INTIMATE PARTNER VIOLENCE DURING PREGNANCY AND ITS ADVERSE BIRH OUTCOME AMONG RECENTLY DELIVERED WOMEN IN HOSSANA TOWN, HADIYA ZONE, SOUTHERN ETHIOPIA; FACILITY BASED CROSS SECTIONAL STUDY

BY

TARIKU LAELAGO (BSC)

A THEISIS SUBMITTED TO THE DEPARTMENT OF POPULATION & FAMILY HEALTH, COLLEGE OF PUBLIC HEALTH & MEDICAL SCIENCES, JIMMA UNIVERSITY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF PUBLIC HEALTH IN REPRODUCTIVE HEALTH (MPH)

JUNE 2014

JIMMA, ETHIOPIA

Intimate Partner Violence during Pregnancy and Its Adverse Birth Outcome among Recently Delivered Women in Hossana Town, Hadiya Zone, Southern Ethiopia; Facility Based Cross Sectional Study

By

Tariku Laelago (BSC)

Advisor: Tefera Belachew (MD, Msc, DLSHTM, PhD), Professor of Nutrition

Co-advisor: Meseret Tamrat (Msc)

June 2014

Jimma, Ethiopia

Abstract

***Background**: Intimate partner violence is recognized as worldwide serious public health problem. It can cause serious injury, disability or death. Risk factors for intimate partner violence during pregnancy are often similar to risk factors for intimate partner violence in general. Most studies done on intimate partner violence during pregnancy stated only prevalence of physical violence or physical and sexual violence, but this study tried to fill the gaps by elucidating intimate partner violence interims of physical, sexual and psychological violence and also determined its adverse birth outcome.*

***Objectives**: To assess the prevalence and associated factors of intimate partner violence during pregnancy and its adverse birth outcome among recently delivered women in public health institution of Hossana Town, Hadiya Zone, Southern Ethiopia, 2014.*

***Methods**: Facility based cross sectional study was conducted on recently delivered women in public health facility of Hossana Town, Hadiya zone, Southern Ethiopia. A total of 195 recently delivered women were included in the study. The data were collected by pretested structured questionnaire and record review and were described by using frequency tables and graphs.*

Multivariate logistic regressions were performed to identify the most significant predictors of intimate partner violence and birth outcome. Odds ratios at 95% CI were computed to measure the strength of the association between the outcome and the explanatory variables. P-value <0.05 was considered as a statistically significance.

***Results:** Twenty three percent (23%) of women experienced at least one form of Intimate partner violence during pregnancy. Psychological violence was the most common form (20%) followed by physical (15%) and sexual (12%).*

Alcohol drinking by the partner (AOR=22(7.4, 65.6), no formal education of the partner (AOR=10.8(1.06, 108.5), planned pregnancy (AOR=0.23(0.079, 0.67) were significantly associated with intimate partner violence during pregnancy and intimate partner violence during pregnancy (AOR=14.3(5.03, 40.7) was significantly associated with Low birth weight.

Conclusion

This study revealed that intimate partner violence during pregnancy was a common experience. Partners' alcohol consumption; no formal education of partner, planned pregnancy were associated with intimate partner violence during pregnancy and intimate partner violence during pregnancy was associated with low birth weight. Health sector, police, lawyers and advocator's should give due emphasis to the victims of this problem and public awareness of its consequences.

***Keywords**: intimate partner violence, pregnancy, adverse birth outcome*

Acknowledgement

I would like to express my gratitude to my advisors Professor Tefera Belachew and Mrs. Meseret Tamrat for their contributions and comments they have provided from development of the proposal to finalization of the study.

I would like to thank also Jimma University, department of population and family health, for the chance they give to me.

Clients, staffs of the hospital and health Center who participated directly or indirectly in the study are acknowledged.

I would like to thank all my data collectors, supervisors and facilitators.

At last but not the least, I would like to thank my friends for their important inputs in the preparation of this research report**.**

Table of contents

List of tables

List of figures

Acronyms and abbreviations

ANC	antenatal care
AOR	adjusted odd ratio
APGAR	Appearance, pulse, grimace, activity and respiration
COR	crude odd ratio
ETB	Ethiopian birr
HIV	Human immune deficiency virus
Id no	Identification number
IPV	Intimate partner violence
KM	Kilometres
LBW	Low birth weight
OR	odd ratio
RI	Rhode Island
SD	Standard deviation
SNNPR	South nation's nationalities and peoples region
SPSS	Statistical Package for the Social Sciences
STD	Sexual transmitted disease
USA	united States of America
VAW	violence against women
WHO	World health organization

Chapter one: Introduction

1.1 Background of the study

Intimate partner violence (IPV) consists of the use or threat of use of physical, emotional, verbal, or sexual abuse by a current or former partner or spouse with the intent of instilling fear, intimidating and controlling behaviour(1).

The term intimate partner violence is also known as domestic violence, spouse abuse, or woman abuse. About three quarters of acts of violence against women older than age 18 are perpetrated by a current or former husband, cohabitating partner, or date. In other cases, the perpetrator is another family member, such as a parent or guardian, or a more casual acquaintance (2).Intimate partner Violence during pregnancy is defined as the physical, sexual or emotional abusive acts as well as controlling behaviours inflicted on pregnant women (3).

Intimate partner defined as a current or former partner, including a spouse, boyfriend, or girlfriend. Intimate partner violence can be expressed through many types of violent behaviour. Its hallmark is coercive control, which includes actual physical or sexual violence, threats of physical or sexual violence, and psychologic or emotional abuse. Often, psychologic and emotional abuse occurs along with physical or sexual violence (2, 4).

WHO mult-country study confirmed that IPV is widespread in all countries studied. Among women who had ever been in an intimate partnership:13–61% reported ever having experienced physical violence by a partner, 4–49% reported having experienced severe physical violence by a partner; 6–59% reported sexual violence by a partner at some point in their lives; and 20–75% reported experiencing one emotionally abusive act, or more, from a Partner in their lifetime (5).

Pregnant women are at a higher risk of experiencing gender based violence because they are more likely to be in relationships compared to non-pregnant population. The socio-demographic risk factors reported by Taillieu and Brownridge included being young or adolescent; single marital status; separated or divorced during pregnancy; belonging to ethnic minorities and low educational status. Adolescents who are usually less mature to handle relationships or marriages may also be economically vulnerable and at risk of submitting to

male power and abuse. Other risk factors identified included increased substance and drug use (6).

The experience of IPV during pregnancy has many adverse consequences. Babies born to women who are subjected to IPV while pregnant have a significantly increased risk of being born preterm or LBW, which can result in immediate and long term health and developmental problems. Effects are not limited to women who experience only physical abuse or trauma, as even psychological IPV has been linked to poor pregnancy outcomes. Many maternal factors are associated with pregnancy IPV, including physical and mental health problems and negative health behaviours (7).

Any woman could be a potential victim but , those most likely to be experiencing pregnancy IPV are women with recurrent pregnancy infections, including STDs, women who suffer from depression or anxiety, women with inadequate prenatal care utilization, those who fail to gain adequate weight, and women who smoke, consume alcohol, or use illicit substances during pregnancy (7).

There are significant negative maternal and child health outcomes associated with violence against pregnant women which are directly linked to Millennium Development Goals number 4 and 5 to reduce child mortality and improve maternal health as well as MDG 3 to promote gender equality and empowerment of women(8).

The majority of studies on intimate partner violence during pregnancy measure physical violence during pregnancy, although sexual and emotional abuse during pregnancy are also considered as detrimental for women's and their children's well-being. An especially concerning form of physical violence during pregnancy is when abusive partners target a woman's abdomen, thereby not only hurting the women but also potentially jeopardizing the pregnancy (3).

1.2 Statement of the problem

The prevalence of intimate partner violence during pregnancy among ever-pregnant women ranged from approximately 2% in Australia, Denmark, Cambodia and Philippines to 13.5% among ever-pregnant women in Uganda. Over half of the surveys had a prevalence estimate between 3.8 and 8.8%. Prevalence appeared to be higher in the African and Latin American countries relative to the European and Asian countries, although estimates within regions (and countries) were highly variable (9).

The prevalence of physical intimate partner violence among pregnant women in Shimelba refugee camp of Ethiopia ranged from 2.6 %(12 month prevalence) to 4 %(life time prevalence (10).

Intimate partner violence is recognized as worldwide serious public health problem .It can cause serious injury, disability or death. It can also lead directly to mental disorder, substance abuse, lack of fertility control, and personal autonomy. IPV during pregnancy, particularly, is harmful as it associated with determinant outcome to both mother and her unborn baby. Women experiencing IPV during pregnancy have high rate of miscarriage, more complication during pregnancy, sexually transmitted infection(including HIV),and higher prevalence of mental disorder such as depression, anxiety, sleep and eating disorders compared to their non-abused peers (11-14).

Intimae partner violence during pregnancy has consequences into the postpartum and later periods is provided by studies that find increased levels of anxiety even six months after birth among babies whose mothers experienced partner violence during pregnancy (15).

There are various factors that appear to place certain women at a somewhat greater risk for abuse, These includes possessive partner, pregnancy, substance abuse (alcohol or other by partner), history of abuse (men who witnessed domestic violence between their parents), age of women (between 19 and 29) and marital status (separated or divorced were more likely than married to report abuse) (4).

Women may be at greater risk for IPV during and shortly before pregnancy perpetrated by a former husband or partner and IPV risk during pregnancy is strongly associated with risk factors such as: having a partner who expressed he did not want the pregnancy (16).

Antenatal care provides a window of opportunity for identifying women who experience intimate partner violence. Not only is it often the only point of contact for women within a health-care setting, but also provision of health services and support through the duration of a pregnancy and the possibility for follow-up, make antenatal care a suitable setting for

addressing issues of abuse. The most frequently tested intervention in antenatal care is a short 'empowerment counselling' intervention, which provides information about the types of abuse and the cycle of violence, conducts a danger assessment to assess risks and preventive options women might consider, and develops a safety plan with the woman.

Being tested in several antenatal and postnatal care clinics in the USA and Hong Kong Special Administrative Region, China, the intervention showed a decrease of psychological and physical violence as well as improvements in women's physical and mental health (17-18).

To improve the health of pregnant women and their infants, it is important that research investigates the risk factors for violence against women during pregnancy, the prevalence and forms of violence experienced by pregnant women and its adverse birth outcome. However, there is no other study done on intimate partner violence during pregnancy and associated factors and its adverse birth outcome in the study area. Therefore, this study tried to assess the prevalence and associated factors of intimate partner violence during pregnancy and its adverse birth outcome among recently delivered women in public health facility of Hossana Town.

