

**YANGON UNIVERSITY OF ECONOMICS  
DEPARTMENT OF STATISTICS  
MASTER OF APPLIED STATISTICS PROGRAMME**

**WOMEN'S PERCEPTIONS ON GENDER-BASED VIOLENCE IN  
DALA TOWNSHIP: AN EMPHASIS ON SOCIO-ECONOMIC  
AND DEMOGRAPHIC CHARACTERISTICS**

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**MAS - 14**

**DECEMBER, 2019**

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DEMOGRAPHIC CHARACTERISTICS**

A thesis submitted as a partial fulfillment towards the requirements for the Degree of  
Master of Applied Statistics

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**ABSTRACT**

This study explores the relationship between women's perceptions on gender-based violence and their socio-economic and demographic characteristics. Primary data on the target population were collected through personal interview using a structured questionnaire in Dala Township, Yangon Region. Target population of the study is women aged above 18 years. The sample size of 205 households from five wards of urban area in Dala Township was obtained by two-stage cluster sampling. The binary logistic regression model was used in the data analysis. Six independent variables were considered in this study and physical, emotional and sexual violence were used as dependent variables. It has been found that women's age group, income, marital status and education are significant and positive influence on their perceptions towards physical violence. It has been observed that women's age group, education, occupation are significant and positive influence on their perceptions towards emotional violence. It has been noticed that women's age, education, occupation, marital status and income are significant and positive influence on their perceptions towards sexual violence. It has been found that women's age, income, marital status, education and occupation are significant and positive influence on their perceptions towards overall gender-based violence among women in this study. Regarding the results, it can be concluded that there is a positive relationship between perceptions of women on gender-based violence and their socio-economic and demographic characteristics in Dala Township. It can be well-known knowledge of help seeking behaviors due to women's perceptions are becoming higher. Moreover, occurrence of violence can be decreased.

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## CONTENTS

	<b>Page</b>
<b>ABSTRACT</b>	
<b>ACKNOWLEDGEMENTS</b>	
<b>LIST OF TABLES</b>	
<b>LIST OF FIGURES</b>	
<b>LIST OF ABBREVIATIONS</b>	
<b>CHAPTER I      INTRODUCTION</b>	
1.1    Rationale of the Study	1
1.2    Objectives of the Study	2
1.3    Method of Study	3
1.4    Scope and Limitations of the Study	3
1.5    Organization of the Study	3
<b>CHAPTER II     LITERATURE REVIEW</b>	
2.1    Gender-based Violence	5
2.2    Prevalence of Gender-based Violence in Globalization	6
2.3    Gender-based Violence in Myanmar	9
2.4    Studies on Relationship between Socio-economic Characteristics and Gender-based Violence	10
2.5    Conceptual Framework of Study	12
<b>CHAPTER III    METHODOLOGY</b>	
3.1    Logistic Regression	13
3.1.1    Binary Logistic Regression Model	13
3.1.2    Likelihood Ratio Test	14
3.1.3    Wald Test	14
3.1.4    The Hosmer-Lemeshow Test	14
3.1.5    Cox and Snell R-Square	15
3.1.6    Nagelkerke R-Square	16
3.1.7    Omnibus Test	16
3.1.8    Pseudo R-Square	17

3.2	Survey Design	18
3.2.1	Questionnaires	18
3.2.2	Determination of sample size	18

**CHAPTER IV ANALYSIS OF WOMEN’S PERCEPTION ABOUT GENDER-BASED VIOLENCE**

4.1	Socio-economic and Demographic Characteristics of Women	21
4.2	Perceptions of Women about Gender-based Violence	27
4.2.1	Perceptions of Women about Physical Violence	27
4.2.2	Perceptions of Women about Emotional Violence	28
4.2.3	Perceptions of Women about Sexual Violence	29
4.3	Variables in the Binary Logistic Regression Model	31
4.4	Binary Logistic Regression Analysis for Women’s Perceptions about Physical Violence	32
4.5	Binary Logistic Regression Analysis for Women’s Perceptions about Emotional Violence	35
4.6	Binary Logistic Regression Analysis for Women’s Perceptions about Sexual Violence	39
4.7	Binary Logistic Regression Analysis for Women’s Perceptions about Overall Gender-based Violence	42

**CHAPTER V CONCLUSION**

5.1	Findings	47
5.2	Suggestions	48
5.3	Further Research	48

**REFERENCES**

**APPENDIX**

## LIST OF TABLES

<b>Tables</b>	<b>Title</b>	<b>Page</b>
4.1	Age of Women	21
4.2	Religion of Women	22
4.3	Education of Women	22
4.4	Marital Status of Women	23
4.5	Length of Residency of Women	24
4.6	Occupation of Women	24
4.7	Monthly Income of Women	25
4.8	Monthly Income of Women's Household	25
4.9	Monthly Expenditure of Women's Household	26
4.10	Household Size of Women	27
4.11	Descriptive Statistics of Physical Violence	28
4.12	Descriptive Statistics of Emotional Violence	29
4.13	Descriptive Statistics of Sexual Violence	30
4.14	Variables in the Binary Logistic Regression Model	31
4.15	Model Fitting Information for Physical Violence	32
4.16	Parameter Estimates of Binary Logistic Regression Model for Women's perceptions about Physical Violence	33
4.17	Model Fitting Information for Emotional Violence	35
4.18	Parameter Estimates of Binary Logistic Regression Model for Women's perceptions about Emotional Violence	37
4.19	Model Fitting Information for Sexual Violence	39
4.20	Parameter Estimates of Binary Logistic Regression Model for Women's perceptions about Sexual Violence	40
4.21	Model Fitting Information for Overall Gender-based Violence	42
4.22	Parameter Estimates of Binary Logistic Regression Model for Women's perceptions about Overall Gender-based Violence	44

## LIST OF FIGURES

<b>Figures No.</b>	<b>Title</b>	<b>Page</b>
2.1	Programing Essential-UNWOMEN	4
2.2	Programing Essential-UNWOMEN	5

# **CHAPTER I**

## **INTRODUCTION**

Gender-based violence (GBV) is a critical and persistent problem in Myanmar, it occurs in everyday situations of the society and includes marital rape, sexual violence, harassment by stalking, harassment in work place and public place, violence through tradition and customary practice, violation of reproductive rights and exclusion of women from opportunities to participate in public life (AGIPP-2017). Women and girls are often the targets because of social norms and beliefs that perpetuate their social status. GBV is rooted in historically unequal power among men, women, boys and girls (CARE International Myanmar-2017). The report expressed that violence against women constitutes an obligation under the 1979 Convention on the Elimination of All Forms Discrimination against Women (CEDAW). With the goal of bringing Myanmar's laws into more effective compliance with CEDAW, the Government of Myanmar has worked with GEN and the UN to draft the Protection and Prevention of Violence against Women (PoVAW) bill. As of early 2016, the bill is undergoing review by the Government and is likely to be enacted in legislation later in the year. If the Protection and Prevention of Violence against Women (PoVAW) passed into law, it will provide a legal framework for addressing women's disproportionate experiences of violence (AGIPP-2017).

### **1.1 Rationale of the Study**

Gender based violence (GBV) or violence against women and girls (VAWG), is a global problem that affects 1 in 3 women in their lifetime. Thirty-five percent of women worldwide have experienced either physical or sexual intimate partner violence. Globally seven percent of women have been sexually assaulted by someone other than a partner. Globally, thirty-eight percent of women of murders are committed by an intimate partner. Two hundred million women have experienced female genital cutting (UN Women-2014 Report).

Violence against women is a silent emergency in Myanmar. It ranges from gender-based violence to human trafficking and sexual violence. It is a serious and reprehensible human rights violation that affects the health, livelihoods and opportunities of women in Myanmar. While violence against women is a global

problem and the situation in Myanmar is exacerbated by high levels of social acceptance, armed conflict, discrimination against minorities, and a weak legal system which permits gender-based violence to be committed with impunity and little attention to the needs and rights of survivors (UNFPA-2016).

Civil society, government authorities and international stakeholders increasingly recognize the extent and scope of this issue across the country. Nowadays, Governments, UN and International non-government organizations are implementing and preventing from gender-based violence against women and also victims who suffered gender-based violence, supporting for health, legal and social services in Myanmar. Thus, this study suggests the organizations to be more easy and smooth for planning, selecting project area and gender-based violence program proposal because the study results will help knowing women's perception on gender-based violence.

As mentioned above, violence against women is prevalent in Myanmar. On the other hand, there has been little research among women in Myanmar's population on this topic. Therefore, gender-based violence topic needs to be studied the related with women's perception and how there is relationship women's socio-economic and demographic characteristics. So, this study is intended to examine in detail relevant women's perception on gender-based violence. This study area was selected because it includes one of the townships prevalent of gender-based violence in Yangon Region and there was larger female population in Dala Township, Yangon Region.

