

Consequences of Teenage Pregnancy in Kathmandu Valley

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Abstract

Introduction: Teenage pregnancy has emerged as one of the major public health problem in Nepal. The aim of this study was to explore the consequences of teenage pregnancy in Kathmandu Valley.

Methods: A Descriptive Cross-Sectional study was adopted. The population of the study were Teenage and non-teenage (20-25 years) postnatal mothers admitted in Paropakar Maternity and Women's Hospital (PMWH). Non-probability purposive sampling was used for the selection of mothers. Hundred postnatal mothers were included. Ethical approval was taken from the research committee NINE and from concerned authorities of PMWH, Thapathali. Formal permission was taken from hospital administrator of PMWH for data collection. Thorough out the study precautions were taken to safeguards the rights of the mother. Informed verbal consent was obtained from all the participants. Liberty was given them to discontinue the study at any time if they wished. SPSS version 16 was used and chi-square test value was applied for statistical analysis. P value < 0.005 was considered in statistically significant.

Results: This study showed no association between teenage pregnancy and accessibility and utilization of health services, many of the maternal outcomes studied viz. eclampsia, preterm labor, premature rupture of membranes, prolonged labor, obstructed labor and post-partum hemorrhage and all of the fetal outcomes viz. preterm birth, low APGAR score and low birth weight ($p > 0.05$). However, this study showed significant association of teenage pregnancy with occupation, educational level of the women, use of contraceptive devices, type of contraceptive devices used, gestational hypertension, anemia and type of delivery ($p < 0.05$).

Conclusion: Teenage pregnancy is less likely to have adverse fetal outcomes while adverse maternal outcomes like anemia and pre-eclampsia are more likely to be faced by them. And, teenage women are more likely to have vaginal delivery with episiotomy.

Keywords: Fetal outcomes, Maternal outcomes, Teenage pregnancy

Introduction

Globally, Thirteen million children (a tenth of all births worldwide) are born to women under age 20 worldwide annually. More than 90% of these births occur to women living in developing countries.^[1] Stillbirths and newborn deaths are 50% higher among infants of adolescent mothers than among infants of women aged 20-29 years. Infants of adolescent mothers are more likely to have low birth weight.^[2] South Asia has a large proportion of young people in the world and teenage pregnancy has emerged as one of the major public

health problem among them.^[3] A study done in several South Asian countries revealed that early marriage and adolescent pregnancy and its consequences are still leading causes of high maternal mortalities and childhood mortalities including Nepal.^[4] Child marriage adds a layer of vulnerability to women.s that leads to poor fertility control and fertility-related outcomes, and low maternal health care use^[5] The purpose of this study was to explore the consequences of teenage pregnancy in Kathmandu valley and to compare them with those of non-teenage pregnancy.

Methods

This was a descriptive, cross-sectional study in Paropakar Maternity and Women's Hospital (PMWH) conducted from Mansir 30 to Poush 13, 2014. A total of 100 postnatal mothers were included in the study with 50 respondents in each of teenage and non-teenage group. Non-probability purposive method was followed and data collection was done by interview method with semi-structured questionnaire. The variables were categorized into four groups for comparison viz. socio-demographic profile of respondents (area of origin, ethnicity, religion, marital status, educational status and level, type of family and occupation), predisposing factors for teenage pregnancy (age of marriage, type of family, source of income of family, availability of health services and use of contraceptive devices), maternal outcomes (minor discomforts during pregnancy, anemia, eclampsia/pre-eclampsia, premature rupture of membranes, obstructed labour, type of delivery and preterm delivery) and fetal outcomes (premature birth, low APGAR score, neonatal death, low birth weight and anomalies). Statistical analysis was done by using Statistical Package for Social Science (SPSS) version 16 and non-inferential statistics was adopted.