Chapter two: Literature review

Prevalence of intimate partner violence during pregnancy

The WHO multi-country study on women's health and domestic violence against women, which consists of population-based surveys conducted in various countries using the same methods and definitions, found the prevalence of physical intimate partner violence in pregnancy to range between 1% in Japan city to 28% in Peru Province, with the majority of sites ranging between 4% and 12% (19). This finding was supported by an analysis of Demographic and Health Surveys and the International Violence against Women Survey, which found prevalence rates for intimate partner violence during pregnancy between 2% in Australia, Denmark, Cambodia and Philippines to 13.5% in Uganda, with the majority ranging between 4% and 9% (9).

A study conducted in Rhode Island on intimate Partner Violence before or during Pregnancy identified Overall, 5.5% of RI women reported physical IPV before and/or during the most recent pregnancy,4.2% for before pregnancy and 3.2% for during pregnancy. IPV was significantly higher among teenagers (14.3%) (20).

A systemic review of Africa studies on IPV against pregnant women reported the overall prevalence of intimate partner violence during pregnancy ranged from 2.3% to 57.1%. The studies also reported prevalence rates of 23% to 40% for physical, 3% to27% for sexual and 25% to 49% for emotional intimate partner violence during pregnancy (21).

A cross sectional study conducted on prevalence and associated factors of intimate partner violence among pregnant women in Kenya Kisum hospital showed that one hundred and ten (37 %) of them experienced at least one form of IPV during pregnancy. Psychological violence was the most common 29 %, followed by sexual 12%, and then physical 10 % (22).

WHO multi-country study on women's health and domestic violence against women found the prevalence of intimate partner violence during pregnancy 8 % in Ethiopia province(3).

Risk Factors for Violence during Pregnancy

Risk factors for intimate partner violence during pregnancy are often similar to risk factors for intimate partner violence in general. Given that pregnancy is a time that may demand increased relationship commitment and increase the resources needed, some risk factors are likely to be more important during pregnancy. One potential risk factor significantly associated with intimate partner violence during pregnancy is having an unwanted or

unplanned pregnancy, as numerous population-based studies in Bangladesh, Plurinational State of Bolivia, the Dominican Republic, Kenya, Malawi, Moldova, New Zealand, Rwanda, and Zimbabwe showed (23-24). WHO study on violence against women showed that young age of partners is risk factor for intimate partner violence and sexual violence (25).

In a rural part of Africa, IPV during pregnancy was highest in the age group 21-25 years (26).Study conducted in Abeokuta, Nigeria shows that Younger age women such as being an adolescent compared to non-adolescent (over 20 years) was found to be associated with intimate partner abuse (27). In contrary to the above Cross sectional population based study done in Bangladesh showed that women's age was not associated with abuse during pregnancy among rural women and in the urban area, being older than 19 was negatively associated with abuse(28).

Study conducted in Chines society and in ten other countries shows there is disparity in educational attainment, i.e. where a woman has a higher level of education than her male partner associated with the risk of both victimization of women and perpetration by men (19, 29).

Study conducted in Kenya Kisum Hospital on prevalence and associated factors of intimate partner violence among pregnant women showed that having a partner who attends tertiary education is protective against intimate partner violence during pregnancy (22).Another study conducted in Nigeria reported strong positive associations between a woman's and partners low level of education and experiencing IPV (28). Study conducted in Bangladesh showed husband's education beyond 10th grade was associated with lower odds of violence during pregnancy (26).But study conducted in Pakistan showed no association of husband education and violence (30).

Study done in Canada showed that Victims who experienced pregnancy violence were more likely to be unemployed compared to victims who did not experience pregnancy violence (42% vs. 32%) (31).Another Study done in Canada has shown under-employment in male partners is risk factors of perpetration of partner violence (32).similarly study in rural South Africa noted that being unemployed was a risk factor for experiencing abuse (27).

Research review showed that unmarried women are more likely than other women to experience IPV while pregnant (7).Another study conducted in Canada showed that 11.3% of victims of intimate partner violence from a current marital or common-law partner had experienced violence while pregnant (31).

Study done in Bangladesh shows that ten percent of women from the urban site and 12% of women from the rural site reported experiencing physical abuse during at least one of their pregnancies (26). Another Study conducted in New Zealand showed that approximately 40% of women had experienced violence in more than one pregnancy (23).

Cross sectional facility based study done on Partner violence and associated factors among pregnant women in Nkangala district, Mpumalanga (South Africa) shows having 1 - 3 and 4 or more children were both significantly associated with physical partner violence. Pregnant women with 4 or more children were eight times more likely than those having no children to have experienced physical partner violence, while pregnant women with 1 - 3 children were twice as likely to have done so (33).

A study conducted among pregnant women in Nkangala district, Mpumalanga showed that planned or unplanned pregnancy is not associated with physical violence during pregnancy**.** (33).But study done in Bangladesh shows significant association between IPV and unintended pregnancy. Women who have the history of any form of physical or sexual violence have reported unintended pregnancy **(**34).In contrary to this Study conducted in Nigeria and South Africa showed no association between unplanned pregnancy and violence(27,33).

Study conducted in Pakistan showed that Women who were married for five to nine years or ten or more years were at higher risk of being abused than women who were married for less than five years (31).

Study done on Intimate Partner Violence during Pregnancy among Urban African American Women, shows that the women who experienced intimate partner violence were low income (35).

Five studies examined the relationship between alcohol use and IPV and all of them found that alcohol use by a woman and/or partner whether heavily or occasionally is significantly associated with pregnancy-related abuse (21).Study in Kenya Kisum hospital showed that drinking alcohol by partners was associated with intimate partner violence during pregnancy (22).Study in South Africa showed that Intimate partner violence during pregnancy has also been associated with use of alcohol by their partners (32).

The effects of intimate partner violence on birth outcome

When women are abused during pregnancy the impact can range from decreased self-esteem, maternal depression, misuse of alcohol, tobacco and other substances, internal bleeding to even death. For the foetus the abuse can result in preterm birth, premature rupture of the membranes, low birth weight, fetal haemorrhage, miscarriage or stillbirth (36).

Compared with those not reporting physical, sexual and emotional violence, women who did were more likely to deliver by caesarean and to have abnormal progress of labour, premature rupture of membranes, low birth weight, preterm birth and any hospitalization before delivery (37).

A meta-analysis of 30 studies on maternal exposure to abuse and birth outcomes found that maternal exposure to domestic violence was significantly associated with an increased risk of low birth weight, as well as an increased risk of preterm birth (38).Similarly study conducted in Canada identified statistically significant associations for preterm birth or small for gestational age and experience of violence (39).

The study conducted in Karachi found that the proportion of infants with birth weight < 2500 grams, gestational age < 37 weeks, or 5-minute Apgar < 7 was not significantly greater in abused women than in non-abused women (40).Another study conducted in Bangladesh showed that Stillbirth was not associated with IPV experiences(41).

There is variation in defining intimate partner violence during pregnancy, some literatures defined it as only physical violence or physical and sexual and some defined interims of physical, sexual or psychological violence. Most studies done on intimate partner during pregnancy explained only prevalence and associated factors of intimate partner violence during pregnancy.

Significance of the study

Most researches done on intimate partner violence during pregnancy both in developed and developing countries explained only physical violence or physical and sexual violence.

In Ethiopia only few studies are done on intimate partner violence during pregnancy which stated only prevalence of physical violence, but this study tried to fill this gap by elucidating the intimate partner violence during pregnancy interims of physical, sexual or psychological violence and also showed its adverse birth outcome.

Lack of data and statistics on prevalence of violence against women makes the elaborations of program difficult. The results of this study will contribute by filling this gap and helps government officials, health managers and other concerned bodies develop intervention strategy to prevent IPV during pregnancy. The study will also provide baseline data for further researchers.

Conceptual framework

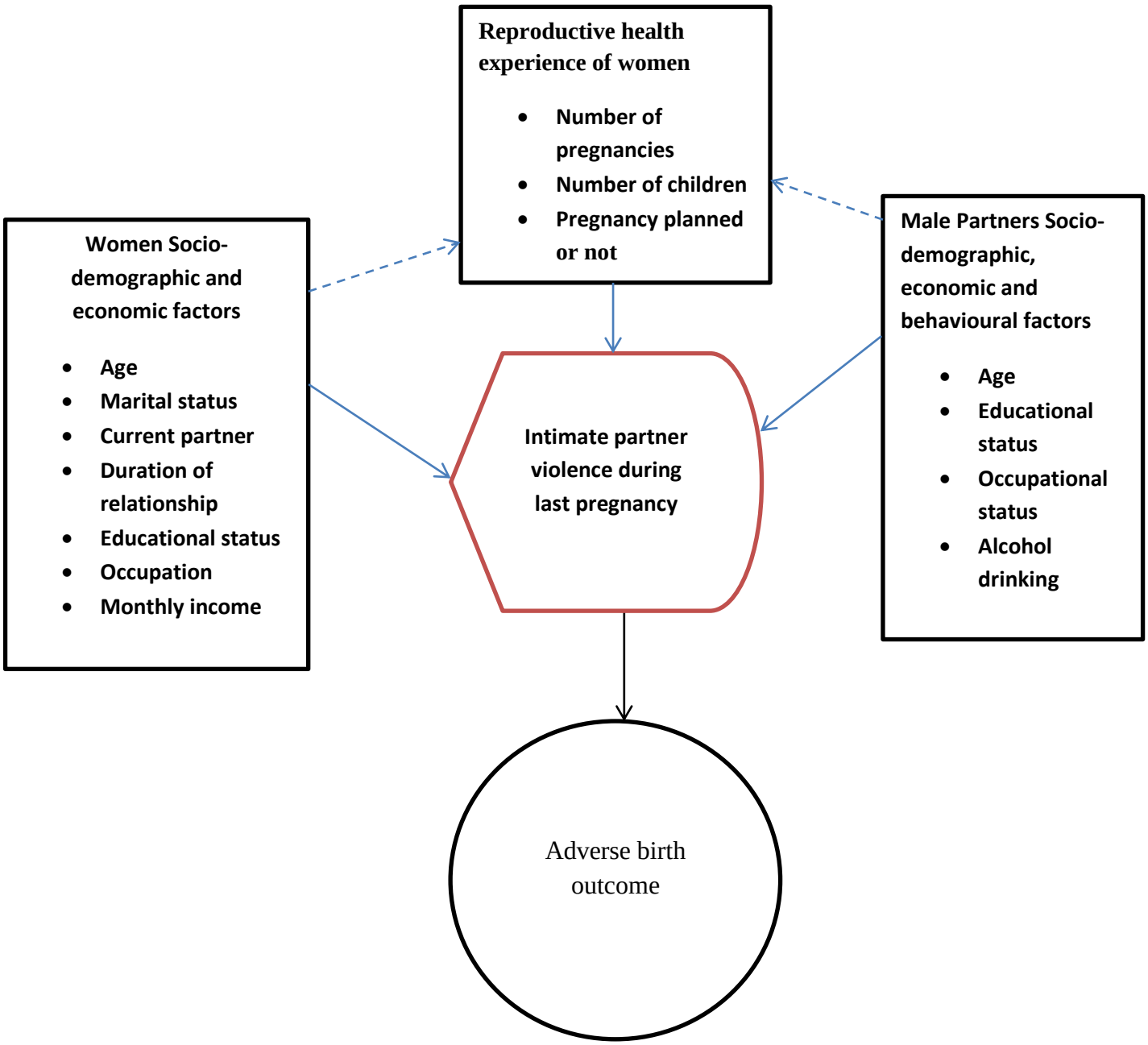

Figure 1: Conceptual framework of the study developed after reviewing different literatures.

