ISSN: 0976-3031

Available Online at http://www.recentscientific.com

CODEN: IJRSFP (USA)

International Journal of Recent Scientific Research
Vol. 10, Issue, 05(F), pp. 32546-32551, May, 2019

International Journal of Recent Scientific Research

DOI: 10.24327/IJRSR

Research Article

TEENAGE BIRTHS IN NEISU (D R CONGO): PREVALENCE, PROFILE, MATERNAL AND PERINATAL PROGNOSIS

Nadi Aninyesi J[1], Nobikana S[2], Likilo Osundja[3], Juakali SKV[3], Komanda L[3]and Katenga Bosunga[3]

[1]Department of Gyneco-Obstetrics of the University of Uele in Isiro (D R Congo)
[2]Notre Dame Hospital of the Consolata of Neisu (D R Congo)
[3]Department of Gynecology and Obstetrics of Kisangani University (D R Congo)

DOI: http://dx.doi.org/10.24327/ijrsr.2019.1005.3494

ARTICLE INFO

Article History:
Received 15th February, 2019
Received in revised form 7th March, 2019
Accepted 13th April, 2019
Published online 28th May, 2019

Key Words:

Childbirth, adolescence, Neisu, DR Congo.

ABSTRACT

Aims: To determine the epidemiological profile of the women who gave birth as well as the fœto-maternal prognosis during teenage delivery in Neisu Hospital (DR Congo).
Methods: Analytical and comparative cross-sectional study from 1st January 2016 to 30 June 2018 about 375 cases of childbirth among adolescents and 700 for childbirth in adults (20 to 34 years). Maternal and perinatal data were analyzed on the SPSS 20.0 software.
Results: The frequency of teen birth was 34.9 %. Delivery and fetal-maternal prognosis did not differ much from that of adults. The average age of these teenagers was 17.50 ± 1.2 years (13 and 19 years). They were mostly primiparous (79.5%); 74.7% had not totaled at least 4 prenatal consultation. Caesarean section was performed in 29.9% of cases, episiotomy in 43.2% and transfusion in 3.7% of cases. There was 3.2% prematurity ; 26% low weight (with significant difference); 1.6% of Apgar <7 at the 5 th minute and 32 ‰ of perinatal mortality. On the maternal side we found 6.4% of endometritis; 16.1% of parietal infection; 3.7% transfusion and 2.7‰ maternal mortality.
Conclusion: The frequency of teen births at Notre Dame de la Consolata Hospital in Neisu is among the highest in Africa. The difference is not significant between the two groups except for the lower birth weight among teenagers. We believe that improving pregnancy monitoring in this category will improve its prognosis.

INTRODUCTION

Early pregnancy (which occurs before the age of 20) [1] and unwanted is a global problem that affects both developed and developing countries. It has a major impact on the lives of adolescents, especially girls, in many ways: health, social, economic and educational. It is in low- and middle-income countries that we observe the highest number of adolescent girls who are pregnant. In 36 of these countries, up to 25 per cent of girls between the ages of 15 and 19 are either pregnant or already mothers, and in 16 low- and middle-income countries over 40 per cent of girls marry before the age of 18. [2, 3]. Sub-Saharan Africa has the highest fertility rates among 15-19 year olds (with 103 births per 1,000 girls), followed by Latin America and the Caribbean (64.57 births per 1,000 girls) (open data World Bank). The evolution of teenage pregnancy is peppered with psycho-social, economic and biological consequences. Biologically we can have: high rate of pregnancy-induced hypertension, anemia, gestational diabetes, complications related to childbirth and its involvement in maternal-fetal morbidity and mortality [4].

Maternal complications during childbirth are made of cerebrospinal disproportion (which is often the indication of caesarean section) to stop labor, postpartum hemorrhage is complicated by the anemia, vesico-vaginal fistula [5] and soft tissue tear if the episiotomy is not performed [6,7]. As for their newborns, there is a high rate of low birth weight, premature delivery, respiratory distress, various neonatal complications as well as perinatal mortality [2, 4, 8-11]. We are conducting this study to determine the epidemiological profile of the women who gave birth as well as the fœto-maternal prognosis during teenage delivery in Neisu Hospital (D R Congo).

