Intimate Partner Violence and Adverse Pregnancy Outcomes

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ABSTRACT

Background

Intimate partner violence (IPV) is an abuse or harm that occurs in a close relationship. The World Health Organization (WHO) estimated that, globally, 35% of women living in industrialized and developed countries have experienced exposure to intimate partner violence and during pregnancy it is associated with low birth weight, preterm birth, and even death of the baby.

Objective

To find out proportion of intimate partner violence and adverse pregnancy outcome among postnatal mothers who recently delivered their baby.

Method

A cross-sectional study was conducted among 220 postnatal mothers using a structured questionnaire based on 13-item WHO Violence against women instrument in Nepali language. Face-to-face interview technique was used to collect data using consecutive sampling technique at Kathmandu Medical College teaching Hospital. The data were analyzed using SPSS version 20.

Result

In recent pregnancy, 32.7% of women had experienced intimate partner violence at least once, which has been categorized as physical 28.6%, psychological 30.9%, and 22.7% sexual violence. Among them, 36% had low birth weight babies, 24% had preterm, 2.8% had dead baby, and 35% reported abortion in previous pregnancy. In the binary logistic regression, intimate partner violence was significantly associated with preterm baby (OR-1.143, 95% CI- 0.386-3.384, p=0.002), low-birth weight (OR-0.237, 95% CI- 0.093-0.602, $p \leq 0.001$), and abortion (OR-0.021, 95% CI- 0.003-0.175, $p \leq 0.001$).

Conclusion

One in three women experienced intimate partner violence during their recent pregnancy and is associated with adverse pregnancy outcomes. Programs targeting screening of intimate partner violence against women should therefore be emphasized during reproductive health services such that adverse pregnancy outcomes can be prevented.

KEY WORDS

Intimate partner violence, Low birth weight, Pregnancy outcomes, Preterm birth

INTRODUCTION

Intimate partner violence (IPV) refers to any behaviour within an intimate relationship that causes physical, psychological or sexual harm to those in the relationship and it is one of the most common forms of violence against women. The global estimates by the World Health Organization highlight the prevalence of IPV to be 30-35%.[1] The lifetime physical or sexual IPV or both varied from 15% to 71% in many countries.[2] In Nepal, 26% of women experienced at least one form of violence from their husband in their lifetime, while 13.7% has experienced any form of IPV in the past year.[3,4] Thirty one percent of women experienced pregnancy loss due to violence from their husband.[5] Those women who have experienced at least one form of IPV were 1.5 more times experienced pregnancy loss and 1.7 times more likely to experience abortion than women who never experienced IPV.[4] Violence on pregnant women significantly increase risk for low birth weight infants, pre-term delivery and neonatal death.[2] Women who are pregnant and the victims of IPV have high rates of stress, deliver a preterm or low birth weight infant.[6] Physical violence was associated with an increased risk of antepartum hemorrhage, intrauterine growth restriction and perinatal death. The gender role makes it difficult to conceptualize IPV as a problem and also fuels to perpetrate violence.[7] This study is aimed to assess IPV during recent pregnancy and its adverse birth outcomes at Kathmandu Medical College Teaching Hospital (KMCTH).

METHODS

A cross-sectional study employing quantitative research methods was used to obtain information on Intimate Partner Violence and Adverse Pregnancy Outcomes. Consecutive sampling technique was used to collect data from 7th June to 11th September 2020. Ethical clearance was taken from KMC, Institutional Review Committee, Kathmandu Medical College, Sinamangal. Postnatal mothers who delivered their babies either normally or by caesarean section and admitted in postnatal ward were included in the study. Women who expressed interest in participating after 12 hours of delivery and provided written consent were invited to a private interview room for face-to-face interview. Postnatal mother having psychological problem and confined to bed because of ill-health were excluded from the study. Sample size was calculated taking 40.8% of prevalence with 95% confidence interval and population N = 200 (previous months admission history of average population of postnatal mothers in postnatal ward) using formula sample size (n) = Z^2pq/d^2, adding 10% for non-response resulting to an estimated sample size of 220.[8]

A Structured questionnaire was designed based on 13-item WHO Violence against women instrument in Nepali language.[9] Questionnaire included questions concerning the women's socio-demographic information, basic gynecological history, partner's information including marriage and adverse pregnancy outcomes. IPV questionnaire included three domains: physical (6 questions), psychological (4 questions), and sexual (3 questions). For each question, respondents were asked whether they had experienced the specific act during pregnancy. Pre-test was done with 10% of postnatal women in similar setting of final data collection and then subjected to necessary adjustments and modifications to ensure for ease of understanding. Data were entered into Epi Data v 3.1 then cleaned and analyzed using SPSS v20. The data was analyzed by using descriptive statistics and inferential statistics like chi-square test and binary logistic regression.