Chapter three: Objective of the study

3.1 General objective

- To assess the prevalence and associated factors of intimate partner violence during pregnancy and its adverse birth outcome among recently delivered women in public health facility of Hossana Town, Hadiya zone, SNNPR, 2014.

3.2 Specific objectives

- To describe the prevalence of intimate partner violence during pregnancy.
- To identify factors associated with Intimate partner violence during pregnancy.
- To determine association between intimate partner violence during pregnancy and adverse birth outcome.

Chapter four: Methods and materials

4.1 Study area and period

The study area, Hossana Town, is found in Hadiya zone of South nation's nationalities regional state. It is located 232 and 168 Km far away from Addis Ababa and the regional capital Hawassa respectively. There are eight kebeles, three health centers and one government hospital in the Town. The projected population of the Town is 97,185 in 2006 E.C.ANC1 and ANC4 coverage of the Town was 68 % and 30 % in 2005 E.C. Post natal coverage of the Town was 53 % in 2005 E.C. Two thousand one hundred seventy six women gave birth in the public health institution of Hossana Town in first half of 2006 E.C (42).The study was conducted from March 31- April 30,2014.

4.2 Study design

Facility based cross sectional study

4.3 Source population

Women who were giving birth (delivery) at public health facility in Hossana Town.

4.4 Study population

Recently delivered women (women on postnatal care) during the data collection period in Public health facility of Hossana Town.

4.5 inclusion and exclusion criteria

4.5.1 Inclusion criteria

All recently delivered women irrespective of whether the pregnancy outcome was a live or still birth.

4.5.2 Exclusion criteria

Women who were not mentally and physically capable of being interviewed.

Women admitted for abortion were excluded.

4.6 Sample size and sampling strategies

4.6.1 Sample size

The sample size was calculated by using the formula for single population proportion.

The total sample size was calculated with assumption of:

95% confidence interval (Z=1.96)

d = 4% margin of error

P = 8%, Prevalence of intimate partner violence during pregnancy in Ethiopia province (3).

The formula is = = $\frac{P\ (1- P)\ Z^2}{d^2}$

0.08*0.92*1.96*1.96/0.04*0.04=177

By adding non-response rate 10%, final total sample sizes was195.

4.6.2 Sampling procedure

The required numbers of sample was allocated proportionally among the four public health facility. The samples were allocated based on the number of clients who got post natal care in the first half in 2006 E.C.

Consecutive sampling technique was undertaken by taking every woman who was presented in selected health facility during data collection period until allocated samples size was reached.

Women's who fulfil inclusion criteria was interviewed until allocated samples are reached.

Schematic presentation of sampling procedure

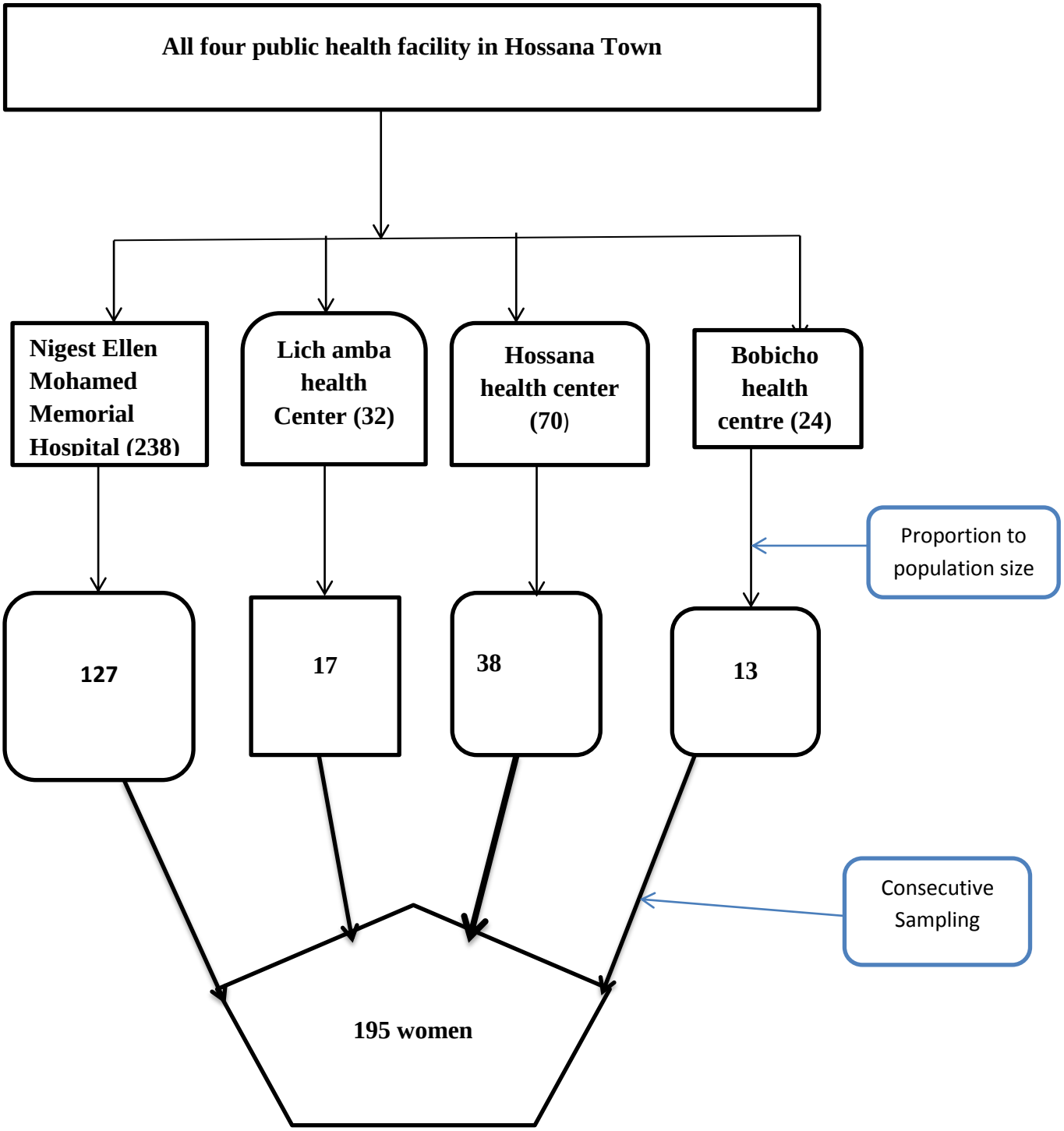

Figure 2: Schematic presentation of sampling method.

4.7 Study variables

4.7.1 Dependent variables

- Adverse birth outcome(Low birth weight, Still birth, Apgar score at 5 minute and preterm birth)

4.7.2 Intermediate variable

- Intimate partner violence

4.7.3 Independent variables

Socio-demographic and economic variables

- Age of woman
- Age of partner
- Educational status of Partner
- Educational status of woman
- occupation of women
- occupation of partner
- Marital status
- Current partner
- Duration of relationship
- Monthly income

Reproductive health experience of women

- Number of pregnancies
- Number of children
- Pregnancy planned or not

Variable related to partners behavioural characteristic

- Alcohol drinking by partner

4.8 Data collection instrument and procedure

4.8.1 Data collection instrument

Pretested Structured questionnaire and record review checklist were used to collect data from each study subject. The questions were adopted from WHO multi-country study on domestic violence (19).

Record review checklist was developed by principal investigator to collect data from each study subject's delivery summary book on new born outcomes (Alive, Still birth, birth weight, Apgar score within 5 minutes, Term and Preterm).

The Questionnaire was first prepared in English and then translated in to Amharic and then it was translated back to English to check for its consistency.
The data collection instruments comprises four parts; Part I socio-demographic and economic factors, Part II Questions on intimate partner violence during pregnancy, Part III Question on partners behavioral character tics and Part Four check list to assess birth outcome.

Socio demographic and economic factors were assessed by asking question on women age, Partners age, women educational status, partner educational status, women occupational status, partner occupational status, marital status, current partner ,years women lived with partner, number of pregnancy, number of children, average monthly income and planned or unplanned pregnancy was measured by yes or no questions.

Pregnancy violence was assessed by asking questions like during in your last pregnancy have you experienced violence by your husband/ intimate partner? (0=no or 1=yes).

Birth outcome was assessed interims of Low birth weight, Preterm, still birth or Apgar score. Low birth weight was assessed by as a live birth weighing < 2500 grams (<2500=1,>=2500=0), Preterm was measured by (1=yes 0r 0=no), Still birth was measured by (1=yes or 0=no) and Apgar score at 5 minutes by (0=Apgar score <=7 or 1=Apgar score >7).

4.8.2 Data collection technique

Pretested structured interviewer administered questionnaire and record reviews were used to collect data from each study subject.
The selected women were administered the questionnaire outside the visiting hours by the interviewer after obtaining verbal consent. The record reviews were done on delivery summary book of each respondent to review birth outcome of new born.

4.8.3 Data collectors

Four female nurses and two supervisors' were recruited as interviewers and as supervisors respectively.

