at school and out of school, and provision of contraceptive services for the considerable population of adolescents who are sexually active are measures that will help in reducing the incidence of adolescent pregnancy. For

those who are pregnant, it is also important to ensure that they continue their education or employment during pregnancy and also after the delivery of the baby. Improvement in the socio-economic status of the teenager will create a favourable condition for child bearing. However, with the present poor manpower and infrastructural deficiency in the Health sector, it is better to prevent teenage pregnancy. This can be achieved by the government encouraging and supporting education for all up to secondary school level. This is apart from adult education, which will also help, in enlightening parents of their social responsibilities to their children.

References

1. Tadesse E and Nigussie S. Adolescent pregnancies in Addis Ababa. *East African Medical Journal*. 2000; 77 (8): 431-434.
2. Wolkind SN. Teenage pregnancy. *J. Roy. Soc. Med.* 1985; 7: 112-116.
3. Aboyeji AP. Obstetric outcome of Teenage primigravidae in Ilorin. *Nig. Med. J.* 1997; 31 (3): 56-59.
4. Kenya Fertility Survey, 1977-1978. First report. Central Bureau of Statistics Ministry of Economic planning and Development. 1980; 1:70-82.
5. Anate M. Adolescent fertility: A panoramic view of the problems. *Nigerian Med. Practitioner* 1993; 25: 3-9.
6. Fakeye O. Body weight and body component of total water, lean mass and fat at menarche. *J. Obstet. Gynaecol.* 1990; 8:22-24.
7. Osborne GK, Howat. R and Jordan MM. The obstetric outcome of pregnancy. *Brit. Obstet. Gynaecol.* 1981; 88: 215-221.
8. Uhan WH. Obstetric implications of pregnancy in primigravida aged 16 years or less. *Bri. Med. J.* 1967; 2:736-736.
9. Ogedengbe OA, Otolorin, EO and Fabanwo, AO. Pregnancy performance of Nigerian Women aged 16 years and below. *Afri. J. Med. Sci.* 1987; 16: 89-95.
10. Khawaja SS, Al-Sibai, Mei A, Sileiman AS and Zibdeh MT. *Obstet. Gynaec. Scand.* 1986; 65:57-61.
11. Chabra S. perinatal Outcome in Teenage Mothers. *The Journal of Obstetrics and Gynaecology of India.* 1991; (1):30-32.
12. Simms M and Smith C, Mothers. Late attendant at Medical and Antenatal care: Midwife Health Visitor and Community Nurses. 1984; 2: 192-200.
13. Fish NM, Shweni PM. Labour outcome of Juvenile primiparae in a population with a high incidence of contracted pelvis. *Int. J. Gynaecol. Obstet.* 1989; 28 5-7.
14. Evrad JR and Gold EM. One year study of teenage pregnancy at women and infant Hospital, Rhode Island. *J. Rpro. Med.* 1978; 21:95-101.
15. Bace A, Marhica CM, Machingo F, Bugallo A, Cultini M. Outcome of teenage pregnancy in Maputo, Mozambique. *Int. J. Gynaecol. Obstet.* 1993; 40:19-23.
16. Macleod A. Changing patterns of teenage pregnancy: population based study of small areas. *British Medical Journal.* 2001; 323 (7306): 199-203.
17. Odongo F and Ojwang SB. Some aspects of teenage pregnancy in Nairobi. A prospective study on teenage mothers at Kenyatta Nairobi Hospital and Pumwani Maternity hospital. *East Afri. Med. J.* 1990; 6: 432-436.
18. Hamson KA. Childbearing health and social priorities. A survey of 22,774 consecutive births in Zaria, Northern Nigeria. *Br. J. Obstet. Gynaecol.* 1985 (5): 23-31.

19. Adetoro OO And Ajah A. The implication of childbearing in post-pubertal girls in sokoto, Nigeria. *Int. J. Gynaecol. Obstet.* 1988; 27: 73-77.
20. Nadagajah S and Leong NKY. Adolescent pregnancies managed at KK Hospital, Singapore. *Medi. J.* 2000; 41 (1): 30-36.
21. Verma V, and Das KB. Teenage pregnancy: A comparative study. *Indian Journal of Public Health* 1997; 41 (2) 52-55.