RESULTS

A total of 220 postnatal mothers aged 15-45 years who delivered their babies and admitted at postnatal ward were interviewed about their demographic information, husband information, pregnancy, marriage, and their experience of all three physical, psychological and sexual violence. Respondents who had experienced IPV were 32.7% (n=72) and do not feel safe with their husband and among them 37.5% experienced risk to their recent pregnancy. Among the total respondents (40%) were from age group 26-33 years and 23.6% were from 18-25 years. Mean age of respondents was 30.18 years. Majority of respondents (82.3%) were from Hindu religion and 52.7% were from Brahmin/Chhetri ethnicity. 39.5% of respondents have completed higher secondary level education and 7.3% have non-formal education. Regarding occupation of respondents, 36.4% were housemaker and 6.4% respondents were engaged in service. Majority of respondents (70.5%) were living in nuclear family and 72.2% were from urban (Table 1).

Regarding marriage and relationships, 83.2% of respondents were married at the age of 26 years or more, 66.4% had arranged marriage and majority of marriages were decided by their parents. Among love marriages, 31.1% meet as their school friend. 46.9% of husband had bachelors and above education whereas few respondents (2.7%) had only primary education. Regarding husbands' occupation, 26.8% had trade/business, 15% were migrant worker and 4.0% were unemployed. 51.8% respondent mentioned that their partner do have habit of smoking and drinking (Table 2).

Regarding obstetric information, 45.5% were primigravida, 53.2% have one child and 19.1% respondents had have history of abortion. Respondents expressed different problems during pregnancy, among them pain abdomen 26.4% and preterm labor was 8.2%. Similarly, they mentioned problems with reproductive organs as heavy bleeding, pelvic pain and trauma of reproductive organs (Table 3).

Table 1. Respondents' sociodemographic characteristic (n=220)

Variables	Number	Percentage
Age group in years		
18-25	52	23.6
26-33	88	40
34-40	80	36.4
Mean=30.18; SD=5.70		
Religion		
Hindu	181	82.3
Buddhist	20	9.1
Christian	19	8.6
Ethnicity		
Brahmin/Chhetri	116	52.7
Janajati	71	32.3
Dalit	33	15
Education level		
Non-formal	16	7.3
Primary education	21	9.5
Secondary education	18	8.2
Higher secondary	87	39.5
Bachelor and above	78	35.5
Occupation		
Student	22	10
Housewife	80	36.4
Farmer	38	17.3
Wage laborer	46	20.9
Trade/business	20	9.1
Employment/service	14	6.4
Family type		
Nuclear	155	70.5
Joint	44	20

Regarding adverse pregnancy outcomes among postnatal mother having IPV (n=72) shows that 36% had low birth weight babies, 35% had abortion history and 2.8% had dead baby (Figure 1).

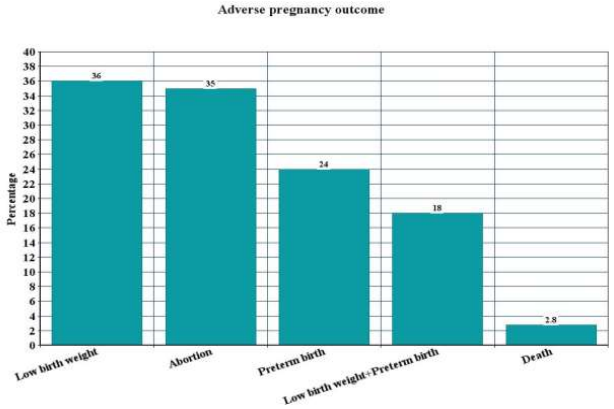

Figure 1. Pregnancy outcome among postnatal mother having intimate partner violence.

Table 2. Respondents' Information regarding Marriage and Relationship (n=220)

Variables	Number	Percentage
Husband education		
Primary education	6.0	2.7
Secondary education	15	6.8
Higher secondary	96	43.6
Bachelor and above	103	46.9
Husband occupation		
Unemployed	9.0	4.0
Migrant worker	33	15.0
Farmer	24	11.0
Wage laborer	37	16.8
Trade/business	59	26.8
Service	58	26.4
Husband smoke/ drink		
Yes	106	48.2
No	114	51.8
Type of marriage		
Love/self	74	33.6
Arranged	146	66.4
Love marriage meet (n=74)		
School friend	23	31.1
Social network	12	16.2
Through friends	19	25.7
Social gathering	20	27
Age at marriage		
15-25 years	37	16.8
≥ 26 years	183	83.2
Marriage decision		
Self	22	10.0
Parents	178	80.9
Other family members	20	9.1

Age of women, husband education and occupation, age at marriage, decision of marriage, preterm birth, low-birth weight and abortion are statistically significant with IPV. In the binary logistic regression, IPV was significantly associated with adverse pregnancy outcomes like preterm baby, low-birth weight and abortion (Table 4).