Data collectors and supervisions were trained for one day on questions included in the questionnaire, on interviewing techniques, purpose of the study, and importance of privacy,

sensitivity of the issue, discipline and approach to the interviewees and confidentiality of the respondents.

4.9 Data quality control issues

Questionnaires was prepared first in English then translated to Amharic and then back to English by another person in order to ensure consistency.

Pretest was carried out among 10 of study subjects, which was not included in the actual study. Based on the result the questionnaire was modified as necessary.

Training of data collectors and supervisors was undertaken. The principal investigator and supervisor were made a day to day on site supervision during the whole period of data collection. The Principal investigator and supervisors checked each questionnaire daily for completeness and consistency. Data were entered by Epi data version 3.1and exported to SPSS version 16.0 for analysis.

4.10 Data processing and analysis

Data editing, coding and cleaning were carried out and the data were entered into Epi-Data version 3.1. Then, it was exported into SPSS version 16.0 statistical software for analysis. Different frequency tables, graphs and descriptive summaries were used to describe the study variables.

Bivariate logistic regression analysis was used to see significance of association between the outcome and independent variables. Variables with p-value < 0.05 in bivariate analysis were transferred to multivariate logistic regression. Odds ratios at 95% CI were computed to measure the strength of the association between the outcome and the explanatory variables.

Multivariate logistic regressions were performed to identify the most significant predictors of intimate partner violence, birth outcomes and to control for confounders. P-value <0.05 was considered as a statistical significant.

4.11 Ethical considerations

Prior to data collection, ethical clearance was taken from ethical clearance committee of the Jimma university college Public health and medical sciences.

Formal concerned administrative bodies of the health institutions were also informed about the study.

During data collection, each respondent was informed about the purpose and expected outcome of the research and appropriate informed oral consent was taken from the

respondents. The respondents were assured that they have full right to participate or withdraw from the study. In order to establish anonymous linkage, only the codes, not the names of the respondents were registered on the questionnaire.
During the training of data collectors and supervisor ethical issues was addressed as important component of the research.

Interviewers were trained to be aware of the effects that the questions may have on informants and how best to respond, based on a woman's level of distress

A respondent may suffer physical harm if a partner finds out that she has been talking to others about her relationship with him. To minimize the risks interviewers were trained on ensuring participant safety. Privacy and confidentiality of the respondents were protected**.**

4.12 Operational definitions

Intimate partner: Current husband, co-habited (live in the same house without formal marriage), or boyfriend.

Intimate partner violence during pregnancy: any act of physical, sexual or emotional (psychological) abuse during last pregnancy by intimate partner.

Physical violence: includes any of one or more (slapped , pushed or shoved, hit with fist or something else that could hurt you, beaten abdomen, choked or burnt on purpose, used or threatened to use knife ,gun or weapon).
Sexual violence: includes any of one or more (forced into sexual intercourse when she did not want, had sexual intercourse when she did not want to because she was afraid of what partner might do, forced to do something sexual that she found degrading or humiliating).
Psychological (emotional) violence: includes any of one or more (insult, humiliation, intimidate on purpose, threatened to hurt women or someone she cared about).
Monthly income- After computing the median of respondent's income, the individual's income was compared with the total median (greater than or equal to median or less than median).

Low income: When the income of individual is less than the median.

Prevalence of intimate partner violence during pregnancy: proportion of pregnant women who are abused from any of physical, sexual or psychological violence from total pregnant mother.

Alcohol drinking by partner: was measured by partner alcohol drinking or never drinking during women's last pregnancy.

Adverse birth outcome: was assessed in terms of low birth weight, Apgar score < 7 in 5 minutes, preterm birth or still birth.

Low birth weight: was defined as a live birth weighing < 2500 grams.

Apgar score: The 5 minutes recorded Apgar score was used.

Recently delivered women: women who were within 7 days of post-delivery (on postnatal care) in public health institution of Hossana Town.

4.13 Plans for Dissemination and Utilization of Results

Findings of the study will be submitted to Jimma University, School of Postgraduate and Population and Family Health Department. The results of the study will be also communicated to concerned bodies such as Hadiya zone Health Department, Hossana town health office and public health institutions of the Town. It will be also presented to different conferences of governmental and non-governmental organization so that they can use the findings for planning and implementation to decrease intimate partner violence during pregnancy. Publication of the result will be carried out accordingly.

Chapter five: Result

5.1 Socio-demographic and economic characteristics

From a total of 195 women who were identified for the study, 183 were involved in the study while 12 women refused to participate the study, yielding a response rate 94 %.

The mean age women were 25.4 (SD ±4.6) years. Regarding to educational status 64(35%) attained primary education. Occupation status of respondent's shows housewife accounted 98(53.6%). One hundred seventy four (95%) of women were married and current partner were husbands for 172(94%).

Ninety three (50.8%) of women lived with their current partner for six and more years. The mean duration of relationship with partner was 6(SD ±4) years. Ninety two (50.3%) of respondent became pregnant three or more times. For Majority of women 137(75%) their last pregnancy was planned. More than half of respondents 114(62.3%) have one to three children. The mean of children women have were 2.8(SD±1.9).

The median monthly income of the respondent's was 1200 ETB. The Mean age of partners was 33.3(SD ±7.2) years. Sixth six (36.1%) of partners had attained tertiary education. Occupational status of partners showed 61(33.3%) of partners were government employees. Sixty seven (36.6%) of partners were consumed alcohol (Table 1 & 2).

Table 1: Socioeconomic and demographic Characteristics of the women, Hossana, April 2014.

Variables	Frequency	Percentage
Age of women in years(n=183)		
18-24	75	41
25-29	67	36.6
30-34	28	15.3
35-38	13	7.1
Educational status of women(n=183)		
No formal education	35	19.1
Primary education	64	35
Secondary education	42	23
Secondary education	42	23
Occupational status of women(n=183)		
Housewife	98	53.6
Student	16	8.7
Merchant	31	16.9
Government employee	33	18.0
Non-government employee	3	1.6
Other*	2	1.1
Marital status of women(n=183)		
Married	174	95.1
Never married	5	2.7
Divorced	4	2.2
Current partner(n=183)		
Husband	172	94.0
Cohabited	4	2.2
Boyfriend	7	3.8
Duration of relationship with partner(n=183)		
< 2 year	25	13.7
2 to 5 year	65	35.5
≥ 6 years	93	50.8
Times women become pregnant(n=183)		
One or two	92	50.3
Three or above	91	49.7
Last pregnancy planned(n=183)		
Yes	137	75
No	46	25
Number of children(n=181)		
No child	1	0.6
One to three child	120	66.3
Four and above	60	33.1
Average monthly income(n=180)		
Low income	98	54.4
High income	82	45.6

*Other –daily workers

Table 2: Socioeconomic and demographic Characteristics of the male partner as responded by women, Hossana, April 2014.

Variable	Frequency	Percentage
Age of partners in years(n=183)		
20-24	18	9.8
25-29	37	20.2
30-34	40	21.9
≥35	88	48.1
Educational status of partners(n=183)		
No formal education	14	7.7
Primary education	50	27.3
Secondary education	53	29.0
Tertiary education	66	36
Occupational status of partners(n=183)		
Farmer	48	26.2
Merchant	47	25.7
Government employee	61	33.3
Non-government employee	10	5.5
Others*	17	10.2
Alcohol consumption by partners(n=183)		
Yes	67	36.6
No	116	63.4

*others-daily labourer, no job, preacher, student, driver

5.2 Prevalence of intimate partner Violence during pregnancy

Forty three (23%) of women experienced at least one form of IPV during pregnancy. Psychological violence was the most common form 36 (20%) followed by physical 27(15%) and sexual 22 (12%).From physical violence slapping 27(14.8 %) was the commonest form of violence. Physically forced to do sexual intercourse 22(12%) and insulting 36(19.7) were commonest form of sexual and emotional violence respectively.

Table 3: Prevalence of intimate partner violence during pregnancy among recently delivered women, Hossana, April 2014.

Violence item	Frequency	Percentage
Physical violence		
Slapped	27	14.8
Pushed	19	10.4
Hit with fist	12	6.6
Beaten in the abdomen	6	3.3
Chocked or burned on purpose	4	2.2
Threatened to use or actual used weapon	5	2.7
Overall prevalence of physical abuse	27	15
Sexual violence		
Physically forced to do sexual intercourse	22	12
Had sexual intercourse when you do not want	19	10.4
Forced you to do something sexual that you found humiliating	3	1.6
Overall prevalence of sexual violence	22	12
Emotional or psychological violence		
Insulted	36	19.7
Humiliated	30	16.4
Had done something to scare you	20	10.9
Had threatened to hurt you	22	12
Overall prevalence of emotional or psychological violence	36	20
Over all prevalence of intimate partner violence pregnancy	43	23

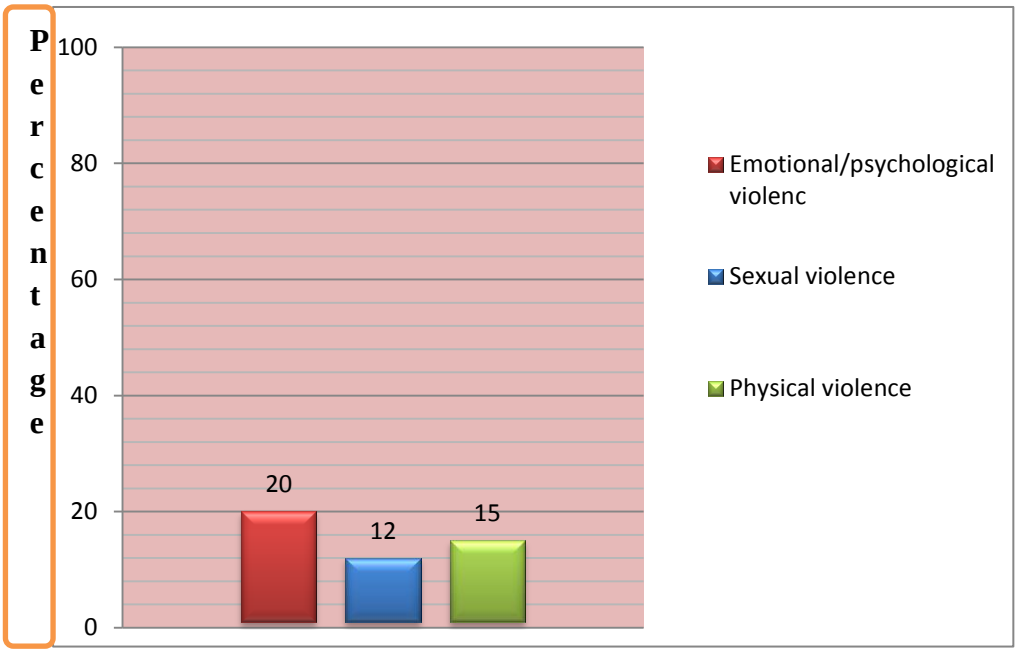

Figure 3: Percentage of women who experienced different forms of violence by intimate partner, Hossana, April 2014.