Results

Table 1. Socio-demographic information of respondents

Variables	Teenage mothers (n=50), No. (%)	Non teenage mothers (n=50), No. (%)	Total (n=100), No. (%)	p value
Area of Origin of Respondents				
Rural	20 (40)	15 (30)	35 (35)	0.295
Urban	30 (60)	35 (70)	65 (65)	
Ethnicity of respondents				
Brahmin	6 (12)	7 (14)	13 (13)	0.942
Chhetri	20 (40)	20 (40)	40 (40)	
Newar	9 (18)	7 (14)	16 (16)	
Lama	10 (20)	11 (22)	21 (21)	
Others	4 (8)	6 (12)	10 (10)	
Religion of respondents				
Hindu	37 (74)	35 (70)	72 (72)	0.499
Buddhist	11 (22)	10 (20)	21 (21)	
Christian	2 (4)	5 (10)	7 (7)	
Type of family				
Joint	20 (40)	24 (48)	44 (44)	0.229
Nuclear	30 (60)	26 (52)	56 (56)	

Regarding sociodemography majority of the respondents (65%) came from urban areas. Majority of them (40%) were of Chhetri ethnicity and the least of them were of others ethnicity included Dalit, Madhesi, respectively. Similarly, greater part of the total participants followed Hindu religion (72%) and the least of them followed Christianity. Majority of the participants (56%) in both the age groups came from nuclear family. The chi-square tests between these variables did not show any significant association with teenage pregnancy ($p>0.05$).

Regarding the marital status, all of the participants were married and majority of non-teenage group (74%) were married after the age of 19 years. In total majority (69%) of participants were married before during their teenage years. Regarding the economic status, minority of participants in teenage mothers' group were job holders if compared with non-teenage mothers' group (8% vs 36%, $p=0.001$). Similarly, the main source of income of family in non-teenage mothers' group was business for majority (38%) while for teenage mothers' group (44%), which include labor, driving local vehicles, construction works and shops. The educational status of the respondents, as shown by this study, revealed that the literacy rate was better among teenage mothers' group as compared to non-teenage mothers' group (94% vs 88%, $p=0.295$). However, the educational level was highest in secondary level for teenage mothers'

group (40%), while in non-teenage mothers' group, it was secondary level (28%). Similarly, this study showed that the use of contraceptive devices among teenage mothers was low in comparison with non-teenage mothers' group (16% vs 44%, $p=0.002$). The majority of teenage mothers (50%) used Depo Provera as contraceptive device while non-teenage mothers used both Depoprovera and Oral Contraceptive Pills in majority (36.3%) each, ($p=0.037$).

Table 2: Comparison of Accessibility of health services and ANC examinations performed

Variables	Teenage mothers (n=50), No. (%)	Non teenage mothers (n=50), No. (%)	Total (n=100), No. (%)	p value
Accessibility of health services				
Less than 30 minutes from home	37 (74)	38 (76)	75 (75)	0.817
More than 30 minutes from home	13 (26)	12 (24)	25 (25)	
ANC Examinations performed during pregnancy				
Not performed	3 (6)	5 (10)	8 (8)	0.461
Performed	47 (94)	45 (90)	92 (92)	
No. of ANC Examinations performed				
Four times	23 (46)	9 (18)	32 (32)	0.002*
Less than four times	18 (36)	35 (70)	53 (53)	
More than four times	6 (12)	3 (6)	9 (9)	

*p significant at ≤ 0.05 level

Study reveals majority of the participants (75%) had easy accessibility to health services. This implied both for teenage as well as non-teenage mothers group. The chi-square test identifies that there is the association between teenage pregnancy and accessibility of health services ($p>0.05$) and also between teenage pregnancy and performance of ANC examinations during pregnancy ($p>0.05$). However test show a significant association between teenage pregnancy and number of ANC examination performed during pregnancy ($p<0.05$).

