



ISSN: 0975-833X

RESEARCH ARTICLE

MATERNAL AND FOETAL OUTCOMES AMONG TEENAGE MOTHERS IN THE SELECTED HOSPITALS OF KATHMANDU

*¹Sushila Devi Bhandari and ²Dr. Sarala Joshi

¹PhD Scholar, Mewar University, Rajasthan, India

²Assistant Dean, TU, IOM, Coordinator of PhD Programme, Institute of Medicine, Nursing Campus
Maharajgunj, Kathmandu

ARTICLE INFO

Article History:

Received 20th April, 2016

Received in revised form

19th May, 2016

Accepted 15th June, 2016

Published online 16th July, 2016

Key words:

Foetal outcome,
Maternal outcome,
Teenage pregnancy.

ABSTRACT

Background: Globally, pregnancy and childbirth complications are the major cause of death among 15 to 19 year teenaged mothers. Teenage pregnancy and childbirth is a common health problem in industrialized as well as the middle and low income countries. Teenage pregnancy is also a major social and health problem in Nepal and which occurs two times higher in rural areas than in urban areas. The purpose of this study was to explore maternal and foetal outcomes among teenage mothers regarding teenage pregnancy and childbirth.

Methods: Descriptive exploratory study design was used. Simple random sampling technique was used to select the hospital and purposive sampling was used for the selection of the study population and total population was 245 teenage mothers delivered at hospital. Written consent was obtained from each respondent. Semi structured interview schedule was used for data collection and collecting data was analysis by using SPSS 20.

Results: The mean age of the respondents was $18.04 \text{ years} \pm 1.018$. The study found that ethnicity; numbers of sibling, education and respondents knowledge are the most aggravating factors for early marriage, pregnancy and childbirth. Early teenage mothers faced social as well as health problems in relation to late teen mothers. Antenatal visit has significant association ($p\text{-value}=0.017$) with health problems faced during pregnancy. Neonates born from early teenage mother were more prone to being low birth weight than late teen mother ($p \text{ value}=0.006$).

Conclusion: Teenage pregnancy and childbirth can be minimized by advocating girl's education and increasing awareness among parents and girl child herself. Regular Antenatal clinic visit during pregnancy help to improve the pregnancy outcomes.

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Citation: Sushila Devi Bhandari and Dr. Sarala Joshi, 2016. "Maternal and foetal outcomes among teenage mothers in the selected hospitals of Kathmandu", *International Journal of Current Research*, 8, (06), 34137-34140.

INTRODUCTION

Globally, 16 million adolescents give birth each year covering 11% of births. Ninety five percent of these births occur in low and middle income countries (WHO, 2016). Teenage girls who give birth each year have higher risk of dying from maternal causes than young adults (WHO, 2014). In addition, teenage below 16 years faced four times higher risks of maternal death compare to women over 20s. Likewise, babies born to adolescents also face a significantly higher risk of death (Paranjothy *et al.*, 2009). In Nepal, about 1 in 5 girls from 15 to 19 years become mother or pregnant soon after marriage. Majority of adolescent girls married and pressured to have a

child (UNFPA, 2013). Due to teenage pregnancy and childbirth most of the teenagers were forced to discontinue their education and become dependents throughout their life. Additionally, both the teenager and her child's future become dark (Sarah and Muthoni, 2012). Very few studies have been conducted to explore the perception of teenage mothers. Therefore the purpose of this study was to explore the maternal and foetal outcomes of teenage pregnancy and their perception regarding teenage pregnancy and childbirth.

MATERIALS AND METHODS

Descriptive – exploratory study design was used to reveal the consequences of the teenage pregnancy. Probability sampling technique was used to select hospital and purposive sampling was used to select sample. Participants were selected from the

***Corresponding author:** Sushila Devi Bhandari,
PhD Scholar, Mewar University, Rajasthan, India

hospital chart. The data was collected from March to September 2015 in Paropakar Maternity and Women Development Hospital, Nepal Medical College (NMC) Teaching Hospital, and Patan Hospital. Ethical approval was obtained from Nepal Health Research Council (NHRC) and concerned hospitals. Pre tested semi structured questionnaire was used for interview and some of data were extracted from patient's chart. Cronbach's alpha test was done to test the reliability of test instrument. Total 245 samples were taken for data collection. Written informed consent was obtained from each respondent for interview. Data entry was done in Epi-Data 3.1 and analysis was done by using SPSS 20 and Excel 2010. The statistical analysis like mean, median, range and standard deviation were performed for univariate analysis. Bivariate analysis was done by using chi square test, Analysis of Variance (ANOVA), and co-relation.

