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Domestic Violence and Its Association with Adverse Pregnancy Outcomes in Zimbabwe: A Descriptive Correlational Study

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Abstract:
This study aimed at determining the relationship between domestic violence during pregnancy and adverse pregnancy outcomes. A descriptive correlational study design was employed. The setting for this study was Marondera Provincial Hospital in Zimbabwe, targeting women of childbearing age 15 to 49 years. A total of 120 participants were drawn from post-natal, neonatal unit and female wards including both post-natal and post aborted mothers. Convenient sampling method was used to recruit participants and face to face interviews were done using structured interviews to collect data. Data was coded and computed using the SPSS 16.0 and was analysed through descriptive and inferential statistics. The study revealed that women are experiencing different forms of domestic violence but they are not reporting. The results revealed that 32.5% of women experienced psychological/emotional abuse, 24.2% economic abuse, 11.7% physical abuse and 7.5% sexual abuse. Of the 120 participants, 21.7% reported abuse in pregnancy. The major adverse pregnancy outcomes reported included preterm deliveries (9.2%), low birth weight (13.3%), birth asphyxia8.3%, still births (2.5%), neonatal deaths (0.8%) and abortion (3.3%). Late antenatal care booking 79 (65.8%) and unbooked 1 (0.8%) cases were reported as some of the major risk factors. The major abusers were the intimate partners (17.5%), followed by the ex-husbands (1.7%). Other people like the in-laws were also reported as abusers (2.5%). The study revealed that these cases were going away unreported as most of the cases were not reported for medical care and even to the police. The inferential statistics revealed that there is a positive relationship between domestic violence during pregnancy and adverse pregnancy outcomes at (r=.229 and p=<0.05). R- squared indicated that experience of domestic violence during pregnancy accounts for 5.3% of the variance in the occurrence of adverse pregnancy outcomes. The study revealed that there is great need to intensify education of both men and women on the effects of domestic violence in pregnancy and strength the policy framework for the implementation of the local, regional and international polices on rights of women in a bid to improve health outcomes for women and children.*

Keywords: *Domestic Violence, Descriptive Correlational study, Pregnancy adverse outcomes,*

1. Introduction

Domestic violence against woman is now widely recognised as a serious human rights abuse and increasingly as an important public health problem. It has got some substantial consequences for women's physical, mental, sexual and reproductive health (Hegarty, 2011). This recognition was strengthened by agreement at key international conferences and the fourth World Conference on Women, Beijing 1995 (beijing20.unwomen.org/en/about.). Violence against women is also a major threat to social and economic development. The General Assembly of the United Nations resolved to combat all forms of domestic violence against women and to implement the Convention on Elimination of all forms of Discrimination against Women (WHO, 2013).Its platform for action identified the scarcity of adequate information on the prevalence, nature, causes and consequences of domestic violence worldwide as a serious obstacle to the wide recognition of the magnitude and seriousness of the issue, and the development of the effective intervention strategies. Since

then international research has provided increasing evidence of the prevalence of violence against women, particularly physical violence perpetrated by intimate male partner (WHO, 2006).

Domestic violence is defined as any behaviour within an intimate relationship that causes physical, economical, psychological or sexual harm. Such behaviour includes acts of physical aggression, psychological abuse, financial abuse, forced intercourse and other forms of sexual coercion, and various controlling behaviours for example isolating from family and friends, monitoring movements and deprivation of basic necessities (Hegarty, 2011). Intimate Partner Violence (IPV) against woman is defined as any acts of threats of physical or sexual assault perpetrated against woman by their current or former spouses, intimate partners, or date (Malcoe, Duran & Montgomery, 2011).

According to the WHO (2006), 15-71% of women had ever been physically or sexually assaulted by partners. Domestic violence is one of the major causes of morbidity and mortality for women of child bearing age, their new born babies, with the main contribution being from the mental health consequences of abuse (Hegarty, 2011). According to WHO (2013), the other consequences of violence include complex social conditions such as poverty, lack of education, gender inequality, child morbidity and mortality, maternal ill health and HIV/AIDS. Worldwide, almost one third (30%) of all women who have been in relationship have experienced physical and or sexual violence by their intimate partner, in some regions this is much higher. Globally, 38% of all murders of women are committed by intimate partners (WHO, 2013).