Table 3: Comparison of maternal outcomes of pregnancy

Variables	Teenage mothers (n=50), No. (%)	Non teenage mothers (n=50), No. (%)	Total (n=100), No. (%)	p value
Minor discomforts**				
Morning sickness	24 (48)	27(54)	51(51)	0.548
Backache	30(60)	21(42)	51(51)	0.072
Stress incontinence	16(32)	10(20)	26(26)	0.171
Vertigo	22(44)	23(46)	45(45)	0.841
Itching	23(46)	19(38)	42(42)	0.481
Eclampsia and Preeclampsia				
Preeclampsia				
• Blood Pressure > 140/90 mm of Hg	7(14)	19(38)	26(52)	0.006*
• Urine Protein > 0.3gm/L/day	1(2)	4(8)	5(10)	0.168
Eclampsia				
• Convulsions only	3(6)	2(4)	5(5)	0.360
• Loss of consciousness only	1(2)	0(0)	1(1)	
• Both	0(0)	2(4)	2(2)	
Anemia				
Anemia	32(64)	18(36)	50(50)	0.008*
No anemia	17(34)	33(66)	50(50)	

*p significant at ≤ 0.05 level ** Multiple response questions

Table 4: Comparison of fetal outcomes

Variables	Teenage mothers (n=50), No. (%)	Non teenage mothers (n=50), No. (%)	Total (n=100), No. (%)	p value
Labour				
Preterm labour	11 (22)	6 (12)	17 (17)	0.177
Normal labour	37 (74)	37 (74)	74 (74)	
Prolonged labour	2 (4)	6 (12)	8 (8)	
Rupture of Membranes				
Premature Rupture	12 (12)	7 (14)	19 (19)	0.220
Normal Rupture	38 (38)	43 (86)	81 (81)	
Time of Labour				
Prolonged labour	23 (46)	26 (52)	49 (49)	0.840
Normal labour	27 (54)	24 (48)	51 (51)	
Obstructed labour				
Obstructed labour	6 (12)	11 (22)	17 (17)	0.168
Normal labour	44 (88)	39 (78)	83 (83)	
Type of delivery				
Normal vaginal	1 (2)	11 (22)	12 (12)	0.001*
Vaginal with episiotomy	31 (62)	16 (32)	47 (47)	
Operative	18 (36)	23 (46)	41 (41)	
Post Partum Hemorrhage				
Yes	11 (22)	15 (30)	26 (26)	0.330
No	39 (78)	34 (68)	73 (73)	

*p significant at ≤ 0.05 level

Regarding maternal outcomes of participants during pregnancy majority of the respondents (60%) in teenage mothers group experienced backache while minority of them (32%) experienced stress incontinence. There is the significant association between teenage pregnancy and backache ($p < 0.005$) while there is no association of teenage pregnancy between other minor discomforts. Similarly there is significant association between high blood pressure and teenage pregnancy ($p < 0.05$) but there is no association of teenage pregnancy with increased urine protein level and eclampsia ($p > 0.05$).

The study showed both teenage and non teenage mothers had lower incidence of preterm and post term birth. APGAR score was good among both age groups. The babies born to both age groups were of normal weight and none of the babies born had any kind of anomalies. The chi-square test reveals that there is no significant relationship between teenage pregnancy and premature birth ($p > 0.05$), and age of the mothers, and weight of

baby at birth ($p > 0.05$). Similarly, there is no association between teenage pregnancy and Apgar score of babies born to them.

Discussion

This study did not show any significant association between teenage pregnancy and the socio-demographic factors of the respondents ($p > 0.05$). However, in contrast to this finding, studies show that there is connection between adolescent mothers and their socio-demographic factors, stating that the socio-demographic profile of adolescent girls who become pregnant is likely to have a significant influence on their health seeking behavior.^[6] Pregnant teenagers tend to be socioeconomically disadvantaged and face higher risks of various pregnancy related complications.^{[7] [8]} A significant association between teenage pregnancy and economic status was revealed by this study. This may be probably because they are students, dependent on

their parents and without support from their partners. Teenage pregnancies are more common in populations with low socio-economic status leading to increased risks of poorer health and well-being for both mother and the baby^[4]. The educational status of the teenage mothers was good as shown by this study. However, the educational level was lower among teenage mothers' group. This finding is supported by various studies which show that teenage pregnant women have less education than the reproductive-aged group.^{[11] [12]} Regarding the use of contraceptive use, this study showed that teenage mothers used less contraceptive devices in comparison to non-teenage mothers. Teenagers are more likely to have no prior contraceptive usage.^[13] Lack of proper sexual education and awareness of contraceptive measures may have contributory factor to such a trend in teenage pregnancy. Majority of the respondents had origination in urban areas and this might be the reason why most of them had easy access to health services. Easy access to health services might have precipitated for high number of Antenatal Checkup (ANC).^[3] However, the number of visits was lower among teenage mothers' group as stated by Wang et al.^[14]