MATERIAL AND METHODS

Our study is cross-sectional and comparative with the retrospective collection of the data contained in the maternal health check-up sheets, the birth registers and those of the

Corresponding author:* **Nadi Aninyesi J
Department of Gyneco-Obstetrics of the University of Uele in Isiro (D R Congo)

operating theater of the Notre Dame de la Consolata Hospital in Neisu. It is a reference hospital, located in the village Neisu, 30 km from the town of Isiro, in the Haut-Uele province, north-east of the Democratic Republic of Congo. For two years and six months (from 1st January 2016 to 30 June 2018), we registered a total of 1187 deliveries. We excluded from this study 95 cases of delivery occurring in pregnant women aged 35 and over and 17 cases of twin pregnancies and we remained with 1075 cases. We divided these women into two groups according to their age: a group of women under the age of 20 (375 cases) and a second group of women aged 20 to 34 (700 cases). We compared childbirth in both groups. The following parameters have been taken into account :

For the mothers : age (women under 20 (early motherhood) and those aged 20 to 34 (normal maternity)), level of education (illiterate, primary, secondary and higher), parity (primiparous, pauciparous 2 at 3, multipare 4 to 6 and grand multipar beyond 6), marital status (married and single), gestational age (28 to 36 weeks, 37 to 42 weeks and beyond 42 weeks), monitoring of pregnancy (pregnancy not followed if no prenatal consultation had taken place, badly followed if the number of prenatal consultation was less than 4 and well followed if this number was greater than or equal to 4), the antecedent caesarean section, the delivery route, the concept of transfusion, puerperal infection and maternal mortality ;

or newborns: Apgar in the 5 th minute, the notion of resuscitation, weight, prematurity, neonatal infection and perinatal mortality (in utero death and neonatal mortality).
We considered as dysmature any newborn at term with a low birth weight (<2500 gr). The normal weight ranges from 2500 to 4000 gr and macrosomia when the weight is greater than 4000 gr. We took into account the Apgar score in the 5 th minute and the weak Apgar is the one that is less than 7. We took as a case of neonatal asphyxia any newborn who was resuscitated during the first minutes of life. The data thus obtained were analyzed on SPSS 20.0 software

RESULTS

Frequency of teen Birth

We found 34, 9% (375/1075) of teenage births between the ages of 13 and 19 during the study period.

Sociodemographic Characteristics

Table 1 shows the demographic characteristics, monitoring of pregnancy and the notion of reference of our respondents. The mean age of teenage childbearing was 17.5 ± 1.2 years and in the adult delivery age was 25.7 ± 4.0 years. The average parity was 1.25 ± 0.5 among teenaged women versus 3.72 ± 1.7 among the adult deliveries and the difference between the two means is significant (p = 0.00). Although there were illiterates in both groups (5.3% for teenagers and 12.4% for adults), teenagers had a high level of education (secondary level) because of 30.1% compared to 20.4% in adults and the difference was significant (OR 1.67 ; 95% CI 1.2-2.2 ; p = 0.00). We found more grooms in the teenage group of female deliveries (53.1%) than in the adult delivery (3.1%) and the difference between the two groups was significant (OR 34.8 ; CI 95%: 21.7-55.7 ; p = 0.00). Adolescent girls referred were more numerous than adults because of 15.5 % versus 14.1 % respectively and the difference is not significant (p = 0.558). The majority of adolescent girls were primigravida and primiparous with respectively OR: 56.7 ; CI95% : 37-85 ; p = 0.00 and OR 67.4 ; 95% 44.6-101 ; p = 0.00. Three point two percent (3.2%) of teenage births had given birth before 37 weeks compared to 4.7% of adults without the difference being significant. Regarding the monitoring of pregnancy, the average number of prenatal consultation among teenagers was 2.29 ± 1.49 with 24.3% of pregnancies not followed against 2.03 ± 1.46 with 26% of pregnancies not followed. in adults. Adolescent girls were in the majority in not totaling at least four prenatal consultation, 74.7% versus 55.4% in adult, and the difference was significant (p = 0.00).