Considerable overlap was found between emotional, physical and sexual violence in the study. Ten percent of women reported that they were victims of all three types of violence during pregnancy. (Figure 4)

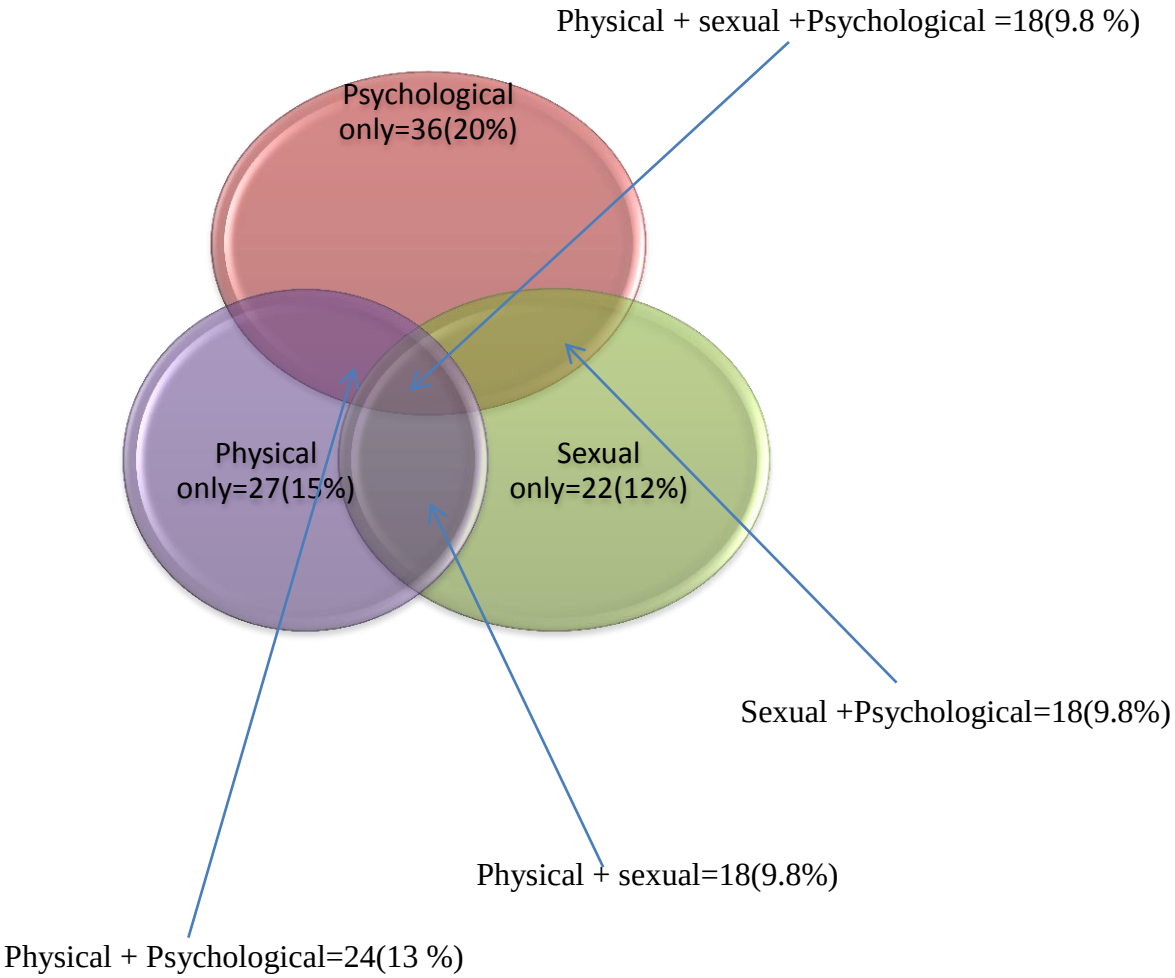

Figure 4: overlap of different types of intimate partner violence during pregnancy, Hossana, April 2014.

5.3 Factors associated with intimate partner violence during pregnancy

Bivariate and multivariate logistic regression analyses were done by using enter method to analyses factors associated with intimate partner violence during pregnancy**.** On bivariate analyse age of partner, education status of women, educational status of partners, times women becomes pregnant, pregnancy planned or not, alcohol drinking by partners had association with intimate partner violence during pregnancy.

Although the bivariate analyses showed association of intimate partner violence with six independent variables, only alcohol consumption by partners, educational status of partners and pregnancy planned or not were associated with IPV on multivariate analysis.

Multivariable analyses revealed that intimate partner violence during pregnancy is 22 times higher among women whose current partners drank alcohol as compared to those women whose partner did not drink alcohol (AOR=22(7.4,65.6).

Similarly, partners who had no formal education were 10.8 times more likely to abuse their wives as compared to those who had tertiary education (AOR=10.8(1.06,108.5) and Women whose last pregnancy was planned were 77 percent less likely to be abused than women whose pregnancy was not planned (AOR=0.23(0.08,0.67).

Table 4: Factors related to experiencing of intimate partner violence during pregnancy, Hossana, April 2014.

Variables	Intimate partner violence		COR at 95 % CI	AOR at 95% CI
Alcohol drinking	Yes	No		
Yes	37(86%)	14(5.2%)	22.6(8.7,58.6)*	22(7.4,65.6)*
No	6(14%)	110(78.6%)	1	1
Pregnancy planned				
Yes	19(44.2%)	118(84.3%)	0.15(0.07,0.34)*	0.23(0.08,0.67)*
No	24(55.8%)	22(15.7%)	1	1
Time women become pregnant				
One or two	15(34.9%)	76(54.3%)	0.451(0.22,0.92)*	0.902(0.262,3.102)
Three or more	28(65.1%)	64(45.7%)	1	1
Age of partner				
20-24	4(9.3%)	14(10%)	0.612(0.185,2.029)	0.478(0.09,2.58)
25-29	5(11.6%)	32(22.9%)	0.335(0.118,0.951)*	0.724(0.16,3.34)
30-34	6(14%)	34(24.3%)	0.378(0.142,1.005)	0.442(0.118,1.652)
≥35	28(65.1%)	60(42.9%)	1	1
Educational status of women				
No formal education	12(27.9%)	21(15%)	7.33(2.1,25.7)*	0.275(0.024,3.225)
Primary education	17(39.5%)	51(36.4%)	2.29(0.93,5.66)	0.383(0.05,2.84)
Secondary education	8(18.6%)	34(24.3%)	1.28(0.48,3.35)	0.626(0.123,3.533)
Tertiary education	6(14%)	34(24.3%)	1	1
Educational status of partners				
No formal education	8(18.6%)	6(4.3%)	6.667(1.928,23.05)*	10.8(1.06,108.5)*
Primary education	14(32.6%)	36(25.7%)	1.94(0.795,4.756)	0.757(1.345,0.205)
Secondary education	10(23.3%)	43(30.7%)	1.163(0.45,2.99)	1.136(0.229,5.626)
Tertiary education	11(25.6%)	55(39.3%)	1	1

*** P-value < 0.05**

5.4 Birth outcome

One hundred eighty three records were reviewed to obtain the birth outcomes of the new born. The birth outcomes reviewed were live birth, still birth, Birth weight in grams, Apgar score at 5minutes, term and preterm birth. From 183 samples, 175(95.6%) were live birth and 8(4.4%) were still births. Thirty nine (22.3%) of new born were low birth weight. Only 16(8.7%) of the new born were preterm and 9(5%) of new born Apgar scores were less than 7 at 5 minutes. Adverse birth outcome was assessed by the status of low birth weight, Apgar score <7 at 5 minutes and preterm or still birth.

5.5 Association between intimate partner violence during pregnancy and adverse birth outcome.

Bivariate association was done using enter method to identify association between intimate partner violence during pregnancy and Adverse birth outcome. IPV during pregnancy showed significant association with LBW but it did not show significant association with still birth, Apgar score at 5 minutes and Preterm birth.

Table 5: Exposure to violence and preterm birth among abused and unabused women, Hossana, April 2014.

Variables		Preterm birth		COR at 95 % CI
		Yes	No	
Intimate partner violence	Yes	7(43.8)%	36(21.6 %)	0.353(0.12,1.014)
	No	9(56.2 %)	131(78.4 %)	1

Bivariate association showed that there was no association of intimate partner violence during pregnancy and preterm birth.

Table 6: Exposure to violence and still birth among abused and unabused women, Hossana, April 2014.

Variables		Still birth		COR at 95 % CI
Intimate partner violence		Yes	No	
	Yes	4(50%)	136(77.7%)	0.287(0.07,1.12)
	No	4(50%)	39(22.3%)	1

On bivariate analysis intimate partner violence during pregnancy was not associated with still birth.

Table 7: Exposure to violence and Apgar score among abused and unabused women, Hossana, April 2014.

Variables		Apgar score <7 at 5 minutes		COR at 95 % CI
Intimate partner violence		Yes	No	
	Yes	2(22.2%)	129(77.7%)	1(0.2,5.0)
	No	7(77.8)	37(22.3%)	1

Bivariate analysis showed Intimate partner violence during pregnancy was not associated with Apgar score.

Multivariate analyses were done to see significant association between intimate partner violence during pregnancy and low birth weight.

Multivariate analyses revealed that new born whose mothers were abused during pregnancy were 14.3 times more likely to be having low birth weight as compared to new born whose mothers were not abused during pregnancy (AOR=14.3(5.1,40.7).

Table 8: Socio-demographic factors adjusted association between exposure to intimate partner violence and low birth weight, Hossana, April 2014.

Variables	Low birth weight		Crude OR at 95 % CI	AOR at 95% CI)**
Intimate partner violence during pregnancy	Yes	No		
Yes	22(56.4)	17(43.6%)	16.3(6.6,40)*	14.3(5.1,40.7)*
No	10(7.3%)	126(92.7%)	1	1

***significant at p-value less than 0.05**

**Adjusted for the following variables using enter logistic regression method: age of women, number of pregnancy, pregnancy planned or unplanned, educational status of women and monthly income.