## **1.2 Objectives of the Study**

The objectives of the study are

- (i) To investigate the perceptions of women on gender-based violence occurring in Dala Township, Yangon Region.
- (ii) To analyze the relationship between women's perceptions on gender-based violence and socio-economic and demographic characteristics of women in Dala Township, Yangon Region.

### **1.3 Method of Study**

This study applied logistic regression and primary data. The required primary data has been collected by using two-stage cluster sampling. Target population is women aged above 18 years in urban area of Dala Township, Yangon Region. Questionnaire consists of four main sections. The first section includes socio-economic and demographic characteristic of women. The second section consists women's perceptions on physical violence. The third section includes women's perceptions on emotional violence. The four section includes women's perceptions on sexual violence. In questionnaire, a five-point Likert type scale (1=strongly disagree, 2=disagree, 3= neutral, 4=agree, 5=strongly agree) has been used to investigate women's perceptions on gender-based violence.

### **1.4 Scope and Limitations of the Study**

This study is based on primary data. The study of women's perceptions on gender-based violence is an urgent need because women are suffering from gender violence in Myanmar. There are urban and rural areas in Dala Township but the urban area was selected due to time frame and budget constraints. So the urban area of Dala Township was selected to study women's perceptions on gender-based violence. The collected sample is 205 women aged above 18 years old in urban area of Dala Township, Yangon Region.

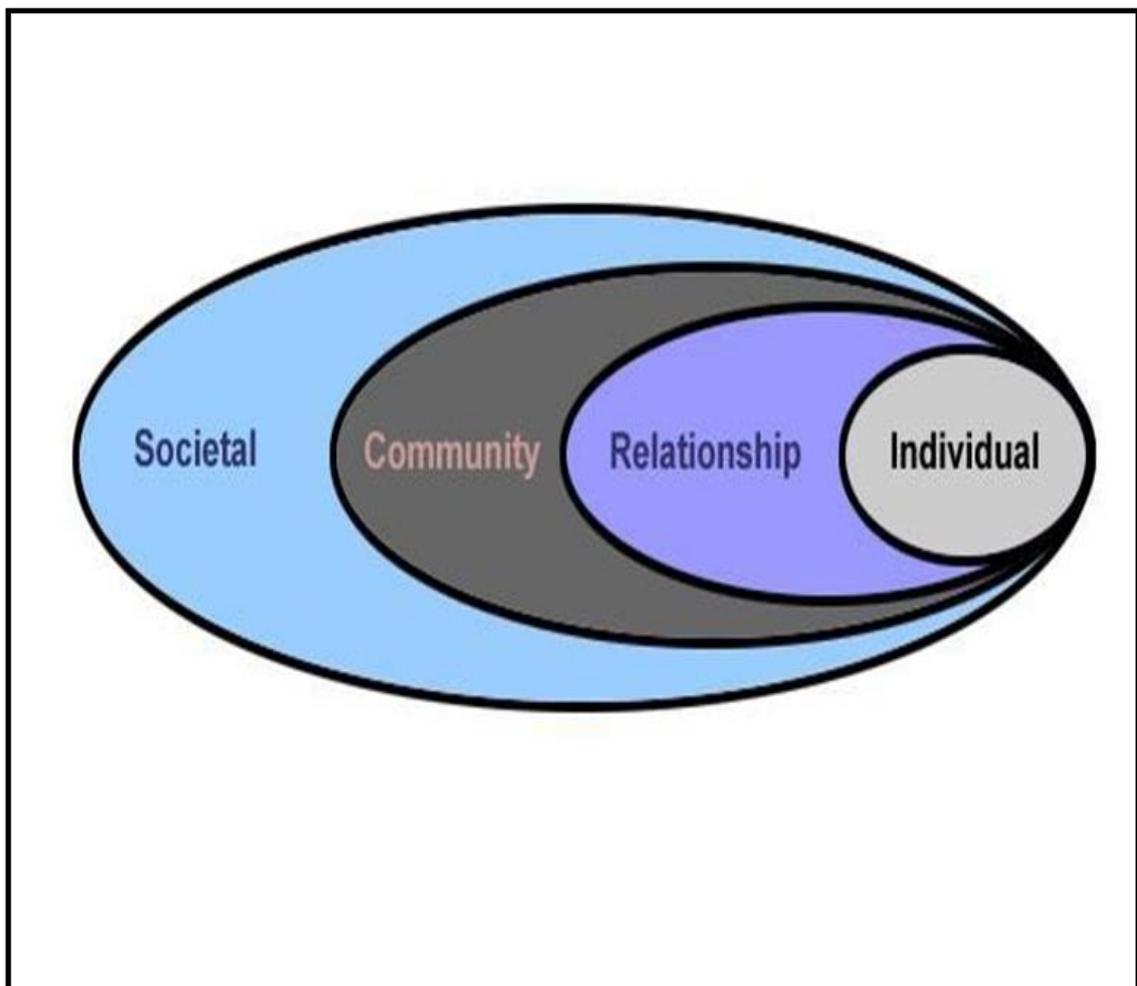
### **1.5 Organization of the Study**

This study is organized into five chapters. Chapter I is introduction. It includes rationale of the study, objectives of the study, method of study, scope and limitations of the study and organization of the study. The literature review is presented in Chapter II. The methodology based on logistic regression analysis is described in Chapter III. The analysis of the women's perceptions based on gender violence is discussed in Chapter IV and the conclusion is presented in Chapter V.

## CHAPTER II

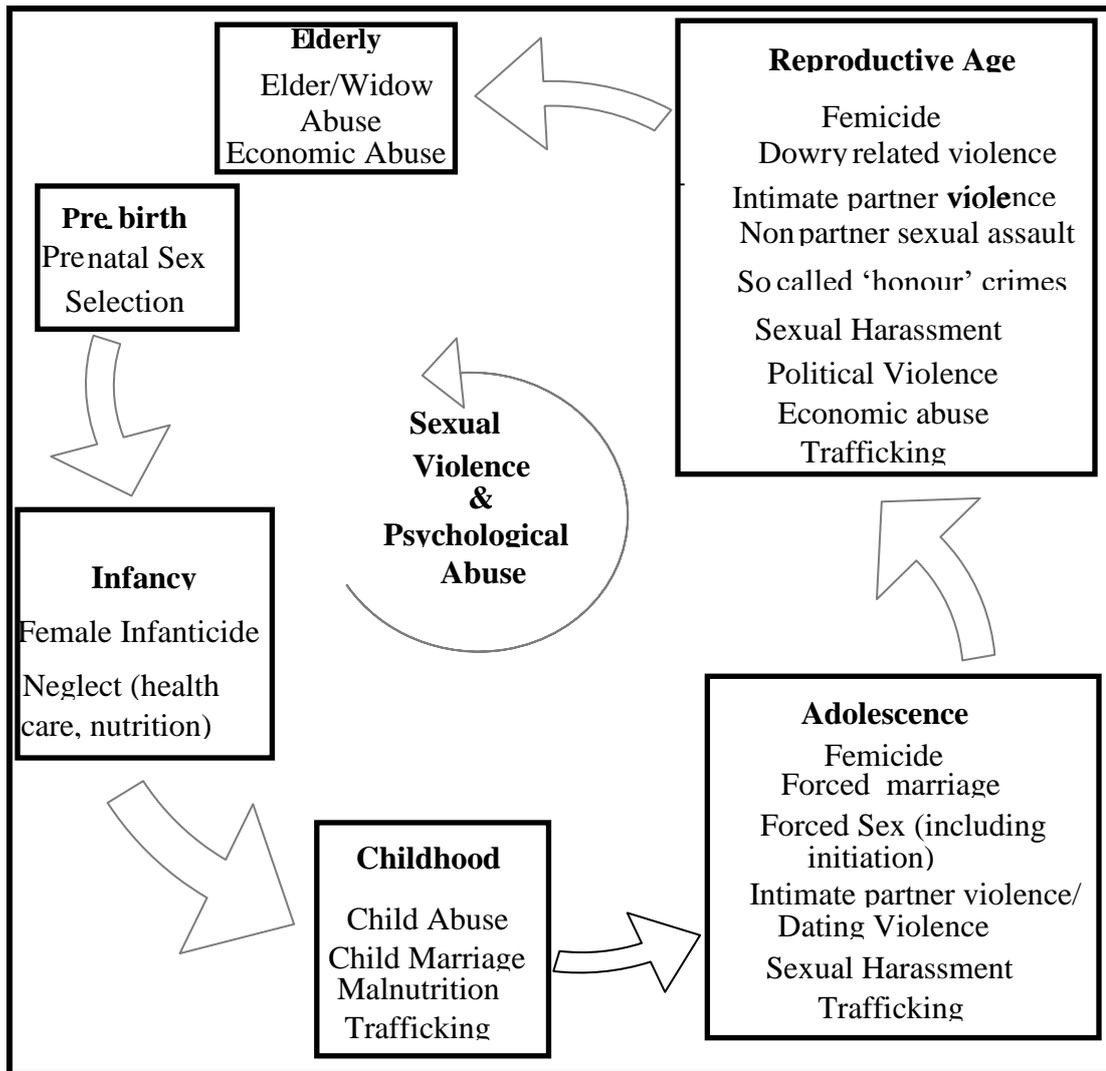
### LITERATURE REVIEW

Most of the literature based on gender violence focus about the contemporary nature of gender violence. Mainly the term violence is focuses on the women violence. Women and girls around the world are experience countless acts of violence throughout their lives simply because of their gender identification. Ecological model for understanding violence and life cycle of violence against women and girls is expressed to be aware in Figure (2.1) and (2.2).