DISCUSSION

In this study the prevalence of intimate partner violence among currently delivered women was 32.7% which is consistent with the multi-country study by the WHO (2015) reported in similar and neighboring developing countries (22.9% in Thailand, 31.9% in Bangladesh) and higher in the study done in Pakistan (51%) and in India (12.9%).[10-12] Three forms of violence, physical 28.6%, psychological 30.9%, and 22.7% sexual violence was seen at least once in recent pregnancy which is consistent with study done

Table 3. Respondents' Obstetric Information (n=220)

Variables	Number	Percentage
Gravida		
First	100	45.5
Second	91	41.4
Third	19	8.6
Fourth	10	4.5
Number of children		
None	8.0	3.6
One	117	53.2
Two	86	39.1
Three	9.0	4.1
Abortion		
Yes	42	19.1
No	178	80.9
Problem during pregnancy*		
Antepartum haemorrhage	20	9.1
Pregnancy induced hypertension	36	16.4
Gestational Diabetes Mellitus	17	7.7
IUGR	22	10
Preterm labour	18	8.2
Pain abdomen	58	26.4
Problem with reproductive organs*		
Heavy Bleeding	16	7.3
Pelvic pain	23	10.5
Trauma	11	5.0

*Multiple response

in Nepal (28% physical, 35% psychological and 22% sexual) and contrast with study done in India (10% physical, 10.7% psychological and 1.8% sexual).[12,13]

In this study, gestational age determination and baby's weight was based on ultrasound report and from baby's note, adverse pregnancy outcomes were 9.1% preterm birth, 12.3% low birth weight, and 9.1% abortion. Among postnatal mother who reported IPV during pregnancy showed that 36% had low birth weight babies, 35% had abortion, 24% had preterm birth, 18% had both preterm and low birth weight babies and 5% had death baby. The findings of higher occurrence of LBW and preterm deliveries among IPV sufferers in the current study is consistent with the study findings done by Sarkar in multi-country study and in a study done by Yost in Texas, USA.[2,14] In a Meta-analysis done by Donovan found that IPV was significantly associated with preterm birth and low birth weight.[15]

Age at marriage (p = 0.004), young maternal age (p = 0.011), and unemployed/ low earning husband (p ≤ 0.001) shows statistically significant with IPV which states that younger age and low economic status of women increase the risk for IPV. This result is consistent with the study done on domestic violence during pregnancy in Pakistan, which states that 'Young maternal age, having an unemployed husband were significant predictors of abuse'.[11] In this study, women whose husband having below higher-secondary education are greater risk of IPV (p = 0.026). Several studies had been concluded that those women whose husband had higher education and occupation are less risk to spouse violence.[2,5,16] There is no association between husband's smoking and drinking habit with IPV in this study which contradict with similar study done in India which states that 'husband being regularly drunk is the factor for moderate to high risk of violence during pregnancy'.[17] Another study done in same country found that lower socioeconomic status, low education level of intimate partner, and partners' addiction were statistically significant to IPV.[12]

Table 4. Association of intimate partner violence and adverse pregnancy outcomes.

Variables	IPV		AOR	95% CI	p value
Preterm baby	Non-exposed n (%)	Exposed n (%)			
Present	7.0 (35)	13 (65)	1.143	0.386-3.384	0.002*¶
Not present	141(70.5)	59(29.5)			
Low birth weight					
Present	7.0 (25.9)	20(74.1)	0.237	0.093-0.602	<0.001*¶
Not present	141 (73.1)	52(26.9)			
Abortion					
Present	1.0 (5%)	19 (95)	0.021	0.003-0.175	<0.001*¶
Not present	146 (73.4)	53(26.6)			

*Significance at 0.05, ¶-Fisher exact test, AOR- Adjusted odds ratio, CI- Confidence interval.

The odds of having preterm birth among IPV exposed respondents is 14% more likely than non-exposed respondents (AOR-1.143, 95% CI-0.386-3.384). The odds of having low birth weight baby among IPV non-exposed respondents is three times less than exposed respondents (AOR-0.237, 95% CI-0.093-0.602) and nearly neutral to occur abortion among IPV exposed and non-exposed respondents (AOR-0.021, 95% CI-0.003-0.175). These findings are consistent with study done in Vietnam which states that the pregnant women who were exposed to physical violence during pregnancy were five times more likely to have preterm birth and were nearly six times more likely to give birth to a child of low birth weight as compared to those who were not exposed to physical violence. There was strong relationship between exposure to IPV and occurrence of preterm and low birth weight babies and also found that the risk of adverse birth outcomes increased when the pregnant women were exposed to more than one type of violence.[16] There is no statistical significance of IPV with death baby in this study.

Among respondents who had experienced IPV, 56.9% had husband with controlling behavior, 69.4% respondents didn't report violence due to fear of trouble, shame or stigma to discuss about marital issues, and 30.6% reported violence but nothing get done. These findings are also consistent with study done in Ethiopia which states that 'controlling behaviors might be due to the social construct that promotes male dominance through encouraging men to exercise control over their partner'.[18]

IPV is a sensitive topic and women exposed to IPV might have been unwilling to share their all experiences due to fear of their husband and family's reactions. Furthermore, there is a possibility of recall bias due to immediate postpartum period, although researcher had made efforts to reduce it by adhering ethical and safety approach during data collection.

CONCLUSION

One in three women experienced IPV during their most recent pregnancy with increased risk of preterm birth, low birth weight. Any pregnant women may be at risk so, programs targeting screening of IPV against women should therefore be emphasized during reproductive health services such that adverse birth outcomes can be prevented.

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