In Zimbabwe domestic violence is widely acknowledged to be a great concern, not just as a human rights perspective but also from an economic and health perspective (ZDHS, 2010/11). Thirty percent (30%) of women aged 15-49 have experienced physical violence since the age of 15 and the most current perpetrator against women is the woman's current husband or partner. This domestic violence has affected their pregnancy outcome but has not been recognised or even reported. Thirty-two percent (32%) of women who have had sexual intercourse reported that their first experience was forced against their will. Overall 27% of women reported having experienced sexual violence. In 9 to 10 cases, their current or former husband or boyfriend committed the act. Only 37% of women who had experienced physical or sexual violence had sought help. Experienced violence during pregnancy does not only affect the health of the woman but also can have serious consequences for the unborn child. Overall 5% of women who have had ever been pregnant reported that they experienced violence during one or more of their pregnancies (ZDHS, 2010/11).

Marondera District is among some of the districts reporting domestic violence cases among women of childbearing age. The following were some of the cases reported in 2014: physical violence-208, economic abuse-271, psychological/verbal abuse-173 and sexual abuse-19. All these forms had some adverse effects on pregnancy outcome (Marondera District Annual Report, 2014). Between 2010 and 2013, Marondera provincial Hospital recorded the following adverse pregnancy outcomes which could be attributed to domestic violence during pregnancy: underweight deliveries 169, 497, 475 and 612, abortions 137, 325, 434 and 407, early neonatal deaths 37, 100, 136 and 113, still births 68, 126,124, and 122 and lastly deliveries by HIV positive mothers 65, 130, 326 and 411.

This showed a gradual increase of the adverse pregnancy outcomes from the year 2010 to 2013. Prematurity and low birth weight is among the major problems followed by abortions. This is an indication that interventions must be put in place on domestic violence cases to reduce some of these cases. This study sought to determine the association between domestic violence in pregnancy and adverse pregnancy outcomes amongst women of Child bearing age in Marondera, Zimbabwe.

2. Materials and Methods

A descriptive correlational design was used to investigate the relationship between domestic violence during pregnancy and adverse pregnancy outcomes among women of child bearing age from 15 to 49 years at Marondera Provincial Hospital. Women of child bearing age were chosen as the study population based on their vulnerability to domestic violence and adverse pregnancy outcomes. Convenience sampling was used to select a sample size of 120 participants. Data was collected on demographics, prevalence of domestic violence and pregnancy outcomes utilizing structured interviews. Pretesting of the instrument was done on five participants and adjustments were done to ensure reliability and validity. The study was cleared by Joint Parirenyatwa Research Ethical Committee (JREC) and Medical Research Council of Zimbabwe (MRCZ). Informed written consent was obtained from the study participants. Descriptive and inferential statistics were used to analyze data.

3. Results

3.1. Socio-demographics and Participant Characteristics

The study participants consisted of 120 women of child bearing age who were either postnatal mothers or post abortal. Thirty three (27.5%) mothers were 15 to 20 years, 58 (48.3%) were 21 to 30 years, 27 (22.5%) were between 31 to 40 years and women 41 to 49 constituted the minority age group 2 (1.7%).The sample had a mean age of 26 years with a standard deviation of 6.4 and a mode of 20 years. The minimum age was 15years and the maximum age was 42 years.

The marital status of the participants were 3 (2, 5%) for single mothers, 116 (96.7%) married mothers and only 1 (0.8%) divorced mother. Only 1 (0.8%) reported that she stayed alone and this was a divorcee, 110 (91.7%) stayed with their husbands, 8 (6.7 %) stayed with family and 1 (0.8%) stayed with other relatives. Sixty four (53.3 %) participants resided in the urban and 56 (46.7%) stayed in the rural areas. Ninety seven (80.8%) reported secondary education, followed by primary education 16 (13.3%), 6 (5.0%) went up to tertiary education and only 1 (0.8%) reported to have no formal education. Fifteen (12.5%) were self-employed,77 (64.2%) unemployed, 12 (10%) professionals and 16 (13.3%) non-professionals.

3.2. Prevalence of Domestic Violence during Pregnancy

Psychological/emotional abuse had the highest rate of39 (32.5%) followed by economic abuse 29 (24.2%) cases, physical abuse had 13(11.7%) and lastly sexual abuse had 9(7.5%) cases. Sexual abuse resulted in some cases of unwanted pregnancies and STIs/HIV infections.

	10. History of abuse								
Variable Frequency (n)	Economic Abuse		Psychological/ Emotional Abuse		Sexual Abuse		Physical Abuse		
Percentage (%)	No	Yes	No	Yes	No	Yes	No	Yes	Totals
	9175.8	2924.2	8167.5	3932.5	11192.5	97.5	10688.3	1411.7	120 100.0

Table 1: Prevalence of Domestic Violence (n=120)

The sexually abused participants were abused by partners 9(7.5%) and 1(0.8%) by ex-husband. Out of the 10(8.3%) cases, 6(5.0%) managed to have protected sex and 4(3.0%) did not. All the 10(8.3%) cases did not sought out for medical care which resulted in some unwanted pregnancies and STIs/HIV infections or re-infections. Sixty six percent of the participants strongly disagreed that they were afraid of their husbands, 12(10%) disagreed, 15(12.5%) agreed and 13(10.8%) strongly agreed.