Table 1 Sociodemographic characteristics, pregnancy monitoring and the notion of reference

	<20 years(n = 375)		20 - 34 years(n = 700)		Total(n = 1075)		p
	Frequency	%	Frequency	%	Frequency	%	
Maternal age / years							
Average age	17.5 ± 1.2		25.7 ± 4.0		22.9 ± 5.2		
Level of study							
Illiterate	20	5.3	87	12.4	107	9.9	
Primary	242	64.5	469	67.0	711	66.1	0.00
Secondary	113	30.1	143	20.4	256	23.8	
Superior	-	-	1	0.1	1	0.1	
Civil status							
Single	176	46.9	678	96.9	854	79.4	0.00
Married	199	53.1	22	3.1	221	20.6	
Parity							
primipare	298	79.5	38	5.4	336	31.3	
Few previous deliveries	74	19.7	316	45.1	390	36.3	0.00
multiparous	3	0.8	304	43.4	307	28.6	
Gde multiparous	-	-	42	6.0	42	3.9	
Average parity	1.25 ± 0.5		3.72 ± 1.7		2.8 ± 1.8		0.00
(Extreme)	(1-4)		(1-11)		(1-11)		
gravidity							
1	281	74.9	35	5.0	316	29.4	0.00
≥2	94	25.1	665	95.0	759	70.6	
Gestational age							
28 - 36	12	3.2	33	4.7	45	4.2	
37 - 42	363	96.8	662	94.6	1025	95.3	0.126
> 42	-	-	5	0.7	5	0.5	
Number of CPN							
Average	2.29 ± 1.49		2.03 ± 1.46		2.11 ± 1.45		
(Range)	(0-5)		(0-5)		(0-5)		
0	91	24.3	182	26	273	25.4	
1-3	189	50.4	414	59.1	603	56.1	0.00
≥4	95	25.3	104	14.9	199	18.5	
Reference							
Yes	58	15.5	99	14.1	157	14.6	0.558
No	317	84.5	601	85.9	918	85.4	

Table 2 Maternal and perinatal prognosis in adolescents

Settings	<20 years (n = 375)		20-34 years (n = 700)		OR [95% CI]	p-value
	Frequency	%	Frequency	%		
caesarean	112	29.9	240	34.3	0.8 [0.6-1.1]	0.16
Episiotomy	162	43.2	205	29.3	1.8 [1.4-2.4]	0.00
Maternal complications	157	41.9	376	53.7	0.6 [0.5-0.8]	0.00
Eclampsia	1	0.3	6	0.9	0.3 [0.03-2.6]	0.25
endometritis	24	6.4	61	8.7	0.7 [0.4-1.1]	0.2 2
Pre / uterine rupture	6	1.6	19	2.7	0.6 [0.2-1.5]	0.24
Vesicovaginal fistula	-	-	1	0.1	-	-
Transfusion	14	3.7	53	7.6	0.4 [0.2-0.8]	0.01
Maternal death	1	0.3	2	0.3	0.9 [0.1 to 10.3]	0.58
Fetal complications	195	52	333	47.6	1.2 [0.9-1.5]	0.19
Apgar at the 5th minute <7	6	1.6	30	4.3	0.3 [0.1-0.7]	0.02
Resuscitation	46	12.3	87	12.4	0.9 [0.6-1.4]	0.98
Prematurity (<37 weeks)	12	3.2	33	4.7	0.7 [0.3-1.3]	0.31
Weight <2500gr	98	26.1	102	14.6	2.1 [1.5 to 2.8]	0.00
Neonatal infection	21	5.6	41	5.9	0.9 [0.5-1.6]	0.97
Perinatal death	12	3.2	40	5.7	0.5 [0.2-1.1]	0.09

Maternal Morbidity and Mortality

The parameters related to maternal morbidity and mortality are presented in Table 2. Caesarean section was performed in 112/375 adolescents (29.9%) against 240/700 (34.3%) in adults. The difference between the two groups was not significant (OR 0.8 with 95% CI 0.6-1.06). Episiotomy was done in 162 adolescent girls, 43.2 % against 205 adults or 29.3%. The odds ratio of teenage girls to undergo episiotomy is high compared to adults (OR 1.8 [1.4-2.4]). Maternal complications were more prevalent among adult deliveries (53.7%) compared to 41.9% among adolescents and the difference is not significant. Adolescent girls had less eclampsia (0.3%), endometritis (6.4%) and uterine rupture (1.6%) than adults with (0.9%), 8.7% and 2.7%. Transfusion was achieved more in adults (7.6%) than in adolescents (3.7%) and the statistical difference is not significant. Maternal mortality was 2.7‰ in adolescents compared to 2.9‰ in adults; the difference is not significant (p = 0.58).