**Figure (2.1) Ecological model for understanding violence**

Source: Programing Essential (UNWOMEN)



**Figure (2.2) Ecological model for understanding violence**

Source: Programing Essential (UNWOMEN)

## 2.1 Gender-based Violence

Gender-based violence is deeply rooted in gender inequalities and power inequalities between women and men. Physical violence, emotional violence and sexual violence are included in gender-based violence. Physical violence is any act of physical harm as a result of unlawful physical force and it can take the form among other, serious and minor assault, deprivation of liberty and manslaughter. There are spitting, biting, grabbing, shaking, shoving, restraining, slapping, punching, choking, burning, use of weapons including household objects, knives. Emotional or psychological violence is any act which causes psychological harm to an individual

and it can take the form of coercion, threats of violence or harm, verbal attacks or harassment, humiliation, isolating, withholding information, controlling somebody's mind. Sexual violence is any sexual act performed on an individual and it can take the form of sexual harassment, rape, marital rape, gang rape, trafficking for the purpose of forced prostitution (CARE International Myanmar).

## **2.2 Prevalence of Gender-based Violence in Globalization**

United Nations Children's Fund (2000) reported the studies about domestic violence against women at twenty three countries in world wide. Industrialized Countries, the study selected the as representative sample of 12,300 women, twenty nine percent of women reported being physically assaulted by their husband or former partner since the age of sixteen in Canada. Japan was surveyed in 1993 with 796 women, fifty nine percent of women reported being physically abused by intimate partner. New Zealand was surveyed with 314 women, twenty percent of women reported being hit or physically abused by their partner. There were twenty percent of women reported being physically assaulted from 1,500 of sample women in Switzerland. United Kingdom was selected a random sample of women from one district, twenty five percent of women had been punched or slapped by their partner or ex-partner in their lifecycle. United States has been chose as nationally representative sample of women, twenty eight percent of women reported about physical violence from their partner.

Asia and the Pacific, Cambodia was selected as representative sample of women, sixteen percent of women reported being physically abused and eight percent being injured by their spouse. There were forty five percent of married men admitted physically abusing their spouses, in 1996 survey on 6,902 men the Uttar Pradesh state in India. Thirty eight percent of wives from survey of a random sample of women reported being physically abused by a partner in Korea. Twenty percent of husbands from sample of 619 husbands admitted physically abusing their wives at least once in their marriage life in Thailand.

Middle East, thirty five percent of women from sample of women informed being beaten by their partner in their marriage time in Egypt. There were thirty two percent of women reported the physical abuse and thirty percent informed sexual coercion by their partner in 1997 survey of 1,826 Arab women in Israel. In Africa,

forty two percent of women from 612 sample women reported had been beaten and fifty eight percent of women informed that women were beaten often by a partner in Kenya. Uganda surveyed in two districts among women and men, forty one percent of women reported being physically harmed by their spouses and forty one percent of men also reported beating their wives. Thirty two percent of 966 women in one province informed physical abuse by a household member since the age of sixteen, 1996 survey in Zimbabwe. Latin America and the Caribbean, there were twenty six percent of women reported the spousal violence, eleven percent reported the severe violence and fifteen percent of women reported less severe violence form sample women in Santiago in Chile. Colombia surveyed the nineteen percent of women from 6097 sample women had been physically assaulted by their husband in their lifespan. Thirty percent of women from 650 women were surveyed in Guadalajara informed at least one issue of physical violence, thirteen percent reported physical violence within one year, in 1997 in Mexico. There were fifty two percent of women from the sample women in León reported physically abused often and twenty seven percent of women reported physical violence in the last year by their partner, in 1996 report in Nicaragua.

Central and Eastern Europe, twenty nine percent of women aged 18-24 and fifty two percent of women age 65 or above were affected on domestic violence in 1994 survey of 2,315 women in Estonia. The violence was suffered by 60% of divorced women surveyed in 1993 by the Centre for the Examination of Public Opinion reported being hit sometime and twenty five percent of women reported violence in Poland. The study was 174 boys and 172 girls aged 14-17, twenty five percent of girls and eleven percent of boys informed unwanted sexual behaviors in Russia. The study observed 550 women aged 10-40 years, there were twenty three percent of women informed being physical misused in Tajikistan.

Naripokkho and Parishad (2002) expressed that the study was secondary source of information and pilot study on violence against women. The study used mixed method which is quantitative and qualitative. The study found the cause and consequences of gender violence toward women. The cause and consequences are the lack of self-defense, critical assault, community violence, dowry, lack of education, economic dependency, anxiety, poverty and cultural tradition. These are reasons of violence against women in Bangladesh.

Bennett and Manderson (2003) said that domestic violence comes in many different types and formal by originated in the abuse of power at the household level. The study found restrictions of women's movement outside their homes, unequal access to education and restricted necessary opportunities, limit women's ability to exercise their human rights which make them more vulnerable to domestic violence in Bangladesh society.

Kishor and Johnson (2004) described that it was domestic violence. The domestic violence is the culture of silence that surrounds the issue as well as the collection of data on this sensitive issue was very much challenging. The study mainly focused on help seeking to someone when experienced domestic violence in women. The study found that any form of domestic violence issues were never reported by women although it is a criminal offence in Bangladesh.

Samer and Cetinkaya (2004) said that the study was perception of parents, teachers and students on violence in school. The study mentioned that many types of hostile and violent behaviors occurred frequently in their schools including aggression, beating, discrimination, verbally threatening others. The most of the finding of the present study accepted the corporal punishment by teachers among the common type of violence observed in school. Teacher's violence is set as legal restrictions even though beating, bullying, and emotionally abusing students seemed to be joined within the Turkish education system. Teachers did committed corporal punishment at least once a week and another result was that parents were more tolerant with the violence done by teacher. As the result, some parents used teacher's method of minor violence which could be accepted as a normal way in Turkish.

The World Health Organization (2005) released that reported documenting levels of intimate partner violence and exploring outcomes of violence in terms of mental health, sexual health and reproductive health in the developing countries. WHO described a wide range of the reporting physical or sexual violence across countries. National and international research found that most of the violence against women are being perpetuated by the husband and intimate partner. Intimate partner violence was one of the most common forms of violence experienced by women in WHO report.

Ghani (2014) identified that the study focused on the barriers of abused women to examine about seeking help. The study found that women must be patient while lasting abusive behaviors of partner due to their aim to be a good and obedient

wife towards their intimate partner. Women accepted that they did not speak out to others about the abuse and violence in this study. The study related that some of the issues are strongly physical violence and sexual violence owing to cultural and social norms as well as religious beliefs among women in Malaysia society.

David (2018) conducted the study about knowledge, perception and experience among adolescent men and women on gender-based violence. The knowledge and perception of gender-based violence among adolescents were insufficient, importance of both sexes experience of sexual nature. The results showed the need of public information on gender-based violence given to the adolescents at school. They accepted that males are superior to females and traditional beliefs and practices are possible causes. The perception of the adolescents on gender-based violence was found to be lower in more than half of the respondents. They believed that females should obey and argued with their husbands and they didn't think men were at risk of gender-based violence. In the study, the knowledge and perception were found to be lower on gender-based violence among adolescents in Nigeria.