RESULTS

Majority 72.7% of the respondents were belongs to 18-19 years of age and only 1.2% were age of 14-15 years. The mean age of the respondents was 18.04 ± 1.018 years. More than half of the respondents 51% were reside in rural area. In terms of ethnicity Janajati constituted the highest percentage (42%). Most of the respondents (62%) who were delivered at teenage had four and more than four siblings. Majority (98.4%) of respondents were married. Regarding the education, most of them 43.7% were having primary level of education. Most of the respondent's parents 57.6% had low socioeconomic status and food supply is enough only for 6 months. Regarding the age at marriage majority (63.3%) of them had got married at the age of 14 -16 years.

This study found the relationship between the education level of respondents and age at marriage (p -value 0.040), which indicates that age at marriage depends on level of education of respondents. Majority 51.4% respondents had inadequate level of awareness regarding teenage pregnancy and childbirth. Though majority 76.3% of respondents were aware about family planning methods, no one of them were use it. Regarding the Antenatal Clinic (ANC) visit 92.2% of respondents had visited during their pregnancy, among them majority 75% of respondents were visited ANC clinic for four times and more. Though the 29.4% pregnancy was unwanted, 94.3% had got support from husband and in laws during their pregnancy. Any teen age pregnancy is referred as "high risk" for both the mother and baby and cause of great concern. In this research study, 7.8% respondents had faced social problems like school dropout, tease by friends, not accepted by family members and ill health and 53.9% of the respondents were faced health problems during their pregnancy. Out of 53.9% who were faced some health problems during pregnancy 43.9% of respondents had got anaemia, 20.5% of respondents had Urinary Tract Infection (UTI), followed by 18.2% had pregnancy induced hypertension, whereas 10.6% had hyperemesis gravidarum. Likewise 6% had Ante Partum Hemorrhage (APH), and few 1.5% had low blood pressure, oligo-hydramnios and gestational hypertension respectively. Because of teenage pregnancy 54.3% of respondents had faced problems during labour, among them 28.9% had prolonged obstructed labour, followed by 23% had foetal distress, likewise 16% had inducted labour, 11.9% had premature labour, similarly 8.1% had mal-presentation, 6.7% had chorioamnionitis, and only 0.7% had cord prolapsed.

Table 1. Birth weights of the new born

Birth Weight	Frequency	Percent	Mean	Std. Deviation
Less than 2.5Kg	92	37.6	2.16	0.944
2.5Kg	21	8.6		
More than 2.5kg	132	53.9		
Total	245	100.0		

Table 2. Association between age at marriage and problems faced by mothers and baby

Age of Respondents	Social problems faced during this pregnancy		Total	Chi-square
	No	Yes		
14 – 15 years	2	1	3	
16 -17 years	55	9	64	0.017*
18 -19 years	169	9	178	
Total	226	19	245	
	Suffering from postnatal complication			
14 – 15 years	1	2	3	p-value 0.790
16 -17 years	12	52	64	
18 -19 years	32	146	178	
Total	45	200	245	
	New born admitted in NICU			
14 – 15 years	2	1	3	p-value-0.043*
16 -17 years	37	27	64	
18 -19 years	72	105	177	
Total	111	133	244	
Age of Responses	Birth weight of the baby		Total	Chi-square
	<2.5Kg	2.5Kg	>2.5kg	
14 – 15 years	2	1	0	P-value 0.006*
16 -17 years	34	5	25	
18 -19 years	56	15	107	
Total	92	21	132	

P-value significant at the 5% level of significance

Regarding the gestational age of new born 50.2% of new born were 37-40 weeks, similarly 35.5% were at more than 40 weeks and few 14.3% were less than 37 weeks. As data study shows that 98.45% of new born were alive, whereas only 1.6% was dead. Among them 3 were stillbirth and only one was intrauterine death and the cause of death was 2 prematurity, 1 post term baby and another one was low birth weight.