Perinatal Morbidity and Mortality

The parameters related to perinatal morbidity and mortality are also presented in Table 2. Low birth weight was more observed in newborn of adolescent girls,is 26.1% than in adults, ie 14.6% (OR:2.07, 95% CI 1.5-2.8). At the 5th minute, the Apgar score <7 was more observed in newborns of adults (4.3%) than those of teenagers (1.6%) without the difference being significative.
Neonatal asphyxia, prematurity, neonatal infection and perinatal mortality were found in newborns in both groups, but the difference was not significant due to 12.3%, 3.2%, 5.6% and 32‰ among teenaged women, compared to 12.4%, 4.7%, 5.9% and 57.1‰, respectively, among adult women **.**

DISCUSSION

Frequency

The frequency of teenage birth found in our series (34.9%) is identical to that found in the DRC (42.6%) in 2013 by Ganchimeg T [11]. It is much higher than the rates of 6 to 14% found by Althabe F [12] and Obinchemti ET [13] in Sub-Saharan Africa in 2015.

The same is true of the study conducted in 2016 by Mombo-Ngoma G [15] who found 39.5% in Mozambique, 31.5% in Gabon, 13.5% in Tanzania and 10% in Benin. Kakudji LP [14], in 2017, found 7.7% in Lubumbashi. They associate this variability with sociocultural and religious differences [15]**.** Our rate is lower than that found in 2013 in Angola (69.9%), Niger (48.2%) and Uganda (48.2%). The same study found low prevalence in Nigeria (26.7%) and Algeria (4.1%) **[**11]**.**The analysis of these results shows us what is common in these countries is the socio-political instability but on the other hand, we also see that this problem is less widespread in Muslim countries. We believe that the rate found in our study environment would be due to the geographic location of this rural area, the low level of education of our respondents, early marriage, poverty, lack of awareness of the prevention of early pregnancy and the inexistence of a contraceptive program in this environment. We found 34.9% of teenage births. This result is lower than those of other authors: in 2013, Ganchimeg T [12] found 69.9% in Angola, 48.2% in Niger, 48.2% in Uganda, 42.6% in DRC; Mombo-Ngoma G [16] found 39.5% in Mozambique in 2016. This difference may be related to the year of study as well as the sample size (their samples were larger than ours). But it is higher than those found in Gabon 31.5% [16] in Nigeria (26.7%) [12], Tanzania and Benin by Mombo-Ngoma G [16] respectively 13.5% and 10%, in Lubumbashi (7.7%) by Kakudi LP [15] and in Algeria (4.1%) [12]. They associate this variability with sociocultural and religious differences [16]. The analysis of these results shows us what is common in these countries is the socio-political instability that can have repercussions on the education of girls and their morals with the consequence of the occurrence of early and unwanted pregnancies. But on the other side, we also see that this problem is less widespread in Muslim countries. We believe that the rate found in our study environment would be due to the geographic location of this rural area, the low level of education of our respondents, early marriage, poverty, lack of awareness of the prevention of early pregnancy and the lack of a contraceptive program in this environment.

Sociodemographic Characteristics

The average age of adolescent girls was 17.50 ± 1.2 years with the extremes of 13 years and 19 years. Our result is almost identical to those of other authors [10, 14, 16 - 18]. Compared to education and marital status, adolescent girls had slightly

higher education than adults and were more married than adults. The result found by Obinchemti ET [13] in Cameroon was contrary to ours. He found that adults were 3 times more educated than teenage girls and 3 times more married than girls. Even the result Ezegwui HU [19] and Nayama N [17] join that of Obinchemti ET [13]. The high level of study of adolescents compared to adults may be due to the awareness program initiated enrollment of girls by Catholic missionaries in place since 2010. UNFPA [3], in its report, states that education is in itself a major protective factor against early pregnancy: the longer the schooling, the fewer early pregnancies. In principle, the high level of education of these adolescents should coincide with the low frequency of early pregnancy. This is not the case. And the inversion of the marital status of our respondents may be due to the valuation of polygamy in the culture of this people, the prevalence of common-law unions and the forced marriage of adolescent girls as soon as a pregnancy is highlighted. Compared with the prenatal consultation, teenagers were the majority (74.7%) who did not follow quality prenatal consultation (less than four prenatal consultations). Of these, 24.3% had not followed the prenatal consultation. Kakudji LP [14] found 80.5% of teenage deliveries who did not receive prenatal consultation well followed in Lubumbashi and Obinchemti ET in Cameroon [13] had found 59.5% against 57.8% at the adults. Tambwe MNK [20] and Nayama N [17] in their series found 30.2% and 28.2% of untracked teenage pregnancies respectively. N. Seince [21] in France reported that teenage pregnancies are poorly or poorly followed. According to WHO, in developing countries, young pregnant women often come late to prenatal consultation (in the second or third trimester of pregnancy) or do not even present for prenatal care. The reasons given for this apathy towards antenatal care services include ignorance of the importance of antenatal care (especially for the non-instructed), the lack of family or social support, the unavailability of prenatal care services, poverty, uncomfortable remarks by health workers to unmarried teenagers who are pregnant, and try to avoid public scrutiny since some cics lack privacy [22], but also the fear of HIV testing [23]. The association between childbirth in adolescence and poor maternal and perinatal prognosis may be partly explained by the deleterious social environment [2, 2 4].