3.3. Pregnancy Outcomes

Sixteen (13.3%) participants reported delivery of low birth weight babies, 11(9.2%) preterm deliveries, 3(2.5%) still births, 1(0.8%) neonatal death, 10(8.3%) had birth asphyxia and 87(72.5%) had normal babies.

Variables Frequency (n) Percentage (%)
22. Pregnancy Outcomes
Child Outcomes
Low Birth Weight: No104 86.7
Yes1613.3
Preterm Delivery: No10990.8
Yes119.2
Still Births: No11797.5
Yes3 2.5
Neonatal Deaths: No 11999.2
Yes1 0.8
Birth Asphyxia: No 11091.7
Yes10 8.3
Normal Babies: No 87 72.5
Yes3327.5
Totals120100.0

Table 2: Pregnancy Outcomes Data (n=120)

3.4 *Maternal Outcomes*

Seventy nine (65%) had late booking and 1(0.8%) while 40(33.3%) cases managed to book on time. Four (3.3%) had abortions, 10(8.3%) were HIV infected, 1(0.8%) maternal injury, 12(10%) unwanted pregnancies, 5(4.2%) teenage pregnancies and 1(0.8%) had a history of suicidal tendencies.

3.5. Pearson Coefficient Correlation

The results showed that there is a positive significant correlation (r=.229*, p=0.05). The results are showed that if women are subjected to abuse of any form during pregnancy, they are bound to experience adverse pregnancy outcomes. The major forms of abuse reported by these women were emotional/psychological abuse followed by economic abuse which contributed to preterm deliveries, still births, abortions and late antenatal booking.

Y
X.229*
*P=<0.05**p<.01p<0.01
Y= Experience of adverse pregnancy outcomes
X= Domestic violence during pregnancy

Table 3: Pearson's Correlation Test

3.6. Regression Analysis

The regression co-efficient b= .229* showed that domestic violence was a predictor regarding the adverse pregnancy outcomes. The co-efficient of determination, R squared=0.053, F=6.546, P=0.05 and a standard error of the estimate=1.715 indicated that there was a relationship between the two variables. R squared indicated that domestic violence during pregnancy accounts for 5.3% variance in the occurrence of adverse pregnancy adverse pregnancy outcomes.

Variable BSEB Beta Significant Level
X .267*.104 .229*.12
Constant-201** 1.387 .885
R squared = 0.053 F= 6.546
P= <0.05**p=<0.01***p=0.001
X = Domestic Violence during Pregnancy

Table 4: Regression analysis of the experience of domestic violence

4. Discussion

4.1. Sample Demographics

The sample size of 120 participants calculated using Dobson's formula. All the participants fell in the age range of 15 to 42 years. This could be evidence of greater enlightenment and awareness of women on the dangers and risk factors associated with old age pregnancies. According to Perry (2004), these risk factors include chronic conditions such as type 2 diabetes mellitus, reproductive health cancers and certain genetic conditions like Down syndrome. The majority (48.3%) of the participants were between 21 and 30 years which is the most recommended safe child bearing age groups although it's up-to 35 years (Perry, 2004). These women are considered to be physically and emotionally mature and ready to be called mothers or look after their babies. The study findings revealed that as age increases the number of pregnancies reduces and are susceptibility to co-morbidities increase.

Marriage now seems to be universal in Zimbabwe as the majority of the participants 116(96.7%) were married, only 3(5%) were single mothers and 1(0.8%) divorced. According to Campbell (2010), some studies revealed that married women are at higher risk of domestic violence because they want to protect their marriages and these cases may be unrecognised or unreported through fear or shame. Majority of the participants 110(91.7%) stayed with their husbands who happened to be the major abusers with a prevalence of 21(17.5%). The implications of this in midwifery is that partners need to be educated on the issue of domestic violenceespecially during pregnancy as this is likely to cause some adverse pregnancy outcomes. This is also considered a vulnerable group in health because they are carrying a life of another important person. There was no much difference noted between women staying in urban and rural areas. In the study, 64 (53.3%) were from the rural areas while 56 (46.7%) were from the rural areas. Both groups were vulnerable to domestic violence.