Chapter Six: Discussion

In this study an attempt has been made to assess the prevalence and associated factors of intimate partner violence during pregnancy and its adverse birth outcomes among recently delivered women.

The current study demonstrated that the overall prevalence of IPV is consistent with studies done in other parts of Africa. A systemic review of Africa studies on IPV against pregnant women reported the overall prevalence of intimate partner violence during pregnancy ranged from 2.3% to 57.1 %(21).The studies also reported prevalence rates of 23% to 40% for physical, which is higher than current study, 3% to 27% for sexual, which is consistent with current study and 25% to 49% for emotional intimate partner violence during pregnancy which is higher than current study. The wide-ranging estimates may be a result of the different types of violence the researchers inquire about, use of different violence measures, and differences in the populations sampled and cultural differences between the countries.

The overall prevalence of intimate violence during pregnancy and psychological violence in current study is lower when compared to the study done in Kenya which showed that the prevalence of intimate partner violence during pregnancy was 37% with the psychological violence being 29%. The prevalence of physical violence in this study is higher than the Kenya study and sexual violence is consistent with Kenyan study which showed that sexual 12% and then physical 10% (22). The difference may be due to the difference in culture and norms between the two countries. Similarly IPV during pregnancy is higher than the WHO study of Ethiopia which showed 8 % of women were abused during pregnancy (3). This may be due to the current study is done in health institutions and the respondents of the study come from various place with various culture.

In this study unplanned pregnancy had association with intimate partner violence during pregnancy. This is consistent with Study done in Bangladesh and in ten DHS countries which showed significant association of unplanned pregnancy and violence (24, 33).The explanation for this is when pregnancy is unplanned, conflict may be raised between couples and violence may be followed based on this conflict. In contrary to current study, study done in Nigeria and South Africa did not found significant association with experiencing violence and unplanned pregnancy (27, 32).This may be due to they recruited the women who had made at least one previous visit to the antenatal clinic, because of this women who had unplanned pregnancy and abused may not participate in the study.

Educational status of partner was associated with intimate partner violence during pregnancy showing that partner who had no formal education was more likely to abuse his wife than partner who had tertiary education. This is consistent with study done in Kenya and Bangladesh which showed that partner who attends tertiary education is protective against intimate partner violence during pregnancy and Husband's education beyond 10th grade was associated in both rural and urban with lower odds of violence during pregnancy (22, 27, 28). This could be due to when partner education status increase the ability to negotiate may increase and as a result the violence will decrease. In contrary to current study, study conducted in Pakistan showed no association between husband education and abuse (30), but not imply that their results are better.

Partner alcohol consumption was found to be associated with intimate partner violence during pregnancy. This finding is consistent with the study done in Kenya, South Africa and in other African countries. (21, 22,33). This may be due to alcohol consumption can cause aggression and it can result for violent behaviour.

In this study Intimate partner violence during pregnancy were associated with Low birth weight. This is consistent with the research review done in United States of America and meta-analysis done on maternal exposure to abuse and birth outcomes (7, 38).Similarly study conducted in Iran and Canada showed association of violence and LBW (37, 39). More research is needed to determine how violence can affect birth outcome. But this study is inconsistent with the study done in Pakistan which showed that intimate partner violence during pregnancy was not associated with Low birth weight (40).

Strength of the study

The strength of this study is the use validated instrument of WHO multi-country study on VAW.

Limitation of the study

Since this study was a cross sectional in design it is difficult to establish causes and effect relationships among outcome of interest and explanatory variable.

The team interviewed only women as proxy respondents for their husbands/partners, and hence relies on women's reports only. This can be biased when it comes to reporting on husbands'/partners' characteristics.

Information about violence was self-reported, which may have led to recall bias.

The sensitive nature of the topic and its proneness to response bias that may lead to under-reporting of the true extent of the abuse.

Important explanatory variables such as residence, marriage type, Antenatal follow up and history of abuse were not collected in the survey.

Since we collect data from secondary source there may be quality problem

Wide confidence intervals were observed in this study and it may affect precision. This may be due to small sample size; therefore interpretation of the finding shall take in to account this.

Chapter Seven: Conclusion

This study revealed that intimate partner violence during pregnancy was a common experience. Almost one out of four were abused by their intimate partner.

Partners alcohol drinking, no formal education of partner, planned pregnancy was positively or negatively associated with intimate partner violence during pregnancy. The findings of this study also showed that violence towards women is associated with adverse birth outcome (low birth weight).

Chapter Eight: Recommendation

Based on the result of the study the following recommendations were suggested for different levels:

Health sector

- Health sectors should train health care providers on how to screen, how to approach the topic, how to treat and counsel the victims and follow up of victims of abuse.
- Health providers who see and care for abused women need to coordinate and work with other sectors**.**
- Health professionals should create awareness on effect of unplanned pregnancy
- Since alcohol consumption and intimate partner had association health professionals should give health education on risk of alcohol consumption.

Governments

- They must commit themselves to reducing violence against women, which is a major and preventable public health problem.
- Advocacy for gender equality and human rights, and monitoring of national progress towards international commitments, need to be strengthened.

Minsters of education

- Minster of education should strength adult education

Polices, lawyer and advocates

- They should ensure that women seeking justice and protection are treated appropriately.

Future studies should consider using a larger sample size and maternal complication of intimate partner violence during pregnancy.

References

1. Michelle Rice, Nat'l Ctr. for Posttraumatic Stress Disorder, Domestic Violence Fact Sheet,(2007),http://www.ncptsd.va.gov/ncmain/ncdocs/fact_shts/fs_domestic_violence.html#Anchor -Harway-46919. (Date accessed Dec 22, 2013).
2. CDC, Intimate partner violence during pregnancy a guide for clinician, lecture note slides;2012),http://www.cdc.gov/reproductivehealth/violence/intimatepartnerviolence/sld001.htm.date accessed 23/11/2013.
3. WHO, Intimate partner violence during pregnancy, http://whqlibdoc.who.int/hq/2011/WHO_RHR_11.35_eng.pdf, accessed date December 3, 2013.
4. National Alliance for Hispanic Health • 1501 16th Street, NW • Washington, DC 20036-1401(2010) http://www.hispanichealth.org Pdf.
5. Garcia-Moreno C et al. WHO multi-country study on women's health and domestic violence against women: initial results on prevalence, health outcomes and women's responses. Geneva: World Health Organization, 2005.
6. Taillieu TL, Brown ridge DA; Violence against pregnant women: Prevalence, patterns, risk factors, theories, and directions for future research. Aggression and Violent Behaviour; 2010 15: 14–35.
7. Beth A Bailey. Partner violence during pregnancy: prevalence, effects, screening, and management, International Journal of Women's Health.2010,2,188
8. WHO, Millennium Development Goals. http://wwwwhoint/topics/(2000) millennium development goals/about/en/indexhtml accessed December 4,2013.
9. Karen M Devries,a Sunita Kishor,b Holly Johnson,c Heidi Stöckl,d Loraine J Bacchus,e Claudia Garcia-Moreno et al., Intimate partner violence during pregnancy: analysis of prevalence data from 19 countries, Reproductive Health Matters.2010, 18(36):158-170
10. Feseha G, G/Mariam A and Gerbaba M. Intimate partner physical violence among women in Shimelba refugee camp, northern Ethiopia. Bio Med central 2012, 12:125.
11. Ahmed, S., Koenig, M. A., & Stephenson, R. Effects of domestic violence on perinatal and early-childhood mortality: Evidence from north India. American Journal of Public Health.2006, 96:1423–1428.
12. A Boy, & H. M Salihu,. Intimate partner violence and birth outcomes: A systematic review. International Journal of Fertility and Women's medicine(2004), http://www.ncbi.nlm.nih.gov/pubmed/15481481.

13. J.C. Campbella, M.L. Batya, R.M. Ghandourb, J.K. Stockmanc, L. Franciscod, and J.Wagmanb.The intersection of intimate partner violence against women and HIV/AIDS: A review. International Journal of Injury Control and Safety.2008; 15(4):221–231.
14. Kristin L Dunkle, Rachel K Jewkes, Heather C Brown, Glenda E Gray, James A McIntryre, Siobán D Harlow,Gender-based violence, relationship power, and risk of HIV infection in women attending antenatal clinics in South Africa. Lancet, 2004; 363, 1415–1421.
15. Bergman KBA, Sarkar PMD, O'Connor TG, Modi NMD, Glover V. Maternal stress during pregnancy predicts cognitive ability and fearfulness in infancy. Journal of the American Academy of Child and Adolescent Psychiatry.2007, 46(11):1454- 1463.
16. Philip V. Scribano, DO, MSCE; Intimate Partner Violence during Pregnancy. AVA RESEARCH REVIEW.2012, 3:1-4.
17. Tiwari A, Leung WC, Leung TW, Humphreys J, Parker B. A randomised controlled trial of empowerment training for Chinese abused pregnant women in Hong Kong. International Journal of Obstetrics and Gynaecology.2005, 112(9):1249-1256.
18. Kiely M, El-Mohandes A, El-Khorazaty M, Gantz M. An integrated intervention to reduce intimate partner violence in pregnancy: a randomized controlled trial. Obstetrics and Gynaecology, 2010, 115(2):273-283.
19. Garcia-Moreno C, Jansen HA, Ellsberg M, Heise L, Watts C. WHO multi-country study on women's health and domestic violence against women: initial result on prevalence, health outcomes and women's responses. World Health Organization.2005.
20. Hyun (Hanna) Kim Rachel Cain, and Samara Viner-Brown, Intimate Partner Violence Before or During Pregnancy in Rhode Island Conceptual framework, Health by numbers.2010, 93(1):29-30.
21. Shamu S, Abrahams N, Temmerman M, Musekiwa A, Zarowsky C. A systematic review of African studies on intimate partner violence against pregnant women. Prevalence and risk factors. PLoS One.2011,6(3):e17591.
22. Lyndah A. Makayoto,, Jared Omolo, Abel M. Kamweya,Valarie S. Harder, Joseph Muta. Prevalence and Associated Factors of Intimate Partner Violence among Pregnant Women Attending Kisumu District Hospital. Maternal and child health journal.2013, 13:441.

