



## Antenatal Domestic Violence & Fetal Outcome: A Cross-Sectional Study

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### ABSTRACT

**Introduction:** Antenatal domestic violence is a global public health and human rights concern. It increases the risk of maternal and fetal morbidity and mortality. **Aims & Objectives:** To assess the frequency of antenatal domestic violence and associated factors and also to determine effect of domestic violence on fetal outcome. **Place and duration of study:** This cross sectional study was conducted from January to June 2015 in post-natal wards of department of Gynecology & Obstetrics of six tertiary care hospitals of Lahore. **Material & Methods:** A total of 255 females admitted in post-natal wards of department of Gynecology & Obstetrics enrolled after proper verbal informed consent. A structured, self-constructed questionnaire was administered on females enrolled consecutively till the desired sample size was complete. Data on domestic violence (verbal or physical), its associated factors, gestational age at birth, mode of delivery and birth weight of the neonate was analyzed on SPSS version 21.0. **Results:** 22% (55/255) females experienced antenatal domestic violence during current pregnancy and out of 55, 72% faced verbal abuse while 27% experienced physical violence. In total 65/255(26%) w low birth weight neonates were born and out of them 58.18% (32/55) were born to mothers facing violence during pregnancy. Husband was mostly responsible for violence in 49% of cases. Antenatal domestic violence was significantly associated with low birth weight ( $p < 0.001$ ). **Conclusion:** Antenatal domestic violence is associated with low birth weight babies. Antenatal domestic violence prevention needs implementation of legislation and changing behaviors of violence in communities so to avoid health implications.

**Key words:** Abuse, antenatal care, prenatal care, birth weight, domestic violence.

### INTRODUCTION

One of the common forms of violence against women is intimate partner violence (IPV) which includes physical, sexual or emotional violence. It even includes controlling behaviors by the intimate partner. IPV is not only restricted to developing or underdeveloped countries but is reported from all settings. Unfortunately, this global burden of IPV is endured mostly by women. In rare cases women can also be violent but mostly they are the victims by male partners. Types of IPV are; 1) acts of physical violence which includes slapping, hitting, beating or any other form of abusing physically, 2) sexual

violence which includes assault, abuse etc., 3) emotional or psychological abuse which is subjecting the other person to such a behavior that can cause depression, anxiety, sleep disorders, feeling of worthlessness, regression etc. this may lead to suicidal attempts by the victim, 4) controlling behaviors which includes dominating the partner in unhealthy manner, wanting everything in a way they want, monitoring the partner continuously etc.<sup>1</sup> Domestic violence is defined “as the threat or exercise of physical, psychological, and/or emotional violence; i.e., any type of force against another person with the intent of inflicting harm or exercising power and control over them by a perpetrator belonging to the victim’s “domestic

environment". That can be an intimate partner, husband, former intimate partner, family member, friend or by someone who has some connection or familiarity. Whether or not the victim actually lives in the same household as the perpetrator is not crucial for the definition of domestic violence.<sup>2</sup> The term "intimate terrorism" is used interchangeably with domestic violence as well.<sup>3</sup> Factors associated with IPV are low levels of education, poor employment status of the husband, physical and verbal abuse during one's childhood, absence of parental support, and history of violence in family of origin.<sup>4</sup>

It has been documented that almost seventy-five percent of violence against women is committed by their domestic partners.<sup>5</sup> In countries like Pakistan where joint or extended family system is prevalent<sup>6</sup> women are not only treated poorly by their husbands but also by their family members.<sup>7</sup> Potential perpetrators, including spouses and partners, parents, other family members, neighbors, and men in positions of power or influence.<sup>8</sup> Psychological violence is found to be the most common type of violence in rural women residing in Pakistan.<sup>9</sup> A systematic review conducted in Pakistan showed that men are the perpetrators of IPV and women are the victims.<sup>10</sup>

A systematic review done in Ethiopia showed that a significant number of women experienced violence while they were pregnant.<sup>11</sup> IPV/domestic violence is also found to be associated with infertility or sub fertility.<sup>12</sup> Living in an abusive environment leads to chronic stress which may affect birth weight of the newborn.<sup>13</sup> A study conducted in Karachi Pakistan correctly pointed out the scarcity of data on antenatal domestic violence in Muslim countries.<sup>14</sup> Therefore, the aim of this study was to assess the frequency of antenatal domestic violence during pregnancy, factors associated with it and its association with fetal outcomes in Lahore.

The aim of this study is to assess the frequency of antenatal domestic violence during pregnancy, its associated factors and to determine its effect on fetal outcome in females availing obstetric services in tertiary care hospitals of Lahore.

## **MATERIAL AND METHODS**

This cross sectional study was conducted for duration of 6 months from January 2015 to June 2015. Data was collected from the Department of Gynecology and Obstetrics of government hospitals i.e. Shaikh Zayed Hospital, Jinnah Hospital, General Hospital, Mayo Hospital, Lady Wallington and Sir Ganga Ram Hospital. Formal ethical approval was

taken from Ethical Review Board of Shaikh Zayed Hospital.