### **2.3 Gender-based Violence in Myanmar**

Myanmar Demographic and Health Survey (2015-2016) described that the study focused on domestic violence in country wide such as Kachin , Kayah, Kayin, Chin, Mon, Rakhine, Shan, Sagaing , Thnintharyi , Bago, Magway, Mandalay, Yangon, Ayeyarwady, Nay Pyi Taw respectively. The survey observed women aged 15-49 years. In this study, the measurements of violence were experience of violence, marital control behaviors, spousal violence, injuries due to spousal violence and help seeking to stop violence. This survey found that every woman has experienced physical violence the since age of fifteen years and three percent of women had experienced sexual violence. Three percent of ever pregnant women had experienced physical violence during pregnancy period. Every married women had experienced spousal violence such as physical violence and emotional violence. Thirty seven percent of married women had suffered injuries and seven percent of women who had experienced serious injuries because of spousal physical violence. According to the results, most of the women sought for help from their own family and second most common were from neighbors among women. A few women sought help from the police, lawyer and a social organization. Thirty seven percent of women didn't speak

out to other persons to stop violence. The study found that most spousal violence was expressed by forty one percent of ever married women in Rakhine state and forty percent of ever married women in Thanintharyi Region. There were at least twelve percent of women who have had spousal violence in Yangon Region and Mandalay Region.

#### **2.4 Studies on Relationship between Socio-economic Characteristics and Gender-based Violence**

Bonding (1988) analyzed that social violence against women was found on a social institutional structure. The study observed that women are more vulnerable victims, they experience a great deal of direct behavioral violence in every society. Men were perpetuating all kinds of discrimination and harassments against women which result in behavioral violence. The most common expressed behavioral violence against women included rape, wife-beating and prostitution in Malaysia.

Bhatti (1989) concluded that the study was focused on the relationship between forms of violence and women's level of socio-economic. The study collected the data on various forms of violence and women's socio-economic. The results found that women in lower class were the victims of physical and verbal violence and the upper and middle classes were the victims of emotional and intellectual violence more than to the lower class in Pakistan.

Naved and Persson (2005) studied that socio-economic status of the women and their relation by rural and urban settings were changed with the gender violence. The study also assumed that gender violence was misinformed among women. The study found that many kinds of community leaders actively separation women's rights in order to maintain their own power positions within the community. The relationship between spousal physical violence and nature of women was so much because of the silence nature of women. So, women are more vulnerable to the victims of violence and urban women had experienced the spousal violence more than rural women especially for married women in Bangladesh.

Monemi, Naved and Persson (2007) showed the relation between women's socio-economic and physical violence. The results found that the educated women experienced physical violence or high level of controlling behavior in marriage, the

beneficial effect of education is at the same risk level as the non-educated in Bangladesh.

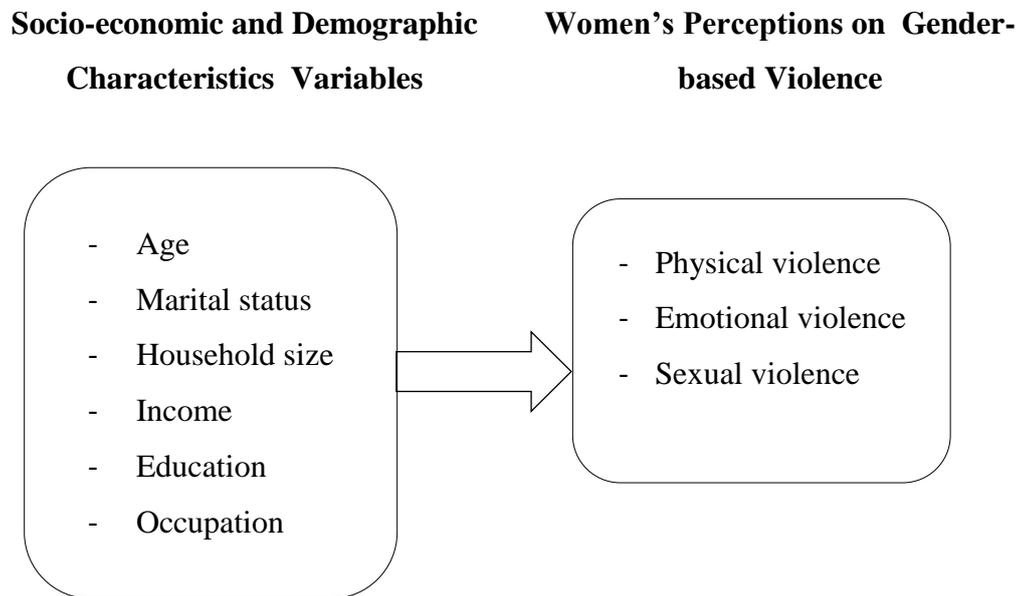
Perera (2012) carried out a study focusing on a gender analysis among men and women. The study findings were uneducated and unemployed men, drunkards, men who wish to have a second wife were mostly perpetrators. Women believed that they must respect and obey their husband's words. As the results, the victims have done help seeking to neighbors, friends and village authoritative persons when violence cases occurred in their surroundings. Women reported the case to polices or law enforcement authorities only if the abuse was very painful because most women put up with abuse for fear of breaking up the marriage, of further abuse or abandonment, and of damaging one's reputation. Women said that they have to be tolerant the violence so as to maintain stability in the family in Northern Rakhine State.

Cathy (2013) focused that the study was help seeking on gender-based violence among urban women and rural women. In this study, women between 15-19 years age group have ever sought help to their families, friends and neighbors as compared with other age groups to stop the violence. As the results, urban women have ever sought help than rural women in Rakhine State.

Mahlori (2018) expressed that the study was perception on gender-based violence among university staff of Florida and Pretoria Universities in South Africa. The study results showed that more universities staff were well-known about gender-based violence and their perception had of higher level because they got awareness through educational programs, from peers discussion, family conversations, university workshops, other conversations in the workplace as well as educated persons. They were well-known how they asked help seeking when they saw around their surroundings relevant to gender-based violence especially for physical and sexual abuse among universities staff in South Africa.

## 2.5 Conceptual Framework of Study

This study describes a conceptual framework for women's perceptions on gender-based violence. The framework presents to analyze the variables that includes women's age, marital status, household size, income, education and occupation as independent variables in model.



Source: Author's Own Compilation

**Figure (3.1) A Framework for Women's Perceptions on Gender-based Violence**

## CHAPTER III

### METHODOLOGY

This chapter describes logistic regression, survey design, sampling selection procedure, questionnaires and determination of sample size. Logistic regression includes binary logistic regression model, likelihood ratio test, wald test, the hosmer-lemeshow test, cox and snell R-square, nagelkerke R-square, omnibus tests and pseudo R-square.

#### 3.1 Logistic Regression

Logistic methods have become an integral component of any data analysis concerned with describing the relationship between a response variable and one or more explanatory variable. Logistic regression was proposed as an alternative in the late 1960s and early 1970s and it became routinely available in statistical packages in the early 1980s. Logistic regression has mostly found in applied researches.

##### 3.1.1 Binary Logistic Regression Model

The dependent variable in logistic regression is usually dichotomous, that is the dependent variable can take value 1 with a probability of success,  $P(Y=1) = \pi$ , or the value 0 with probability of failure  $P(Y= 0) = 1-\pi$ . This type of variable is called a binary variable. The binary logistic regression model in the usual form is

$$Y_i = E(Y_i) + \varepsilon_i$$

Since the distribution of the error term  $\varepsilon_i$  depends on the Bernoulli distribution of the response  $Y_i$ . The expected value of each  $Y_i$  is

$$E(Y_i) = \pi_i = \frac{\exp(\beta_0 + \beta_1 X_{i1} + \dots + \beta_i X_{ii})}{1 + \exp(\beta_0 + \beta_1 X_{i1} + \dots + \beta_i X_{ii})}$$

Where  $E(Y_i)$  = conditional mean given the value of  $X_i$

$\beta_0$  = the constant of the equation

$\beta_i$  = the coefficient of the predictor variable i

An alternative form of the logistic regression equation is:

$$\text{Log}[\pi(X)] = \text{Log}\left[\frac{\pi_i}{1-\pi_i}\right] = \beta_0 + \beta_1 X_1 + \dots + \beta_i X_i$$

### 3.1.2 Likelihood Ratio Test

The likelihood ratio test is performed to see where the inclusion of an explanatory variable in a model tells more about the outcome variable than a model that does not include that variable.

The likelihood ratio test is based on likelihood function. The likelihood ratio is

$$\frac{L(R)}{L(F)}$$

Where L (F) = the likelihood value for full model, L(R) = the likelihood value for the reduced model. The actual test statistic for likelihood ratio test is denoted by  $\chi^2$ .

$$\chi^2 = -2 \log_e \left[ \frac{L(R)}{L(F)} \right] = 2 \log_e L(F) - 2 \log_e L(R)$$

### 3.1.3 Wald Test

Wald test is used to test the significance for the coefficients in the logistic regression. Wald statistic follows a Chi-square distribution.