The majority of the participants 97 (80.8%) were educated up-to secondary level. This is reflective of the country's high literacy (94%) although the employment rate is very low (ZDHS, 2010/11).Partners also showed a high literacy rate with95(79.2%) having attained secondary education. Level of education has been shown to be a strong predictor of domestic violence and in this regard, it could also have contributed to the lower levels of domestic violence. Seventy-seven (64%) reported unemployment which indicated that women are not financially empowered hence they are prone to economic abuse from their partners as evidenced by the study findings. According to other studies, poor women are more susceptible to abuse because they depend on their husbands as sources of income and they can-not look after themselves financially. This is also comprises their ability to make autonomous decisions with regards to their health and that if the future child. All the partners were formally employed or self- employed. Fifty (45.8%) were said to be professionals, 55 (45.8%) were non-professionals and 11(9.2%) were self-employed. This is a sign that partners are likely to take advantage of this situation and tend to abuse their wives because they are not financially empowered.

One-hundred and twelve (93.3%) of the participants were Christians of various denominations and only 8(6.7%) were traditionalists. According the bible, women are supposed to be submissive to their husbands and this could explain why some of the women are vulnerable to domestic violence and these cases are often going unreported. There is need to educate these women in church gatherings on domestic violence and its implications on pregnancy outcomes.

4.2. Prevalence of Domestic Violence among the Pregnant Women

Participants were screened for domestic violence during pregnancy and the adverse pregnancy outcomes which revealed a relationship with the occurrence of adverse pregnancy outcomes. They were screened for the four major forms of abuse which included psychological/emotional abuse, economic abuse, physical abuse and sexual abuse. The responses of the participants were scored from 0 to 1. A yes response was scored as 1 and a no or not applicable was scored as 0. The total scores for the occurrence of domestic violence were 23 which was an indicative of abuse during pregnancy. According to the findings the mean score was 13.22 and the standard deviation was 1.5 with a mode was 13. The scores ranged from 10 to 20.

The study findings revealed that women were more vulnerable to psychological/emotional abuse 39(32.5%), followed by economic abuse29 (24.2%) or both. These forms of abuse can contribute to adverse pregnancy outcomes indirectly. These can lead to stress and the mother is likely to develop maternal conditions such as pregnancy induced hypertension which may result into abortions, preterm delivery, intra-uterine growth restriction, small for gestational age or even still births (Moneni et al, 2003). There were also

cases of physical abuse 14(11.7%) and sexual abuse 9 (7.5%).These results tend to differ with the World Health Organisation report in 2006 which revealed more cases of physical and sexual violence at 52% and 30% respectively. This might be an indication that the community is now informed about physical and sexual violence and awareness campaigns should now focus on psychological and economic abuses and their implications to pregnancy outcomes. If a woman is economically abused she is likely to book pregnancy late or even not book the pregnancy which will affect screening and monitoring of both the maternal and foetal conditions to exclude complications which might need early interventions to prevent complications (Moneni et al, 2003).

Twenty-six (21.7%) participants reported history of abuse in pregnancy and all had some adverse pregnancy outcomes. These were either foetal or maternal or both. The majority reported maternal adverse outcomes. Late antenatal booking was identified as a risk factor in all cases. The findings were almost similar to other study findings which were conducted in one of the developing countries like Zimbabwe which revealed that 27.7% women were abused during pregnancy as compared to 13.3% for the developed countries. The partner was the major abuser (30%) of the total cases. Most of the violence against women occurs at home; thus women are more at risk of domestic violence from an intimate partner than from any other type of perpetrator (http://www.biomedcentral.com/1472-6874/14/63/prebub). There is great need to educate partners need on domestic violence and its implications to pregnancy outcomes especially during antenatal visits.

Of the total 120 (100%) participants, 10(8.3%) reported being sexually abused.These findings are almost similar to those for a study done in United States where nearly one in ten (9.4%) women have been raped by an intimate partner in her lifetime. Sexual abuse is associated with high risk of contracting STIs/HIV infection (CDC, 2006). STIs/HIV infections have resulted in poor maternal health which may affect the growth and development of the foetus to the extent of even delivering an HIV positive infected baby. The other cases associated with sexual abuse include unwanted pregnancies and teenage pregnancies.

4.3. Pregnancy Outcomes

Pregnancy outcomes were classified under child and maternal outcomes. The child outcomes were low- birth weight(13.3%), preterm deliveries(11.9%), still births (2.5%), birth asphyxia (8.3%), still births (0.8%) and normal deliveries (72%). A report by the CDC in 2012also revealed that preterm births, low birth weight and small for gestational age were the commonest pregnancy adverse outcomes related to domestic violence. The type and severity of domestic violence are also relevant to neonatal deaths or still births (Ellsberg, Pena, Herrera, Liljestand & Winkvist, 2010).