A total of 255 participants were recruited in this study using consecutive sampling technique. Sample size was calculated by keeping desired precision at 0.05, confidence level of 95%, for a population size of 750 and estimated proportion 0.53 of domestic violence.<sup>15</sup> All women who had delivered babies within last 2 days in obstetric units of selected tertiary care hospitals were included in the study.

A self-constructed, structured questionnaire was administered and filled after verbal informed consent of the participant in front of two witnesses. Questionnaire was piloted and Cronbach's alpha was run for measuring internal consistency of the tool which came out to be 0.7.

The study approval was taken from IRB, Shaikh Zayed Hospital Lahore. During this study anonymity and confidentiality of the participant was ensured and no monetary benefit was given.

**Operational Definitions:** Antenatal Domestic Violence in the study was taken as physical and verbal abuse/violence;

Antenatal physical violence means slapping, pushing, shoving, hitting, kicking, dragging, beating or throwing something at her or was punched or slapped in the abdomen while she was pregnant by her husband or from someone from the immediate family.

Antenatal verbal abuse means insulting her, humiliating her, belittling her, scaring her etc. during pregnancy.<sup>16</sup>

Foetal Outcome in current study included birth weight (low, normal, over weight), gestational age at birth (Pre-term, term, post-term) and still birth. Neonates <2.5 kg birth weight are low, while between 2.5 to 4 Kg are normal and above 4 kg over weight. Before 37 completed gestational weeks are pre-term, 37 completed weeks till 40 completed weeks is term and more than that is post-term.

Domestic Violence is taken as an independent variable while foetal outcome as dependent. All the concerned socio-demographic variables are given in Table-1.

## **Statistical analysis:**

Data was collected and entered in SPSS version 22.0. Frequencies and Percentages of various variables were determined. Chi-square test was applied to determine association of antenatal domestic violence with various socio-demographic variables and fetal outcomes. P value of <0.05 was considered statistically significant.

**RESULTS**

68% (173/255) of participants belonged to age group of 20 to 30 years while 32% (82/255) belonged to age group of 31 to 40 years. 78% (200/255) were from rural area (as most of the patients that visited our government sector hospitals belonged to peripheral areas, therefore those patients were considered in rural setting). 60% (155/255) were illiterate. 58% (150/255) had self-owned houses while 42% lived in rented houses. 18% (45/255) of the females underwent SVD while 82% had caesarian section.

22% (55/255) of females experienced antenatal domestic violence during current pregnancy while 78% did not. As fetal outcome was in terms of birth weight, it was observed that 74% (190/255) of the babies had normal birth weight while 26% had low birth weight (Table-1). 22% (55/255) females experienced antenatal domestic violence during current pregnancy and out of 55, 72% faced verbal abuse while 27% experienced physical violence. In total 65/255 (26%) were low birth weight neonates and out of them 58.18% (32/55) were born to mothers facing violence during pregnancy. Verbal and Physical abuse by husband were found to be most common with 49% (27/55) and 18% (10/55) respectively (Table-3).

Association of age, residence, education, type of housing and type of delivery were assessed with antenatal violence which was non-significant (Table-2), while a p-value of 0.001 showed a significant association of antenatal domestic violence with birth weight of the neonate (Table-4).

Socio-demographic variables		Frequency (N=255)	%
Age of mother	20-30 years	173	68%
	31-40 years	82	32%
Locality	Rural	200	78%
	Urban	55	22%
Educational level	Illiterate	155	60%
	Matric and above	100	40%
Type of housing	Own	150	58%
	Rent	100	42%
Antenatal domestic violence faced during married life	Yes	80	32%
	No	175	68%
Antenatal domestic violence faced during current pregnancy	Yes	55	22%
	No	200	78%
Type of delivery	SVD	45	18%
	CS	210	82%
Birth weight of the baby	LBW (<2.5 kg)	65	26%
	Normal weight (>2.5 kg)	190	74%

**Table-1:** Antenatal domestic violence according to socio-demographic variables

Variables	Categories	Antenatal Domestic Violence		Chi's Square Test.
		Present	Not Present	P-value
Age	20-30 years	37	136	0.918
	31-40 years	18	64	
Residence	Rural	43	157	0.959
	Urban	12	43	
Education	Uneducated	35	120	0.990
	Educated	22	78	
Housing	Own	33	122	0.913
	Rent	22	78	
Type of Delivery	SVD	10	35	0.906

**Table-2:** Association of socio-demographic variables with antenatal domestic violence

Type of abuse		Frequency (N=55)	%
Physical abuse	By husband	10	18%
	By husbands' family	5	9%
Verbal abuse	By husband	27	49%
	By husbands' family	13	23%

**Table-3:** Type of abuse during pregnancy

Domestic Violence	Birth weight of the baby		P-value
	< 2.5 kg	> 2.5kg	
Yes	32	158	0.001
No	23	42	