The test statistic is

$$W = S.E(\hat{\beta}_1)$$

### 3.1.4 The Hosmer-Lemeshow Test

Goodness-of-fit statistics assesses the fit of a logistic model against actual outcomes. The inferential goodness-of-fit test for logistic model is the Hosmer-Lemeshow (H-L) test. The H-L statistic,  $\hat{C}$ , is a Pearson Chi-square statistic, calculated from a g x 2 table of observed and estimated frequencies, where g is the

number of groups formed from the estimated probabilities. A formula defining the calculation of  $\widehat{C}$  is as follows:

$$\widehat{C} = \sum_{k=1}^g \frac{(O_k - n'_k \bar{\pi}_k)^2}{n'_k \bar{\pi}_k (1 - \bar{\pi}_k)}$$

Where  $n'_k$  is the total number of subjects in  $k^{th}$  group,  $C_k$  denotes the number of covariate patterns in the  $k^{th}$  decile,

$$O_k = \sum_{j=1}^{ch} y_j$$

is the number of responses among the  $C_k$  covariate patterns, and the average estimated probability is

$$\bar{\pi}_k = \sum_{j=1}^{ch} \frac{m_j \hat{\pi}_j}{n'_k}$$

### 3.1.5 Cox and Snell R-Square

Cox and Snell's defines R square as a transformation of the statistic of  $-2\ln [L(M_{Intercept})/L(M_{Full})]$  that is used to determine the convergence of a logistic regression. The ratio of the likelihoods reflects the improvement of the full model over the intercept model (the smaller the ratio, the greater the improvement). The Cox and Snell R-square is

$$R^2 = 1 - \left[ \frac{L(M_{Intercept})}{L(M_{Full})} \right]^{2/N}$$

$L(M)$  is the conditional probability of the dependent variable given the independent variables. If there are  $N$  observations,  $L(M)$  is the product of  $N$  such probabilities. Thus, taking the  $n^{th}$  root of the product  $L(M)$  provides an estimate of the likelihood of each  $Y$  value. Cox and Snell's pseudo R-Square has a maximum value that is not 1. If the full model predicts the outcomes perfectly and has a likelihood of 1, Cox and Snell's R-Square will be  $(1 - L(M_{Intercept}))^{2/N}$ , which is less than one.

### 3.1.6 Nagelkerke R-Square

It adjusts Cox and Snell's so that the range of possible values extends to 1. To achieve this, the Cox and Snell's R-Square is divided by its maximum possible value,  $1 - L(M_{Intercept})^{2/N}$ .

$$R^2 = \frac{1 - \left[ \frac{L(M_{Intercept})}{L(M_{Full})} \right]^{2/N}}{1 - (M_{Intercept})^{2/N}}$$

Then, if the full model perfectly predicts the outcome and has a likelihood of 1, Nagelkerke R-Square will be equal to one.

### 3.1.7 Omnibus Test

Omnibus tests are a kind of statistical test. They test whether the explained variance in a set of data is significantly greater than the unexplained variance, overall. In addition, Omnibus test as a general name refers to an overall or a global test. Other names include F-test or Chi-Square test. Omnibus test as a statistical test is implemented on an overall hypothesis that regarding coefficients  $\beta_1 = \beta_2 = \dots = \beta_k$  vs. at least one pair  $\beta_j \neq \beta_j$ , in Multiple linear regression or in Logistic regression. Usually, it tests more than two parameters of the same type and its role is to find general significance of at least one of the parameters is involved. Omnibus test commonly refers to either one of those statistical tests:

- ANOVA F test to test significance between all factor means and/or between their variances equality in Analysis of Variance procedure:
- The omnibus multivariate F Test in ANOVA with repeated measures:
- F test for equality/inequality of the regression coefficients in Multiple Regression:
- Chi-Square test for exploring significance differences between blocks of independent explanatory variables or their coefficients in a logistic regression.

Those omnibus tests are usually conducted whenever one tends to test an overall hypothesis on a quadratic statistic (like sum of squares or variance or covariance) or rational quadratic statistic (like the ANOVA overall F test in Analysis of Variance or F Test in Analysis of covariance or the F Test in Linear Regression, or

Chi-Square in Logistic Regression). While significance is founded on the omnibus test, it doesn't specify exactly where the difference occurs which meaning, it doesn't bring specification on which parameters is significantly different from the other, but it statistically determines that there is a difference, so at least two of the tested parameters are statistically different. If significance was met, none of those tests will tell specifically which mean different from the others (in ANOVA), which coefficient differs from the others (in Regression) etc. The model tested can be defined by  $y_i$ , where as  $y_i$  is the category of the dependent variable for the i-th observation and  $x_{ij}$  is the j independent variable ( $j = 1, 2, \dots, k$ ) for that observation,  $\beta_j$  is the j-th coefficient of  $x_{ij}$  and indicates its influence on and expected from the fitted model.

### 3.1.8 Pseudo R-Square

The model residuals are squared, summed, and divided by the total variability in the dependent variable, and this R-square is also equal to the squared correlation between the predicted values and actual values. The model residuals from a logistic regression are not comparable to those in ordinary Least square. The dependent variable in a logistic regression is not continuous and the predicted value (a probability) is. In OLS, the predicted values and the actual values are both continuous and on the same scale, so their differences are easily interpreted.

The formula defining the calculation of R-square is as follows:

$$R^2 = 1 - \frac{\sum_{i=1}^N (y_i - \hat{\pi}_i)^2}{\sum_{i=1}^N (y_i - \bar{y})^2}$$

$\hat{\pi}$  = model predicted probabilities

## 3.2 Survey Design

In this study, a two-stage cluster sampling design was used to analyse the women's perceptions based on gender violence. Wards were treated as first stage units (FSUs) and households in the FSUs were treated as second stage units (SSUs). In the first-stage sampling, five wards were randomly selected from 24 wards by sample random sampling (SRS) method. The selected wards were No.11/14 ward, Myoma (3) ward, Aung Mingalar Ward, Kyun Mar Yay Housing ward and Tapin Shwe Hti ward, respectively. In the second-stage, 205 households were selected from 5640 households by sample random sampling (SRS) method. This study was selected 205 women in Dala Township.

### 3.2.1 Questionnaires

This study was carried out using structured questionnaire and personal interview to collect women aged above 18 years old in each household. The questionnaire mainly includes the perceptions of women based on physical violence, emotional violence and sexual violence. In addition, the questionnaire consists of demographic and socio-economic characteristics of women such as age, marital status, education, income and occupation. The questionnaire is presented in Appendix.

### 3.2.2 Determination of sample size

In this study, Cochran's Sample Size Formula for categorical data is used. According to Cochran's formula (1977), the required minimum sample size for qualitative data is calculated using the following formula.

$$n_0 \geq \frac{(z)^2 * (P)(q)}{(d)^2}$$
$$n_0 = \frac{(1.96)^2 * (0.5)(0.5)}{(0.07)^2} = 196$$

Where,

$Z = 1.96$  for 5% significant level

$q = 0.5$

$p = 0.5$  (Maximum possible proportion)

$d =$  acceptable margin of error for proportion being estimated  $= 0.07$

The household population in second-stage is 196. Since sample size ( $n_0 = 196$ ) does not exceed 5% of the population ( $5640 \times 0.05 = 282$ ), Cochran's (1977) correction formula should not be used to calculate the final sample size.

However, in many educational and social research surveys, the response rate is typically well below 100%. The required minimum sample size is 205 households. 96% response rate from the pilot survey. Proportion of allocation formula is used to allocate the selected five wards.

$$P = \frac{N_i}{N}$$

$$n_i = P \times n$$

Where,

$P =$  proportion of allocation

$N_i =$  the number of unit in the sub-population of interest

$N =$  the total number of units in the population of interest

$n =$  the sample size

(1) No.11/14 ward

$$P = \frac{1498}{5640} = 0.2656$$

$$n_i = 0.2656 \times 205 = 54$$

(2) Myoma (3) Ward

$$P = \frac{125}{5640} = 0.0222$$

$$n_i = 0.0222 \times 205 = 5$$

(3) Aung Mingalar Ward

$$P = \frac{502}{5640} = 0.0890$$

$$n_i = 0.0890 \times 205 = 18$$

(4) Kyun Mar Yay Housing Ward

$$P = \frac{760}{5640} = 0.1348$$

$$n_i = 0.1348 \times 205 = 28$$

(5) Tapin Shwe Hti Ward

$$P = \frac{2755}{5640} = 0.4885$$

$$n_i = 0.4885 \times 205 = 100$$

The number of households in the selected wards are (54), (3), (5), (18), (28) and (100), respectively.