Regarding the maternal outcomes of respondents during pregnancy, this study did not show any significant association of teenage pregnancy with Preterm labour, Premature Rupture Of Membranes, Prolonged Labour, Obstructed Labour and Post Partum Hemorrhage ($p > 0.05$). The study showed similar findings with both teenage and non teenage mothers groups. This result is supported by that of a study conducted in Namibia by van Dillen et al.^[3] which states that teenage pregnancies are not at an increased risk for obstetric complications. In contradiction to this, other studies state that adolescent pregnancy increases the risk of premature rupture of membranes and preterm labor.^{[15] [16]}

This study showed that there is a significant association of teenage pregnancy with Anemia during pregnancy and type of delivery ($p < 0.05$). Younger maternal age is significantly and consistently associated to greater risks of anemia.^{[4] [16]} The results of this study revealed higher incidence of vaginal delivery with episiotomy among teenage mothers (62%). Similar type of result was shown by a retrospective study done in India by Sagili et al.^[16] which showed a significantly higher incidence of normal vaginal delivery and episiotomy, and a significantly lower incidence of caesarean sections/perineal tears in teenage mothers compared to other mothers. Another study done by

Yadav et al.^[17] showed that teenage mothers are less likely to have delivery by episiotomy, forceps or vacuum and Caesarean sections.

This study showed that there is no significant association between teenage pregnancy and pre-eclampsia which is supported by other study which concludes that pregnancy in adolescence is associated with lower incidence of pre-eclampsia.^[18] However in contrast to this, a study by Martins et al.^[11] concluded that pregnancy in adolescence is associated with pre-eclampsia. The results of this study did not show a significant association between teenage pregnancy and eclampsia ($p > 0.05$). However, in contrast to this, a study done by Eke et al.^[19] concluded that eclampsia is a major cause of maternal mortality; and teenage nulliparous women being most susceptible.

Regarding the fetal outcomes of teenage pregnancy, this study showed that there is no significant association between teenage pregnancy and fetal outcomes like premature birth, low APGAR score, low birth weight and anomalies ($p < 0.05$). In contrary, other studies done state that adolescent mothers have worse perinatal outcomes when compared to other age groups. Similarly, a retrospective cohort study conducted by Lao et al.^[8] concluded that teenage women had increased preterm birth, despite improved health care provision, nutrition and similar incidence of other obstetric complications, but the obstetric and perinatal outcome remains favourable. Similarly, different suggested that teenage pregnancy has an increased risk of adverse obstetric outcomes, especially, low birth weight.^{[17] [20]} Similarly, according to Thaithae and Thato^[21] teenage pregnancy is associated with increased risks of adverse maternal and neonatal outcomes requiring clinical and outreach interventions from health care providers. Similarly, another study conducted by Yadav et al.^[17] Concluded that teenage women are more likely to have preterm births and low birth weight babies.

Conclusion

Teenage pregnancy is high among those women who belong to lower economic status and who have lower educational level. Similarly, the use of contraceptive devices is lower among teenage mothers in comparison with the non teenage mothers. Though there is no association between teenage pregnancy and pre-eclampsia, this study suggests that teenage women are more vulnerable to gestational hypertension than non teenage mothers. Teenage women are more likely to

have vaginal delivery with episiotomy while they are least likely to deliver normally. Teenage pregnancy is less likely to have adverse fetal outcomes while maternal outcomes like anemia and pre-eclampsia are more likely to occur among them. There is no significant difference between the minor discomforts experienced during pregnancy by teenage and non teenage mothers.

Therefore, it can be concluded that this study provided in-depth findings of the consequences of teenage pregnancy.

Conflict of Interest: None Declared

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