Majority 62.5 % of the new born had ≥ 2.5 kg of birth weight, 37.6% had <2.5 kg of birth weight. Mean birth weight of baby was 2.16 ± 0.944 kg. Majority 57.8% of new born had obtained 5-7/minute APGAR score, 22.1% obtained 3-5/minute, similarly 16.8% obtained more than 7/minute and few 3.3% obtained less than 3/minute. Among the new born 45.5% had faced some problems and need admission to Nursery. The study shows that 45.5% of new born were admitted in NICU and the cause of new born admission in NICU was 41.5% poor cry and not sucking breast milk, followed by 27.7% low birth weight, 17.6% respiratory distress syndrome, 8.2% meconium aspiration and few 5% from other cause like congenital abnormalities, sepsis and jaundice. Majority of respondents perceived positively for the cause and consequences of teenage pregnancy on both the mother and baby. Specifically, it can be inferred that the highest level of average value is appeared for the component such as the regular ANC checkup help to reduce the poor effects on both mother and baby. Majority 53.1% of respondents had positive perceptions and 46.9% of respondents had negative perception towards causes, consequences and prevention teenage pregnancy child birth.

Table 2 illustrates that there is relationship between the age of respondents and social problems faced during pregnancy, new born admitted in Neonatal Intensive Care Unit (NICU) and birth weight of the new born. Additionally, there is association (f -value= 6.223, p -value =0.002) between knowledge and perceptions of respondents regarding teenage pregnancy and its consequences on mother and new born on the level of 5% level of significance. Similarly, there is strong association (p value 0.011) between level of knowledge and ANC visit during pregnancy. Likewise, result shows that ANC visit helps to mitigate the health problem during pregnancy. This is proved by chi-square test, where p -value is 0.001.

DISCUSSION

In the study 72.7% of the respondents belonged to 18-19 years of age. The mean age of the respondents was 18.04 ± 1.018 years, which range from 14 years to 19 years. Similar finding was found in Plan (2013), which showed 60% of teenagers married by the age of 18 years. As per ethnicity majority, 42% of the respondents belonged to Janajati and had poor economic status. Additionally, the chi-square test also shows the significant (p -value=0.004) association between the ethnicity of respondents and age at marriage. Similar finding was described on (Monstad *et al.*, 2011). Just more than half of the respondents 51% were reside in rural area, which is consistent with the study conducted by (Choe *et al.*, 2004, Kafle, 2010), which depicted that Nepalese parents especially resided at rural area were married their children at early age. Majority of respondents got only primary level of education. Higher the teenagers are educated lower the rate of teenage pregnancy.

This finding is supported by (NDHS, 2011). Majority of respondents had inadequate awareness on teenage pregnancy and child birth. There is relationship between the level of education and knowledge about teenage pregnancy. This study is supported by the study done by (Wu, 2010) in China regarding Teenagers knowledge on contraceptive. This study found that most of the respondents visited ANC during their pregnancy and ANC visit help to reduce the health effects on mothers and baby. This finding is supported by the study done by (Kayastha and Pradhan, 2012) in Nepal. Based on health problem faced during pregnancy, majority of respondents faced different types of health problems anaemia, Urinary Tract Infection (UTI), pregnancy induced hypertension, hyperemesis gravidarum, Ante Partum Hemorrhage (APH), low blood pressure, oligo-hydramnios and gestational hypertension respectively. This types of problems also found by (Rahman *et al.*, 2010), Haritha *et al.*, 2012) teenage pregnant mothers. Regarding problem faced by newborn, 45.5% of the new born were suffering from problems and admitted in NICU and the problems were poor cry and not sucking breast milk, low birth weight, respiratory distress syndrome, meconium aspiration, congenital abnormalities, sepsis and jaundice. This study result is consistent with study done by (Rudra *et al.*, 2013), which showed new born baby born from teenage mothers need admission in NICU. Though the teenage pregnancy is high risk for both the new born and mother herself, this current finding show that early teenage mothers had faced more problems than late teenage mothers and likewise, new born from early teenage mothers had faced more problem than late teenage mothers. In relation to birth weight, new born from early teenage had low birth weight than from late teenage mothers. Similar finding was found in study of (Chen *et al.*, 2007).

Conclusion

Both the mothers and the new born baby had faced health problem because of teenage pregnancy. Regular ANC visit has helped to promote the health of mother and new born. Half of the respondents were aware about teenage pregnancy and those who were aware had positive attitude towards causes and consequences of teenage pregnancy and child birth. So to prevent the teenage pregnancy and child birth free education should be provided to the girls and likewise, awareness programme should be provided for parents. ANC visit and institutional delivery should be encouraged to the pregnant teenagers.

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