Maternal Morbidity and Mortality

We found 29.9% of caesarean section for teenagers versus 34.3% for adults, but the difference was not significant. This predominance in adults may be justified by the fact that some cesarean sections performed in multiparas were made to perform tubal ligation as there is no contraceptive program in Neisu. Our result is superior to that found by other authors : Walter FA [8] in Brazil 26.7%, Kaka JC [25] 21.2%, Demirci O [2 8] 19.8% vs. 25%, Ezegwui HU [19] 18.9% vs 10.5%, Ymele FF [10] 14.8% , Kakudji LP [14] 11.4% and Seince N [21] 8.8% . But the result of Nayama N [17] is higher than ours or 44.9%. The rate of caesarean section among teens varies according to the extent of early pregnancy from one setting to another, the age of these teenage girls and the experience of caregivers. Not to mention that Ganchimeg T [11] found in her study that pregnant teenagers are exposed to delivery by caesarean section.

In our series, we found 43.2% of adolescent episiotomy versus 29.3% of adult deliveries and the difference is significant. According to Lansac J [6], the frequency of episiotomy varies from 40 to 67% in primipara and from 21 to 42% in multiparis. Obinchemti ET [13] in his study found that there is no difference between adolescents and adults with regard to cesarean section frequency, eclampsia, preeclampsia, placenta previa and episiotomy. The maternal mortality in our series was respectively 2.7 ‰ vs 2.9 ‰ for teenagers and adults. Ezegwui HU [19] and Obinchemti ET [13] had not found death case in their series. While Ymele FF [10] found 5 ‰ vs 69 ‰ in teenage and adult respectively. He found that maternal mortality was due to postpartum haemorrhage (46.7%), hypertensive and thromboembolic disorders (24.4% and 8.9% respectively). These causes are less found in our series. According to the WHO [2], the reduction of maternal mortality has been achieved in some African countries by the fight against the financial and geographical inaccessibility of quality maternity services.

Perinatal Morbidity and Mortality

The prevalence of prematurity that we found (3.2% vs. 4.7%) is lower than that found by HU Ezegwui [19] or 25.7% in adolescents versus 11.4 % in adults. Other studies have also found better results than ours [8 - 10].

We found 26% low weight (<2500 gr) in newborn of adolscent girls compared to 14.6% of newborn of adult (OR : 2.07 ; CI: 95% 1.5-2.8 ; p = 0.00). Ganchimeg T [11] and Socolov D-G [9] found in their studies that there is a relationship between early maternal age and low birth weight, preterm birth and perinatal mortality. Walter FA [8] , Leftwich HK [2 6] and Pinto e SJL [27] had found there is a relationship between one hand prematurity and low birth weight and also reduced the number of prenatal consultation. Compared to the gap with our result, we wonder if some of the mothers in our study were not mistaken about the date of their last period. But also, neglect of prenatal consultation and malaria can contribute to the onset of these two problems. Compared to the Apgar score in the 5 th minute, our result is contrary to those of Demirci O [28], Socolov D-G [9], Obinchemti ET [13], Ezegwui UH [19] and Ymele FF [10], who had found the prevalence of Apgar <7 in the newborns of the teenagers than those of the adults . With respect to this divergence of the results, we wonder if there was not an overestimate in the account of the Apgar score in our series. The perinatal mortality in our series was 32 ‰ for adolescents compared to 57.1 ‰ for adults. Our result is superimposable to those of other authors [16 - 18]. But it is contrary to the statement made by UNESCO [29] according to which : In low- and middle-income country, death at birth and deaths during the first week and the first month of life are 50% higher in children born to mothers aged under 20 than among mothers aged 20 to 29, the risk being inversely proportional to the age of the mother. The results of Ezegwui HU [19] and Obinchemti ET [13] are superior to ours, 162.2 ‰ and 40.5 ‰ respectively. While those of Walter FA [8] and Ganchimeg T [11] are lower than ours, respectively 14.4 ‰ and 12.6 ‰. We believe that perinatal mortality in our study may be due to poverty and low level of education that result in neglect of prenatal consultation and late arrival to maternity during labor. But also, maternal anemia may be one of these causes because the study of Aimakhu C [30], done in Nigeria, showed that