**CHAPTER IV**

**ANALYSIS OF WOMEN’S PERCEPTIONS ABOUT GENDER-BASED  
VIOLENCE**

The logistic regression analysis is conducted to identify women’s perception on gender-based violence in Dala Township. The data are analyzed with likelihood ratio test to explore the relationship between women’s perception on gender-based violence and socio-economic and demographic characteristics of women in Dala Township. This chapter includes socio-economic and demographic characteristics of women, variables in the binary logistic regression model, women’s perception on physical violence, emotional violence and sexual violence.

**4.1 Socio-economic and Demographic Characteristics of Women**

The socio-economic and demographic characteristics of women are age, religion, education, marital status, length of residency, occupation, respondent’s income, household income, household expenditure and household size.

*Age*

The age structure of the sample women was categorized into four groups that were shown in Table (4.1).

**Table (4.1) Age of Women**

<b>Age (years)</b>	<b>No. of Women</b>	<b>Percentage</b>
18 – 30	54	26
31- 43	84	41
44-56	55	27
57-67	12	6
Total	205	100

Source: Survey Data (2019)

According to Table (4.1), most of the women were aged 31-40 years (41%) and women aged 18-30 years were (26%). There were (27%) of women aged 44-56 years and the least of women were aged 57-67 years (6%).

### ***Religion***

The religion of the sample women was categorized into three groups that were shown in Table (4.2).

**Table (4.2) Religion of Women**

<b>Religion</b>	<b>No. of Women</b>	<b>Percentage</b>
Buddhism	192	94
Islam	10	5
Hinduism	3	1
Total	205	100

Source: Survey Data (2019)

This study described that the sample women's religion were Buddhism, Islam and Hinduism. Ninety-four percent of women were Buddhists. The women (5%) of women was Islam and (1%) of women were Hinduism.

### ***Education***

The education level of the sample women was shown in Table (4.3).

**Table (4.3) Education of Women**

<b>Education</b>	<b>No. of Women</b>	<b>Percentage</b>
Primary Level	13	6
Middle Level	68	33
Higher Level	53	26
Graduate	71	35
Total	205	100

Source: Survey Data (2019)

In this survey, there were four education status such as primary level, middle level, higher level and graduate. Most of the women were graduate (35%). Higher level education was found in (26%), primary level was found in (6%) and the middle level was in (33%).

### ***Marital Status***

The marital status of the sample women was shown in Table (4.4).

**Table (4.4) Marital Status of Women**

<b>Marital Status</b>	<b>No. of Women</b>	<b>Percentage</b>
Single	29	14
Married	162	79
Divorced	6	3
Widowed	8	4
Total	205	100

Source: Survey Data (2019)

The marital status of the women were categorized into four groups. The most of the women for married (79%) and followed by (14%) of women for single, (4%) of women for widowed and (3%) of women for divorced.

### *Length of residency*

The length of residency of sample women was shown in Table (4.5).

**Table (4.5) Length Residency of Women**

<b>Length of residency (years)</b>	<b>No. of Women</b>	<b>Percentage</b>
1-10	46	22
11-20	63	31
21-30	57	28
Above 30	39	19
Total	205	100

Source: Survey Data (2019)

The length of residency of the women were categorized into four groups. The most of the women lived for 11-20 years (31%) and followed by (28%) of women who lived for 21-30 years, (22%) of women lived for 1-10 years and (19%) of women lived above 30 years.

### *Occupation*

The occupation of sample women was shown in Table (4.6).

**Table (4.6) Occupation of Women**

<b>Occupation</b>	<b>No. of Women</b>	<b>Percentage</b>
No	94	46
Yes	111	54
Total	205	100

Source: Survey Data (2019)

According to Table (4.6), it is found that (46%) of the women do not have occupation and (54%) of those have occupation.

### ***Respondent's Monthly Income***

The monthly income of the sample women was shown in Table (4.7).

**Table (4.7) Monthly Income of Women**

<b>Monthly Income (Kyats)</b>	<b>No. of Women</b>	<b>Percentage</b>
Below 100000	88	43
100000 - 300000	50	24
Above 300000	67	33
Total	205	100

Source: Survey Data (2019)

According to Table (4.7), most of the women with monthly income below 100000 kyats were (43%) and followed by (33%) of women have monthly income above 300000 kyats and (24%) of women have monthly income 100000-300000 kyats.

### ***Household's Monthly Income***

The household's monthly income of the sample women was shown in Table (4.8).

**Table (4.8) Monthly Income of Women's Households**

<b>Household Monthly Income (Kyats)</b>	<b>No. of Women</b>	<b>Percentage</b>
100000 and below	57	28
100001-300000	61	30
300001-500000	61	30
Above 500000	26	12
Total	205	100

Source: Survey Data (2019)

According to Table (4.8), (30%) of women have household's monthly income 100001-300000 kyats and followed by (30%) of women have household's monthly income 300001-500000 kyats and (28%) of women have household's monthly income 100000 kyats and below. (12%) of women have household's monthly income above 500000 kyats.

### ***Household Expenditure***

The household's monthly expenditure of the sample women was shown in Table (4.9).

**Table (4.9) Monthly Expenditure of Women Household**

<b>Household's Monthly Expenditure (Kyats)</b>	<b>No. of Women</b>	<b>Percentage</b>
100000 and below	91	44
100001-300000	78	38
300001-500000	30	15
Above 500000	6	3
Total	205	100

Source: Survey Data (2019)

According to Table (4.8), (44%) of women have household's monthly expenditure 100000 kyats and below and follow by (38%) of women have household's monthly expenditure 100001-300000 kyats and (15%) of women have household's monthly expenditure 300001-500000 kyats. Three percent of women's have household's monthly income was above 500000 kyats.

### *Household Size*

The household size of the sample women was shown in Table (4.10).

**Table (4.10) Household Size of Women**

<b>Household Size</b>	<b>No. of Women</b>	<b>Percentage</b>
1-3	49	24
4-6	92	45
7 and Above	64	31
Total	205	100

Source: Survey Data (2019)

The household size of the women were categorized into three groups. Most of the households have 4-6 members (45%) and followed by 7 and above members of households size (31%) and 1-3 members of household was found in (24%).

## **4.2 Perceptions of Women about Gender-based Violence**

Gender-based violence was assessed by three categories of violence such as physical violence, emotional violence and sexual violence.

### **4.2.1 Perceptions of Women about Physical Violence**

Women's perceptions of physical violence was identified by five statements as following. It was found that mean and standard deviation for physical violence are shown Table (4.11).

**Table (4.11) Descriptive Statistics of Physical Violence**

<b>No.</b>	<b>Statements</b>	<b>Mean</b>	<b>Std. Deviation</b>
1.	Physical violence is be made hurt the physical with something, hurt the hitting, pushing, kicking., etc.	4.2634	0.44156
2.	Husbands can not use physical punishment like hitting or slapping when their wife does something wrong or does not obey him.	3.6585	1.14210
3.	Husbands can not hit their wives when they are angry.	4.2683	0.61135
4.	A person who poor, uneducated as well as rich , educated are perpetrating physically violence that likely to beating, kicking, pushing and blooding., etc.	4.2146	0.63615
5.	When you met the physical violence, ever tried to seek help to someone who friends, families, wards authorities .,etc.	4.361	0.7452
	Overall Mean	4.153	

Source: Survey Data (2019)

According to the results, the average values of all statements are greater than 4 except statement 2. It has been found that women agree the statements (1), (2), (3) ,(4) and (5). However, the statement 2 is below 4 and it can be said that women did not agree statement 2. Regarding the overall mean of physical violence is greater than 4, it can be concluded that women's perceptions about physical violence is high.

#### **4.2.2 Perceptions of Women about Emotional Violence**

Women's perceptions of emotional violence was identified by five statement as following. It was found that mean and standard deviation for emotional violence are shown Table (4.12).

**Table (4.12) Descriptive Statistics of Emotional Violence**

<b>No.</b>	<b>Statements</b>	<b>Mean</b>	<b>Std. Deviation</b>
1.	Psychological violence is be made hurt the mental with verbally, discrimination, neglect, deprive the opportunity, pent the couldn't out , etc.	4.2878	0.54241
2.	Psychological violence couldn't out aren't normally, it must be solved the problem.	4.3073	0.52225
3.	It can be occurred the big problems due to psychological violence that made hurt the mental, neglect.,etc.	4.3951	0.49007
4.	Girls education is as important as boys, pent the teaching continuous of girls is psychological violence.	4.3512	0.58875
5.	When you met the emotional violence, ever tried to seek help to someone who friends, families, wards authorities .,etc.	4.3220	0.79444
	Overall mean	4.333	

Source: Survey Data (2019)

Regarding the results of emotional violence the mean values of all statements are above 4. It is found that women agree these statements. Regrading the overall mean of emotional violence is greater than 4, it can be pointed out that women's perceptions about emotional violence is high.