**Table-4:** Association of antenatal domestic violence with birth weight of the baby

**DISCUSSION**

The results of this study showed that twenty-two percent of women were victims of antenatal domestic violence during their pregnancy. Results of a study conducted in Turkey showed that 3.2% of females faced antenatal domestic violence during pregnancy.<sup>17</sup> Another study conducted in Ethiopia showed that approximately 23% of women experienced IPV during their pregnancy. Association of IPV with low birth weight was also found to be significant.<sup>18</sup> Results of a systematic review and meta-analysis conducted showed that about 23 % of women experienced domestic violence including IPV during pregnancy. The results also indicated an association of IPV with LBW.<sup>19</sup> Global incidence of IPV is 30%, in some countries it can be as high as 38%.<sup>13</sup> Thus, it can be said that women from different regions of the world faced violence during their pregnancies and the frequency is also approximately similar in developing countries. Results of another national

cross sectional study conducted in Pakistan showed that 37.9% of participants reported experiencing IPV, a significant association was found between IPV, unintended pregnancy and pregnancy loss.<sup>20</sup> The frequency of women who have suffered from violence is even greater than the frequency reported in our study. This variation in frequency might be due to the fact that it was a national level study as compared to this hospital based study.

An analysis conducted on 19 countries concluded that IPV during pregnancy is commonly encountered and is more common than other maternal health conditions which are screened during antenatal. In our study verbal and physical abuse by husband were found to be most common 49% and 18% respectively, whereas physical and verbal abuse by husband family was 9% and 23% respectively.

Domestic violence including IPV during pregnancy is associated with various negative consequences such as decreased infant birth weight and increased risk of premature births. Studies conducted in 2002, 2004 and 2008 signified a strong association of low birth weight of the neonate with antenatal domestic violence (IPV).<sup>21,22,23</sup> These results are consistent with the findings of our study.

Our study found domestic violence association with low birth weight of the new born with a pvalue of <0.001. Low birth weight infants and preterm births are main causes of neonatal morbidity and mortality. Gestational age of the new-born and birth weight at delivery are considered to be the strongest predictor variables of health outcomes of the child. In extremely premature and low birth weight infants cognitive defects, delayed motor development, behavioral and psychological problems are very common<sup>24</sup>.

Domestic violence including IPV was found to be significantly associated with LBW and preterm birth.<sup>25</sup> It is said that violence against women is perhaps one of the most shameful human rights violation. Millennium Development Goals (MDG) 3,4,5& 6 could not be achieved without empowering women. Antenatal domestic violence can be labelled as a security issue. In spite of recognition of this issue, preventive strategies still remain inadequate.<sup>26</sup> A study conducted in Pakistan highlights the magnitude of violence and its association with reproductive health of women.<sup>27</sup> Results of a study conducted in Iran showed that the women with a history of violence during antenatal period had 1.9 fold higher risk of rupture of membranes and 2.9 fold higher risk of low birth weight as compared to women who did not face any violence.<sup>28</sup> Incidence of psychological symptoms such as depression,

anxiety are significantly associated with antenatal domestic violence.<sup>29</sup> However, in 2011, a study conducted in Karachi, Pakistan significantly reports high prevalence (56 to 57%) of physical violence<sup>14</sup> which has now considerably been reduced as shown by other studies (but somewhat still present) and probable reasons may be better education and awareness toward women rights and empowerment. IPV as a part of domestic violence is considered to be a strongly associated with abortion in different settings. Pregnancy terminated through unsafe method often leads to death of the mother or development of serious complications. Therefore, reducing incidence of IPV can significantly reduce the worst outcomes related to maternal health.<sup>30</sup> IPV as a part of domestic violence is found to be significantly associated with unintended pregnancies and unfavorable maternal outcomes such as depression, distress, poor antenatal care, bleeding from vagina, abortion etc. and in infants it can lead to premature birth, low birth weight and development of other complications etc.<sup>31</sup> As birth weight is a reliable variable of measuring health of the new-born therefore, this study focuses mainly on birth weight of the new-born.

Our study is limited by the fact that six hospitals were selected based on administrative and geographical convenience. In future a community based survey or a representative multicentre hospital based survey could be helpful in getting a better insight into the burden of problem. Another limitation is that the females were approached in hospitals after delivery so we missed abortions as fetal outcome. This is only a tip of the iceberg of domestic violence which we see in tertiary care hospitals. For a true picture we must not miss the females facing severe domestic violence and delivering at home or small unregistered centres. A community based survey can overcome these limitations in future.

The antenatal domestic violence reported in this study requires serious attention of policymakers, political allies, and health professionals. Global initiatives which focus on reducing maternal mortality and improving health of the mother should give more attention to violence during pregnancy. Therefore, it can be suggested that history of antenatal domestic violence should be part of normal antenatal check-up.

Legal actions are required to outlaw violence against women. Focus should be given on male and female education. Personnel working in healthcare facilities need training on identification, counseling, management, and prevention of violence against women. Involvement of mass media is necessary to



create a debate on women's empowerment. Most importantly, there is a need to return to the Islamic notion of the husband as a caretaker, sympathetic head of the household.

### CONCLUSION

Antenatal domestic violence is found to be associated with low birth weight of the neonate. Antenatal domestic violence is a neglected domain in maternal & child care and implementation of legislation is required to provide complete protection to mothers

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