there is an association between perinatal mortality and maternal anemia. As for the study of Ayuba II [31], she did not find an association between young maternal age and perinatal mortality.

CONCLUSION

This study shows us that teenage childbirth is common in Neisu (DR Congo). It does not proceed without risk and the resulting fœto-maternal prognosis is worrying. But the difference between teenagers and adults is significant only with respect to low birth weight in the first group. The fight against illiteracy, awareness raising for the prevention of early pregnancy and the promotion of contraceptives can contribute to the reduction of early motherhood. We also believe that improving pregnancy monitoring in this category will improve the prognosis of the mother-child pair.

References

1. OMS. Les lignes directives sur la prévention de la grossesse précoce. www.who.int/maternal_child_adolescent/documents/preventing_early_pregnancy/en
2. OMS. La santé des populations: les mesures efficaces. Le rapport sur la santé dans la Région africaine. Bureau régional d'Afrique. 2014
3. UNFPA. La grossesse chez l'adolescente. Londres/Nations Unies, New York, le 30/10/2013. Lu, le 30/11/2018 à 11h20'.
4. Nditsheni JR, Tsakani RL, Sonto MM *et al*. Views of teenagers on termination of pregnancy at Muyexe high school in Mopani District, Limpopo Province, South Africa. *Afr J Prm Health Care Fam Med.* 2016; 8(2), a945. http://dx. doi.org/10.4102/phcfm.
5. Lisonkova S, Haslam MD, Dahlgren L *et al*. Maternal morbidity and perinatal outcomes among women in rural versus urban areas. *CMAJ* 2016. DOI: 10.1503 / cmaj.151382.
6. Lansac J, Descamps P et Oury J-F. Pratique de l'accouchement. **5**è Edition, Masson, Paris, 2011.
7. Wall-Wieler E, Roos LL and Nickel NC. Teenage pregnancy: the impact of maternal adolescent childbearing and older sister's teenage pregnancy on a younger sister. *BMC Pregnancy and Childbirth* (2016) 16:120
8. Walter FA, Baffi DM, Borges da Fonseca SSV, *et al*. Complications in adolescent pregnancy: systematic review of the literature. *Einstein* 2015;13(4):618-26
9. Socolov D-G, Iorga M, Carauleanu A, *et al*. Pregnancy during Adolescence and Associated Risks: An 8-Year Hospital-Based Cohort Study (2007–2014) in Romania, the Country with the Highest Rate of Teenage Pregnancy in Europe. Hindawi Publishing Corporation. *BioMed Research International Volume* 2017, Article ID 9205016, 8 pages.
10. Ymele FF, Yangsi TT, Ngole ME *et al*. Outcome of deliveries among adolescent girls at the Yaoundé central hospital. *BMC Pregnancy and Childbirth 2*014, 14:102
11. Ganchimeg T, Mori R, Ota E, *et al*. Maternal and perinatal outcomes among nulliparous adolescents in low- and middle-income countries: a multi-country study. *BJOG* 2013; 120:1622–1630.
12. Althabe F, Moore LJ, Gibbons L, *et al*. Adverse maternal and perinatal outcomes in adolescent pregnancies: The Global Network's Maternal Newborn Health Registry study. *Reproductive Health* 2015, 12(Suppl 2):S8
13. Obinchemti ET, Omeichu A, Halle-Ekane GE *et al*. Prevalence and outcome of teenage hospital births at the Buea health district, South West Region, Cameroon. *Reproductive Health* (2015) 12:118
14. Kakudji LP, Mukuku O, Mwembo TA *et al*. Etude du pronostic maternel et périnatal au cours de l'accouchement chez l'adolescente à Lubumbashi, République Démocratique du Congo. Pan African Medical Journal. 2017 ; 26 :182.
15. Mombo-Ngoma G, Mackanga JR, González R, *et al*. Young adolescent girls are at high risk for adverse pregnancy outcomes in sub-Saharan Africa: an observational multicountry study. *BMJ Open* 2016; 6: e011783. doi:10.1136/bmjopen-2016-011783
16. Foumsou L, Gabkika BM, Saleh A *et al*. Les complications obstétricales chez les adolescentes à la maternité de l'Hopital Général de référence nationale (HGRN) de N'Djamena. *Médecine d'Afrique Noire*. N° 6109- Aout/Septembre 2014- 441-447.
17. Nayama N, Malan BRD, Nayoussa M *et al*. Prise en charge de l'accouchement chez les adolescentes au niveau de la maternité Issaka Gazobi de Niamey. Etude rétrospective à propos de 976 observations sur 3 ans. *Méd. d'Afrique Noire* – N°5407 – Juillet 2007 – pages 413 – 418.
18. Gandzien PC, Ekoundzola JR. Grossesse et accouchement chez les adolescentes à la maternité de Talangaï, Brazzaville, Congo. *Médecine d'Afrique Noire* N° 5207- Juillet 2005- pages 429-433.
19. Ezegwui HU, Ikeako LC, Ogbuefi F. Obstetric outcome of teenage pregnancies at a tertiary hospital in Enugu, Nigeria. *Nigerian Journal of Clinical Practice* Apr-Jun 2012- Vol 15 - Issue 2
20. Tambwe MNK, Kalenga MK, Kakoma SZ. La parturition chez les adolescentes aux Cliniques Universitaires de Lubumbashi (Congo). *Revue Française de gynécologie et d'obstétrique* 1999 ; 94(5) : 379-383.
21. Seince N, Pharisien I, Uzan M. Grossesse et accouchement des adolescentes. *EMC (Elsevier Masson SAS, Paris),* Gynécologie/Obstétrique, 5-016-D-10, 2008.
22. World Health Organization. Adolescent pregnancy (Issues in Adolescent Health and Development). Geneva: WHO; 2004.
23. Chaibva CN, Ehlers VJ, Roos JH. Midwives' perceptions about adolescents' utilisation of public prenatal services in Bulawayo, Zimbabwe. Midwivery. 2009 Feb 24; (Epub ahead of print).
24. Markovitz BP, Cook R, Flick LH, Leet TL. Socioeconomic factors and adolescent pregnancy outcomes: distinctions between neonatal and post-neonatal deaths?. BMC Public Health. 2005 Jul 25; 5:79.
25. Kaka JC, Kabakele A. Issues d'accouchement chez les adolescentes au centre Mère-Enfant de Bumbu à Kinshasa (République Démocratique du Congo).