### **4.2.3 Perceptions of Women about Sexual Violence**

Women's perceptions of sexual violence was identified by five statement as following. It was found that mean and standard deviation for sexual violence are shown Table (4.13).

**Table (4.13) Descriptive Statistics of Sexual Violence**

<b>No.</b>	<b>Statements</b>	<b>Mean</b>	<b>Std. Deviation</b>
1.	Women can refuse sex to their husband.	4.1415	0.87699
2.	Sexual violence is be made sexual intercourse without consent among husband and wife.	4.3220	0.65211
3.	Rape is sexual violence.	4.4829	0.52948
4.	Sexual violence is be showed and sent the sexual photo, video, messages with sexual nature .., etc.	4.3463	0.61201
5.	When you met the sexual violence, ever tried to seek help to someone who friends, families, wards authorities...,etc.	4.2732	0.92010
	Overall Mean	4.313	

Source: Survey Data (2019)

Regarding the results of sexual violence the mean values of all statements are above 4. It is found that women agree these statements. Regarding the overall mean of sexual violence is greater than 4, it can be pointed out that women's perceptions about sexual violence is high.

### 4.3 Variables in the Binary Logistic Regression Model

Women's age group, income, education, household size, marital status and occupation are considered as independent variables and women's perception on physical, emotional and sexual violence as dependent variables.

**Table (4.14) Variables in the Binary Logistic Regression Model**

<b>Dependent Variables</b>	<b>Independent Variables</b>
$Y_1$ = Women's perception on physical violence = 0, if low level = 1, if high level	$X_{i1}$ = Woman's age group = 1, if below 30 = 2, if 30-49 = 3, if 50 and above
$Y_2$ = Women's perception on emotional violence = 0, if low level = 1, if high level	$X_{i2}$ = Woman's income = 1, if below 1 lakh = 2, if 1 lakh -3 lakh = 3, if above 3 lakh
$Y_3$ = Women's perception on sexual violence = 0, if low level = 1, if high level	$X_{i3}$ = Woman's education level = 1, if primary level = 2, if middle level = 3, if higher level
$Y_4$ = Women's perception on gender-based violence = 0, if low level = 1, if high level	$X_{i4}$ = Woman's household size = 1, if 1-3 = 2, if 4-6 = 3, if 7 and above
	$X_{i5}$ = Woman's marital status = 1, if single = 2, if married
	$X_{i6}$ = Woman's occupation = 1, if No = 2, if Yes

Source: Survey Data (2019)

#### 4.4 Binary Logistic Regression Analysis for Women's Perceptions about Physical Violence

The value of omnibus test of model coefficient give Chi-square, Hosmer and Lemeshow (H-L) tests, -2 Log Likelihood, Cox & Snell R Square and Nagelkerke R Square are included in the model fitting information for physical violence Table (4.15).

**Table (4.15) Model Fitting Information for Physical Violence**

Model fitting criteria	$\chi^2$ value	df	p-value
Omnibus Test of Model Coefficient	102.452	10	0.000
Hosmer and Lemeshow (H-L) Tests	6.967	8	0.540
-2 Log Likelihood	163.310		
Cox & Snell R Square	0.393		
Nagelkerke R Square	0.541		

Source: Survey Data (2019)

According to the omnibus test of model coefficient give Chi-square of 102.452 on df 10. It has been concluded that the model for the perceptions based on physical violence with women's age, income, marital status and education are significant beyond 0.000. There is no evidence of lack of fit base on the H-L statistic (Chi-square =6.967,df=8, p-value =0.540). Since -2 log likelihood statistic is 163.310, it can be said that the existence of a relationship between the independent variables and dependent variable is supported. The model fitting information includes two different ways of estimation R square (Cox & Snell  $R^2$  and Nagelkerke  $R^2$ ). These pseudo  $R^2$  estimate indicates that 39.3% of variation in perceptions based on physical violence and 54.1% of variation in perceptions based on physical violence can be explained by the variation in independent variables.

The results of perceptions based on physical violence in Binary Logistic with selected socio-economic and demographic characteristics model are shown in Table (4.16).

**Table (4.16) Parameter Estimates of Binary Logistic Regression Model for  
Women's Perceptions about Physical Violence**

Independent variables		B	Standard Error	P-value	Odds ratio	95% Confidence Interval	
						Lower	Upper
Constant		-3.772	0.962	0.000***	0.023		
Age	50 and above (ref)						
	Below 30	1.511	0.499	0.002***	4.534	1.706	12.051
	30-49	2.404	0.381	0.000***	11.068	3.541	34.594
Income	Below 1lakh (ref)						
	1lakh - 3lakh	1.082	0.582	0.063*	2.949	0.943	9.230
	Above 3lakh	2.582	0.692	0.000***	13.222	3.404	51.350
Education	Primary (ref)						
	Middle	0.813	0.805	0.312	2.255	0.466	10.922
	High	1.522	0.805	0.059*	4.583	0.946	22.203
HH size	1-3 (ref)						
	4-6	0.716	0.521	0.170	2.047	0.737	5.687
	7 and above	0.227	0.575	0.693	1.254	0.407	3.868
Marital Status	Single (ref)						
	Married	0.850	0.480	0.077*	2.340	0.913	5.999
Occupation	No (ref)						
	Yes	0.149	0.518	0.773	1.161	0.421	3.201

Note : \*\*\*, \*\*, \* represent 1%, 5% and 10% levels of significance

Binary logistic regression model is performed on the women's perceptions based on physical violence using the independent variables (age, income, education level, household size, marital status and occupation). The results are shown in Table (4.16).

According to the results, women's age has positive influence on the women's perceptions based on physical violence. Women's aged below 30 years is found to be statistically significant at 1% and women aged 30-49 years is significant of 1% level. The odds of women's perceptions based on physical violence suggest that women with aged below 30 years are 5 times more likely to perceive the perceptions on physical violence than women with aged 50 years and above (reference category). The 95% confidence interval suggests that the magnitude of the effect could be anywhere from a 1.706 to a 12.051 fold increase. Women with the aged 30-49 years are 11 times more likely to perceive the perceptions on physical violence than women with the aged 50 years and above (reference category). The 95% confidence interval suggests that the magnitude effect could be anywhere from a 3.541 to a 34.594 fold increase.

Women's income has positive influence on the women's perceptions based on physical violence. Women's income 1 lakh - 3 lakh is found to be statistically significant at 10% level and the coefficient of women's above 3 lakh is statistically significant at 1% level. The odds of women's perceptions based on physical violence suggests that women with income 1 lakh - 3 lakh are 3 times more likely to perceive the perceptions on physical violence than women with below 1 lakh (reference category). The 95% confidence interval suggests that the magnitude of the effect could be anywhere from a 0.943 to a 9.230 fold increase. The odds of women's perceptions based on physical violence suggests that women with income above 3 lakh are 13 times more likely to perceive the perceptions on physical violence than women with below 1 lakh (reference category). The 95% confidence interval suggests that the magnitude of the effect could be anywhere from a 3.404 to a 51.350 fold increase in women's with above 3 lakh.

Women's education level has positive influence on the women's perceptions based on physical violence. The coefficients of women's higher level is statistically significant at 10% level. The odds of women's perceptions based on physical violence suggests that women with higher level are 5 times more likely to perceive the perceptions on physical violence compared to these with primary level (reference

category). The 95% confidence interval suggests that the magnitude of the effect could be anywhere from a 0.946 to a 22.203 fold increase in women's with higher level education.

Women's marital status has positive influence on the women's perceptions based on physical violence. The coefficients of women's marital status is statistically significant at 10% level. The odds of women's perceptions based on physical violence suggests that married women are 2 times more likely to perceive on physical violence compared to single women (reference category). The 95% confidence interval suggests that the magnitude of the effect could be anywhere from a 0.913 to a 5.999 fold increase in married women.

#### 4.5 Binary Logistic Regression Analysis for Women's Perceptions about Emotional Violence

The value of omnibus test of model coefficient give Chi-square, Hosmer and Lemeshow (H-L) tests, -2 Log Likelihood, Cox & Snell R Square and Nagelkerke R Square are included in the model fitting information for emotional violence Table (4.17).