23. Fanslow J, Silva M, Robinson E, and Whitehead A. Violence during pregnancy: Associations with pregnancy intendedness, pregnancy-related care, and alcohol and tobacco use among a representative sample of New Zealand women. Australian and New Zealand Journal of Obstetrics and Gynaecology .http://onlinelibrary.wiley.com/doi/10.1111/j.1479-828X.2008.00890.x/abstract date accessed december 22,,2014.
24. Hindin MJ, Kishor S, Ansara DL. Intimate Partner Violence among Couples in 10 DHS Countries: Predictors and Health Outcomes. Calverton, MD, USA, Macro International. 2008.18.
25. WHO: risk factors for intimate partner violence and sexual violence, 2010.21
26. Hoque, M. E., Hoque, M., & Kader, S; Prevalence and experience of domestic violence among rural pregnant women in KwaZulu-Natal, South Africa. South African Journal of Epidemiology and Infection.2009, 24(4):34-37.
27. Fawole AO, Hunyinbo KI, Fawole OI. Prevalence of violence against pregnant women in Abeokuta, Nigeria. Australian and New Zealand, Journal of Obstetrics and Gynaecology.2008, (48): 405–414.
28. Ruchira TabassumNaved and Lars Åke Persson. Factors Associated with Physical Spousal Abuse of Women During Pregnancy in Bangladesh. International Family Planning Perspectives.2008, 34(2):75.
29. Ko Ling Chan. Sexual violence against women and children in Chinese societies. Trauma, Violence & Abuse.2009, 10(1):69–85.
30. Fariyal F. Fikree, Sadiqua N. Jafarey, Razia Korejo, Anjum Afshan, Jill M. Durocher; Intimate Partner Violence before and during pregnancy Pakistan: J Pak Med Assoc June. 2006, 56(6):256.
31. Douglas A. Brown ridge, Tamara L. Tallieu, Agnes Tiwari, Ko Ling Chan. Pregnancy and Intimate Partner Violence: Risk Factors, Severity, and Health Effects, sociology department faculty publication.2011, 17(7):859-872.
32. Wathen, C.N., Jamieson, E., Wilson, M., Daly, M., Worster, A., MacMillan, H.L. Risk indicators to identify intimate partner violence in the emergency department. Open Medicine.2007; 1(2), e113-22.
Available at: http://www.openmedicine.ca/article/view/63/62
33. G Matseke, K Peltzer, G Mlambo .Partner violence and associated factors among pregnant women in Nkangala district, Mpumalanga, SAJOG. 2012, 18(3):77.

34. Shahreen Raihana1, Rukhsana Shaheen, Md. Shafiqur Rahman. Influence of Intimate Partners' Violence on Unintended Pregnancy in Bangladesh; International Journal of Psychology and Behavioural Sciences. 2012, 2(5):165.
35. Ashley Chapell, Mary Paterno, Doris Campbell, Gloria Call wood. Intimate Partner Violence during Pregnancy among Urban African American Women (2011), JOHNHOPINKS university nursing school :https,//jscholarship.library.jhu.edu/bitstream/handle/1774.2/34972/IPV%2520pregnancy%2520AC date accessed 30/11/2013.
36. Abuse in pregnancy: Information and Strategies for the Prenatal Educator,Ontario's Maternal, New-born and Early Child Development Resource Centre, http://www.beststart.org/resources/anti-violence/pdf/bs_abuse_lr_f.pdf.
37. M. Faramarzi, S. Esmaelzadeh and S. Mosavi prevalence, maternal complications and birth outcome of physical, sexual and emotional domestic violence during pregnancy Acta Medica Iranica, 43(2): 115-122; 2005.
38. Shah, P.S., & Shah, J., on Behalf of the Knowledge Synthesis Group on Determinants of Preterm/LBW Births. Maternal exposure to domestic violence and pregnancy and birth outcomes: A systematic review and meta-analysis. Journal of Women's Health (2010),(http://www.ncbi.nlm.nih.gov/pubmed/20919921) date accessed march 22, 2014).
39. Marcelo L Urquia1, Patricia J O'Campo , Maureen I Heaman , Patricia A Janssen and Kellie R Thiessen: Experiences of violence before and during pregnancy and adverse pregnancy outcomes:An analysis of the Canadian Maternity Experiences Survey :BMC Pregnancy and Childbirth 2011, 11:42.
40. Nabila Zareen, Nasreen Majid, Sonia Naqvi, Sadia Saboohi and Hassan Fatima: Effect of Domestic Violence on Pregnancy Outcome: Journal of the College of Physicians and Surgeons Pakistan 2009, Vol. 19 (5): 291-296.
41. Silverman JG, Gupta J,Decker MR, Kapur N, Raj A.intimate partner violence and unwanted pregnancy, miscarriage, induced abortion, and still birth among a national samples of Bangladesh women. British journal of obstetrics and Gynaecology .2007, 114:1246-1252.
42. Annual report and performance of Hadiya zone health department 2013/2014 (unpublished).

Annex I: English version of the questionnaires

Jimma University College of Public Health and Medical Science

Department of Population and Family Health

Consent form

Good morning/Good afternoon. Thank you for your interest in talking with me today.

My name is _____ who is a member of team conducting a study to assess the prevalence and associated factors of intimate partner violence during pregnancy and its adverse birth outcome among recently delivered women in public health facility of Hossana Town.

You are chosen to participate in this study. Your name will not be written on this form and will never be used in connection with any of the information you will tell me. You do not have to answer any question that you do not feel comfortable with, and you may end this task any time you want to. However, your honest answers to these questions will help us in better understanding of the situation of intimate partner violence during pregnancy and its associated factors as well as adverse birth outcomes, and will eventually help in designing and implementing appropriate intervention programs to alleviate the violence related problem during pregnancy.

The interview will take 25-30 minutes.

Do you want to participate in the study?

1. Yes ☐
2. No ☐

Participant ID No_____

Name of interviewer_____ Signature _____Date _____

Thank you very much

Name of health institution_____

Supervisor name and signature_____Date_____

Questionnaires

Part I Socio-demographic and economic characteristics

Sno	Questions	Response	Remark
101	How old are you?(in completed year)	_____	
102	How old is your husband/partner?(in completed year)	_____	
103	What is your Educational status?	1. No formal education 2. Primary education(1-8) 3. Secondary education(9-12) 4. Tertiary education	
104	What is Educational status of your husband/partner?	1. No formal education 2. Primary education(1-8) 3. Secondary education(9-12) 4. Tertiary education	
105	What is your occupation?	1. House wife 2. Student 3. Privately owned business 4. Government employee 5. Non- governmental employee 6. If other specify_____	

106	What is Occupation of your husband/partner?	1. Farmer 2. Merchant 3. Governmental employee 4. Non-governmental employee 5. No job 6. Others specify_____	
107	What is your Marital Status?	1. Married 2. Never married 3. Divorced 4. Widowed	
108	Who is your current partner?	1. Husband 2. Co-habited(live in the same house without formal marriage 3. Boyfriend 4. Others specify_____	
109	How many years did you live with your current partner?	_____	
110	How many times did you become pregnant?	_____	
111	Had your last pregnancy was planned?	1. Yes 2. No	
112	How many children did you have?	_____	
113	What is average monthly income of your household?	_____	

Part II Questions on pregnancy violence

Sno	Questions	Response	Skip
201	During in your last pregnancy have you experienced violence by your husband/ intimate partner? If yes ask section 2.1, 2.2 and 2.3.	1. Yes 2. No	2 ⟶ 601

2.1 Physical violence

Sno	Questions	Responses	Skip
	During in your last pregnancy had your husband/intimate partner ever…		
301	Slapped or had something thrown at you that could hurt you?	1. Yes 2. No	
302	Pushed or shoved you?	1. Yes 2. No	
303	Hit with fist or something else that could hurt you?	1. Yes 2. No	
304	Beaten your abdomen?	1. Yes 2. No	
305	Choked or burnt you on purpose?	1. Yes 2. No	
306	Threatened to use or actually used a gun, knife, or other weapon against you?	1. Yes 2. No	
307*	During in your last pregnancy have you experienced physical violence by your husband/ intimate partner?	1. Yes 2. No	

2.2 Sexual violence

	During in your last pregnancy had your husband/intimate partner ever……		
401	Physically forced to have sexual intercourse when you did not want to?	1. Yes 2. No	
402	Had sexual intercourse when you did not want to because you were afraid of what partner might do?	1. Yes 2. No	
403	Forced you to do something sexual that you found degrading or humiliating?	1. Yes 2. No	
*404	During in your last pregnancy have you experienced sexual violence by your husband/ intimate partner?	1. Yes 2. No	

2.3 Emotional/psychological violence

	During in your last pregnancy had your husband/intimate partner ever……		
501	Insulted or made to feel bad about you?	1. Yes 2. No	
502	belittled or humiliated in front of other People?	1. Yes 2. No	
503	Had done things to scare or intimidate her on purpose (e.g. by yelling or Smashing things)?	1. Yes 2. No	
504	Had threatened to hurt her or someone you cared about?	1. Yes 2. No	
505*	During in your last pregnancy have you experienced emotional/psychological violence by your husband/ intimate partner?	1. Yes 2. No	

*****to be filled by interviewer

Part III Question on partner's behavioural character.

601	During in your last pregnancy time how often did your husband/intimate partner consumed alcohol?	1. Every day/nearly every day 2. Once or twice a week 3. 1-3 times in a month 4. occasionally ,less than once a month 5. Never	

Part four: Record review Check list on birth outcome

Sno	Characteristics	Outcome result	Remark
701	Alive	☐	
702	Still birth	☐	
703	Birth weight in gram	_____	
704	Apgar score at 5 minutes	_____	
705	Term	☐	
706	Preterm	☐	

Thank you for your participation!!!