Médecine d'Afrique Noire N° 6106- Juin 2014- pages 289-296.
26. Leftwich HK, Alves MV Adolescent Pregnancy. *Pediatr Clin North Am.* 2017 Apr; 64(2):381-388. doi: 10.1016/j.
27. Pinto e SJL, Garanhani SF. Pregnancy in Adolescence - A Challenge Beyond Public Health Policies. *Rev Bras Ginecol Obstet* 2017; 39(02): 041-043
28. Demirci O, Yılmaz E, Tosun Ö, *et al*. Effect of Young Maternal Age on Obstetric and Perinatal Outcomes: Results from the Tertiary Center in Turkey. *Perinatal Medicine,* 23-25 April 2015, İstanbul, Turkey.
29. UNESCO. Objectifs de développement durable : Grossesses précoces et non désirées. Recommandations à l'usage du secteur de l'éducation. Edition 2017. Sur www.unesco.org/aids
30. Aimakhu C, Olayemi O. Maternal haematocrit and pregnancy outcome in Nigerian women. *West Afr J Med* 2003; 22; 18-21.
31. Ayuba II, Gani O. Outcome of teenage pregnancy in the Niger delta of Nigeria. Ethiop J Health Sci. 2012; 22(1): 45-50.

How to cite this article:

Nadi Aninyesi J., 2019, Teenage Births in Neisu (D R Congo): Prevalence, Profile, Maternal and Perinatal Prognosis. *Int J Recent Sci Res.* 10(05), pp. 32546-32551. DOI: http://dx.doi.org/10.24327/ijrsr.2019.1005.3494

****