The majority, 79 (65.8%) of the mothers reported late for ANC booking. According to Henderson & Macdonald (2004), women should seek professional health care whenever they suspect pregnancy which is usually after one or two missed periods and even with the Option B+ programme, approximately 12 weeks and below. This will help the health care provider to screen mothers for conditions which may affect the well-being of the foetus and the mother such as HIV screening and other chronic conditions such as Diabetes Mellitus, hypertension or malnutrition among others. This will allow for early interventions and prevent complications or even start an HIV positive mother on Option B+. Moneni, Ellsberg & Person (2003), indicated that women experiencing domestic violence during pregnancy are more likely to enter antenatal care late in pregnancy and to report having unwanted pregnancies. Late ANC booking can result in late identification of pregnancy complications for interventions and this will affect the growth and development of the foetus.

Four (3.3%) participants reported abortions. WHO (2013), also reported that women experiencing domestic violence during pregnancy are more likely to have miscarriage or abortion. Ten (8.3%) reported to have been treated for pregnancy-induced-hypertension and according to Moneni etal. (2003), depression, anxiety and post-traumatic stress can also contribute to maternal conditions such as PIH and DM. A total of 10(8.3%) mothers reported having been treated for STIs/HIV, 12(10% had unwanted pregnancies and 5(4, 2%) had teenage pregnancies. These could have been as a result of sexual abuse and according to WHO (2013), intimate partner sexual violence can lead to unwanted pregnancies and sexually transmitted infections including HIV. One (0.8%) mother reported maternal injury and also 1(0.8%) reported suicidal attempt and these were as a result of domestic violence.

4.4. The Relationship between Domestic Violence and Adverse Pregnancy Outcomes

Application of the Pearson's correlation test was done to examine the relationship between domestic violence during pregnancy and the adverse pregnancy outcomes. The analysis of the study has shown a positive relationship of: ($r = .229^*$, $p = <0.05$). This implies that domestic violence during pregnancy has an effect on pregnancy outcomes. Participants (21.7%) reported cases of abuse during pregnancy and this is believed to have contributed to some of the adverse pregnancy outcomes. This implies that there is need for community awareness on domestic violence during pregnancy and its implications on pregnancy outcomes.

Linear regression analysis showed that domestic violence in pregnancy had a weak positive relationship to occurrence of adverse pregnancy outcomes. R-squared indicated that domestic violence in pregnancy accounts for 5.3% variance in occurrence of the adverse pregnancy outcomes. These findings supported the hypothesis that there is a relationship between domestic violence during pregnancy and adverse pregnancy outcomes.

4.5. Implications of the Study Findings to Maternal and Child Health Care

There is need for nurses and midwives or other health professionals to screen educate and treat women for domestic violence at first contact to prevent occurrence of adverse pregnancy outcomes. Men should also be engaged as partners in maternal health care so that a comprehensive package on maternal and child care is delivered to both along the continuum of care. Domestic violence and its management in MNCH should constitute one of the thematic areas in the curricula for health professionals to improve their case

management skills. This can be augmented by in-service trainings to midwives on domestic violence including those in private practices. A multi-sectoral approach including all stakeholders (including traditional leadership), ministries and organisation through an integrated approach will assist in allaying the prevalence and potential effects of domestic violence in pregnancy. Government can also strengthen the implementation of the local and international policy frameworks such as the CEDAW and make maximum use of available screening tools and data collections tools to continuously monitor the prevalence and effects of domestic violence.

4.6. Limitations

The study focused one provincial hospital due to time limit and financial constraints. A wider representation could have made the sample more representative and results generalizable. For future studies, prospective study designs could also be used to fully assess the association between the two variables over a period of follow-up.The instrument was developed and used for the first time by the researcher. This could have also impacted on the validity and reliability of the results. This was however curbed by pre-testing of the instrument. Convenient sampling method was used instead of the probability sampling methods. This is known to increase the risk of bias and affect the representativeness of the sample. However considering the study factors, this sampling had its own strength considering the variables that were under study.

5. Conclusion

Women are exposed to different forms of domestic violence during pregnancy. These forms of abuse have an impact on the pregnancy outcomes such as abortions, low-birth weight, pre-term delivery, maternal injuries, suicidal attempts and birth asphyxia among others. It is however the duty of the health-care providers to actively screen these mothers during pregnancy to help on the reduction of maternal and child morbidity and mortality rates. Any domestic violence survivor identified needs counselling and closer follow-up to identify any complications early to reduce maternal and perinatal complications.

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