Annex II: Amharic Version of the questionnaires

ጅማ ዩኒቨርሲቲ

የሕብረተሰብ ጤና እና ሕክምና ኮሌጅ

ስነሕዝብ እና ቤተሰብ ጤና ዲፓርትሜንት

የስምምነት ቅፅ

ጤና ይስጥልን. ከእኔ ጋር ለማዉራት ፈቃደኛ ስለሆኑ አመሰግናለሁ፡፡

ስሜ _____ ይበላል::

የጅማ ዩኒቨርሲቲ ስነሕዝብ እና ቤተሰብ ጤና ትምህርት ክፍል በሚያካሄደዉ ጥናት ውስጥ በጊዜያዊ መረጃ ሰብሳብነት በመስራት ላይ እገኛለሁ፡፡የጥናቱ ዓላማ በእርግዝና ጊዜ በባል/በቅርብ ጓደኛ ምክንያት የሚደርሰዉን ትንኮሳ እና ተያያዥ የሆኑ ነገሮችን መደሰስ ነዉ፡፡በዚህ ጥናት ተሳታፍ እንድሆኑ ተመርጠወል፡፡የእርሶን ምላሽ ሚስጥራዊ ለማድራግ ስሞት በጥያቄ ወረቀት ላይ የማይጸፍ እና የሚሰጡት መራጃ ከስሚ እና ከማንነቲ ጋር ግንኝነት እንዳይኖር ይደረገል፡፡ ምላሽ መስጠት ያልፈለጉትን ጥያቄ ያለመመለስ ሙብት አለዎት፤ ነገር ግን በፍላጎት የሚሰጡን ትክክለኛ መልስ በእርግዝና ጊዜ በባል/በቅርብ ጓደኛ ምክንያት የሚደርሰዉን ትንኮሰና ተያያዥ የሆኑ ነገሮችን ለማወቅ፣በመጨረሻም ችግሩን ለመቃለል የሚረዱ መፍቴዎችን ለማዘጋጀት ይጠቅማል፡፡
ቃለ መጠይቁ ከ25-30 ደቂቃ ብቻ ነዉ የሚወስደዉ፡፡.

በጥናቱ ለመሳተፍ ፈቃደኛ ኖት ?

1.አዎ ☐

2.አይደለም ☐

የተጠቂዉ መለያ ቁጥር_____

የጠያቂዉ ስም_____ፊርማ_____

የተሞላበት ቀን_____

በጣም አመሰግናለሁ::

የጤና ድርጅቱ ስም_____

የተቆጣጠር ስምና ፍርማ _____ቀን_____

መጠይቅ

ክፍል አንድ ፤አጠቃለይ የግለሰብ መረጃ

ተ.ቁ	መጠይቅ	መልስ	ይለፉ
101	ዕድሜዎ ስንት ነዉ?(በዓመት)	_____	
102	የባለቤቶ ወይም የቅርብ ጓደኛዎ ዕድሜ ስንት ነዉ?(በዓመት)	_____	
103	የትምህርት ደረጃ?	ነ. ትምህርት ቤት ገብቼ አልተማርኩም 2. ከ1ኛ-8ኛ ክፍል ተምሬለሁ 3. ከ9ኛ-12ኛ ክፍል ተምሬለሁ 4. ከፍተኛ ትምህርት ተምሬለሁ	
104	የባለቤቶ ወይም የቅርብ ጓደኛዎ የትምህርት ደረጃ ?	ነ. ትምህርት ቤት ገብቶ አልተማረም 2. ከ1ኛ-8ኛ ክፍል ተምሮአል 3. ከ9ኛ -12ኛ ክፍል ተምሮአል 4. ከፍተኛ ትምህርት ተምሮአል	
105	መደበኛ ሥራዎ ምንድን ነዉ?	ነ. የቤት እመቤት 2. ተማሪ 3. የግል ንግድ ስራ 4. የመንግስት ሠራተኛ 5. መንግስታዊ ያልሆነ ድርጅት ሠራተኛ 6. ሌላ (ይግለፁ)_____	
106	የባለቤቶ/ የቅርብ ጓደኛዎ መደበኛ ሥራ ምንድነዉ?	ነ. ገበሬ 2. ነጋዴ 3. የመንግስት ሠራተኛ 4. መንግስታዊ በልሆና ድርጅት ሠራተኛ 5. ስራ የለውም 6. ሌላ (ይግለፁ)_____	

107	የጋብቻ ሁኔታ ?	1. ባለ ትዳር 2. አግብቼ አላውቅም 3. ተፋትቻለሁ 4. ባለቤቴ ከዚህ ዓለም በሞት ተለይቷል	
108	በመጨራሻዉ እርግዝና ጊዜዎ የቅርብ ጓደኛዎ ማን ነበር?	1. ባለቤቴ 2. አብሮኝ የሚኖር የወንድ ጓደኛዬ ነገር ግን ትዳራችን ሕጋዊ አይደለም 3. የወንድ ፍቅረኛዬ 4. ሌላ (ይግለፁ)_____	
109	በአሁኑ ሰዓት አብረው ከሚኖሩት ባል/የቅርብ ጓደኛዎ ጋር ምን ያህል ዓመት ኖሩ?	_____	
110	አሁን የወለዱትን ጨምሮ ስንት ጊዜ ነዉ ያረገዙት?	_____	
111	የመጨራሻዉን እርግዝና በእቅድ ነበር ያረገዙት?	1. አዎ 2. አይደለም	
112	ስንት ልጆች አሉዎት?	_____	
113	የቤታችሁ አማካይ ወራዊ ገቢ ምን ያህል ነዉ?	_____	

ክፍል ሁለት፤በእርግዝናጊዜ በሚከሰት ትንኮሳ ላይ ያተኮሩ ጥያቄዎች

ተ.ቁ	መጠይቅ	መልስ	ይለፉ
201	በመጨራሻዉ እርግዝና ጊዜዎ ባለቤቶ ወይም የቅርብ ጓደኛዎ ትንኮሳ አድርሶቦት ነበር? መልሱ አዎ ከሆና በ2.1 ፤2.2 እና 2.3 ላይ ያሉትን ጥያቄዎች ይመልሱ	1. አዎ 2. አይደለም	አይደለም ከሆና ወደ 601

2.1 አካለዊ ትንኮሰ

ተ.ቁ	መጠይቅ	መልስ	ይለፉ
	በመጨራሻዉ እርግዝና ጊዜዎ ባለቤቶ ወይም የቅርብ ጓደኛዎ…		
301	በጥፍ መትቶዎት ወይም ጉዳት የሚያደርስ ነገር ወርዉሮቦት ያውቃል?	1. አዎ 2. አይደለም	
302	በኃይል ገፍቶዎት ያውቃል?	1. አዎ 2. አይደለም	
303	በቡጢ ወይም እርሶን በሚጎዳ ነገር መትቶዎት ያዉቃል?	1. አዎ 2. አይደለም	
304	ሆዶዎን መትቶዎት ያዉቃል?	1. አዎ 2. አይደለም	
305	አቅዶ አንቆዎት ወይም አቃጥሎዎት ያዉቃል?	1. አዎ 2. አይደለም	
306	እርሶን ሊጎዳ ቢላዋ፤ጥይት ወይም ሌላ መሣሪያ ተጠቅሞ ወይም ሊጠቀም ሞክሮ ያዉቃል?	1. አዎ 2. አይደለም	
307*	በመጨራሻዉ እርግዝና ጊዜ ባለቤት ወይም የቅርብ ጓደኛ አካለዊ ትንኮሰ አደርሶ ነበር?	1. አዎ 2. አይደለም	

2.2 ዖታዊ ትንኮሳ

ተ.ቁ	መጠይቅ	መልስ	ይለፉ
	በመጨረሻዉ እርግዝና ጊዜዎ ባለቤቶ ወይም የቅርብ ጓደኛዎ…		
401	እርሶ ሳይፈልጉ ግብረ ሥጋ ግንኙነት እንድያደርጉ አስገድዶ ያዉቃል?	1. አዎ 2. አይደለም	
402	ሊያደርግ የሚችለዉን ነገር ስለፈሩ ግብረሥጋግንኙነት ማድረግ እምቢ ባሉበት ጊዜ አስገድዶ ግብራሥጋ ግንኙነት አድርጎ ያዉቃል?	1. አዎ 2. አይደለም	
403	እርሶ የሚያዋርድ ነዉ (ክብሬን ይነካል) የሚሉትን ወሲባዊ ድርጊቶችን እንድያደርጉ አስገድዶ ያዉቃል?	1. አዎ 2. አይደለም	
404*	በመጨረሻዉ እርግዝና ጊዜዎ ባለቤቶ ወይም የቅርብ ጓደኛ ዖታዊ ትንኮሳ አድርሶቦት ነበር	1. አዎ 2. አይደለም	

2.3 ስነ ልቦነዊ ትንኮሳ

ተ.ቁ	መጠይቅ	መልስ	ይለፉ
	በመጨራሻዉ እርግዝና ጊዜዎ ባለቤቶ ወይም የቅርብ ጓደኛዎ…		
501	ሰድቦዎት/ዘልፎዎት ወይም ስለራስዎ ጥሩ ስሜት እንዳይሰማዎት አድርጎ ያውቃል?	1. አዎ 2. አይደለም	
502	በሰዎች ፊት አዋርዶዎት ያውቃል?	1. አዎ 2. አይደለም	
503	ሆን ብሎ እርሶን ለማስፈራራት ሞክሮ ያዉቃል (ለምሳሌ በመጮሆ ወይም ዕቃዎችን በመስበር)?	1. አዎ 2. አይደለም	
504	እርሶን ወይም በእርሶ ሀላፍነት ስር ያለዉን ሰዉ ለመጉዳት አስፈራርቶ ያውቃል?	1. አዎ 2. አይደለም	
505*	በመጨራሻዉ እርግዝና ጊዜ ባለቤት ወይም የቅርብ ጓደኛ ስነ ልቦዊ ትንኮሰ አደርሶ ነበር?	1. አዎ 2. አይደለም	

*በጠያቂዋ የሚሞላ

ክፍልሶስት፤በጓደኛ ባህሪ ላይ ያተኮረ ጥያቄ

ተ.ቁ	መጠይቅ	መልስ	ምርመራ
601	በመጨረሻዉ እርግዝና ጊዜዎ ባለቤቶ ወይም የቅርብ ጓደኛዎ መጠጥ(አልኮል) በምን ያህል ጊዜ ይጠጡ ነበር?	1. በየቀኑ/በሰምንት አብዘኛዉን ቀናት 2. በሳምንት አንዴ ወይም ሁለት ጊዜ 3. በወር ከአንድ እስከ ሶስት ጊዜ 4. አልፎ አልፎ በወር ከአንድ ጊዜ በታች 5. በፍጹም አይጠጡም	

ክፍልአራት፤የወሊድ ዉጤቶችን ለመደሰስ የተዘጋጃ ቼክሊስት(Record review Check list on birth outcome).

Sno	Characteristics	Outcome result	Remark
701	Alive	☐	
702	Still birth	☐	
703	Birth weight in gram	_____	
704	Apgar score at 5 minutes	_____	
705	Term birth	☐	
706	Preterm birth	☐	

ስለተሳትፎዎ አመሰግናለሁ።።