**Table (4.17) Model Fitting Information for Emotional Violence**

Model fitting criteria	$\chi^2$ value	Df	p-value
Omnibus Test of Model Coefficient	82.810	10	0.000
Hosmer and Lemeshow (H-L) Tests	7.377	8	0.497
-2 Log Likelihood	147.197		
Cox & Snell R Square	0.332		
Nagelkerke R Square	0.493		

Source: Survey Data (2019)

According to the omnibus test of model coefficient give Chi-square of 82.810 on df 10. It has been concluded that the model for the perceptions on emotional violence based on women's age, education and occupation are significant beyond 0.000. There is no evidence of lack of fit base on the H-L statistics (Chi-square =7.377, df=8, p-value =0.497). Since -2 log likelihood statistic is 147.197, it can be said that the existence of a relationship between the independent variables and

dependent variables is supported. The model fitting information includes two different ways of estimation R square (Cox & Snell  $R^2$  and Nagelkerke  $R^2$ ). These pseudo  $R^2$  estimate indicate that 33.2% of variation in perceptions based on emotional violence and 49.3% of variation in perceptions based on emotional violence can be explained by the variation in independent variables.

The results of perceptions based on emotional violence in Binary Logistic with selected socio-economic and demographic characteristics model are shown in Table (4.18).

**Table (4.18) Parameter Estimates of Binary Logistic Regression Model for  
Women's Perceptions about Emotional Violence**

Independent variables		B	Standard Error	P-value	Odds ratio	95% Confidence Interval	
						Lower	Upper
Constant		-1.984	0.720	0.006***	0.138		
Age	50 and above (ref)						
	Below 30	1.234	0.485	0.011**	3.436	1.328	8.890
	30-49	2.020	0.624	0.001***	7.536	2.217	25.613
Income	Below 1lakh (ref)						
	1lakh - 3lakh	-0.934	0.706	0.186	0.393	0.098	1.569
	Above 3lakh	0.774	0.836	0.354	2.169	0.421	11.170
Education	Primary (ref)						
	Middle	0.691	0.676	0.307	1.996	0.530	7.513
	High	1.432	0.719	0.046**	4.189	1.024	17.130
HH size	1-3 (ref)						
	4-6	-0.079	0.534	0.883	0.924	0.325	2.631
	7 and above	0.216	0.591	0.715	1.241	0.389	3.954
Marital Status	Single (ref)						
	Married	0.261	0.499	0.602	1.298	0.488	3.454
Occupation	No (ref)						
	Yes	2.140	0.656	0.001***	8.501	2.352	30.728

Note : \*\*\*, \*\* represent 1% and 5% levels of significance

Binary logistic regression model is performed on the women's perceptions based on emotional violence using the independent variables (age, income, education level, household size, marital status and occupation). The results are shown in Table (4.18).

According to the results, women's age has positive influence on the women's perceptions based on emotional violence. Women's aged below 30 years is found to be statistically significant at 5% and women aged 30-49 years is significant of 1% level. The odds of women's perceptions based on emotional violence suggest that women with aged below 30 years are 3 times more likely to perceive the perception on emotional violence than women with aged 50 years and above (reference category). The 95% confidence interval suggests that the magnitude of the effect could be anywhere from a 1.328 to a 8.890 fold increase. Women with the aged 30-49 years are 8 times more likely to perceive the perceptions on emotional violence than women with the aged 50 years and above (reference category). The 95% confidence interval suggests that the magnitude effect could be anywhere from a 2.217 to a 25.613 fold increase.

Women's education level has positive influence on the women's perceptions based on emotional violence. The coefficients of women's higher level is statistically significant at 5% level. The odds of women's perceptions based on emotional violence suggests that women with higher level is 4 times more likely to perceive on emotional violence than women with primary level education (reference category). The 95% confidence interval suggests that the magnitude of the effect could be anywhere from a 1.024 to a 17.130 fold increase in women's with higher level education.

women's occupation has positive influence on the women's perceptions based on emotional violence. This effect is found to be statistically significant at 1% level. The odds of women's perceptions based on emotional violence suggest that women with occupation are 9 times more likely to perceive on emotional violence than women with non-occupation (reference category). The 95% confidence interval suggests that the magnitude of the effect could be anywhere from a 2.352 to a 30.728 fold increase.

#### 4.6 Binary Logistic Regression Analysis for Women’s Perceptions about Sexual Violence

The value of omnibus test of model coefficient gives Chi-square, Hosmer and Lemeshow (H-L) tests, -2 Log Likelihood, Cox & Snell R Square and Nagelkerke R Square are included in the model fitting information for sexual violence Table (4.19).

**Table (4.19) Model Fitting Information for Sexual Violence**

Model fitting criteria	$\chi^2$ value	Df	p-value
Omnibus Test of Model Coefficient	90.333	10	0.000
Hosmer and Lemeshow (H-L) Tests	8.110	8	0.423
-2 Log Likelihood	165.771		
Cox & Snell R Square	0.356		
Nagelkerke R Square	0.500		

Source: Survey Data (2019)

According to the omnibus test of model coefficient gives Chi-square of 90.333 on df 10. It has been concluded that the model for the perceptions based on sexual violence with women’s age, education, occupation, marital status and income are significant beyond 0.000. There is no evidence of lack of fit based on the H-L statistic (Chi-square =8.110,df=8, p-value =0.423). Since -2 log likelihood statistic is 165.771, it can be said that the existence of a relationship between the independent variables and dependent variables is supported. The model fitting information includes two different ways of estimation R square (Cox & Snell R<sup>2</sup> and Nagelkerke R<sup>2</sup>). These pseudo R<sup>2</sup> estimate indicates that 35.6% of variation in perceptions of based on sexual violence and 5% of variation in perceptions based on sexual violence can be explained by the variation in independent variables.

The results of perceptions based on sexual violence in Binary Logistic with selected socio-economic and demographic characteristics model are shown in Table (4.20).

**Table (4.20) Parameter Estimates of Binary Logistic Regression Model for Women's Perceptions about Sexual Violence**

Independent variables		B	Standard Error	P-value	Odds ratio	95% Confidence Interval	
						Lower	Upper
Constant		-2.970	8.853	0.000***	0.051		
Age	50 and above (ref)						
	Below 30	1.761	0.481	0.000***	5.819	2.267	14.935
	30-49	1.607	0.526	0.002***	4.989	1.779	13.988
Income	Below 1lakh (ref)						
	1lakh - 3lakh	0.063	0.597	0.916	1.065	0.331	3.430
	Above 3lakh	1.143	0.656	0.082*	3.135	0.866	11.350
Education	Primary (ref)						
	Middle	0.543	0.749	0.469	1.720	0.396	7.467
	High	1.596	0.763	0.036**	4.935	1.107	22.006
HH size	1-3 (ref)						
	4-6	0.047	0.511	0.927	1.048	0.385	2.855
	7 and above	0.131	0.573	0.819	1.140	0.370	3.508
Marital Status	Single (ref)						
	Married	0.982	0.456	0.031**	2.670	1.093	6.521
Occupation	No (ref)						
	Yes	0.897	0.538	0.096*	2.453	0.854	7.044

Note : \*\*\*, \*\*, \* represent 1% ,5% and 10% levels of significance

Binary logistic regression model is performed on the women's perceptions based sexual violence using the independent variables (age, income, education level, household size, marital status and occupation). The results are shown in Table (4.20).

Women's age has positive influence on the women's perceptions based on sexual violence. Women's aged below 30 years is found to be statistically significant at 1% and women aged 30-49 years is significant of 1% level. The odds of women's perceptions based on sexual violence suggest that women with aged below 30 years are 6 times more likely to perceive the perceptions on sexual violence than women with aged 50 years and above (reference category). The 95% confidence interval suggests that the magnitude of the effect could be anywhere from a 2.267 to a 14.935 fold increase. Women with the aged 30-49 years are 5 times more likely to perceive the perceptions on sexual violence than women with the aged 50 years and above (reference category). The 95% confidence interval suggests that the magnitude effect could be anywhere from a 1.779 to a 13.988 fold increase.

Women's income has positive influence on the women's perceptions based on sexual violence. The coefficient of women's above 3 lakh is statistically significant at 10% level. The odds of women's perception based on sexual violence suggest that women with income above 3 lakh are 3 times more likely to perceive on sexual violence than women with below 1 lakh (reference category). The 95% confidence interval suggests that the magnitude of the effect could be anywhere from a 0.866 to a 11.350 fold increase.

Women's education level has positive influence on the women's perception based on sexual violence. The coefficients of women's higher level is statistically significant at 5% level. The odds of women's perception based on sexual violence suggests that women with higher level education is 5 times more likely to perceive on sexual violence than women with primary level education (reference category). The 95% confidence interval suggests that the magnitude of the effect could be anywhere from a 1.107 to a 22.006 fold increase.

Women's marital status has positive influence on the women's perception based on sexual violence. The coefficients of women's marital status is statistically significant at 5% level. The odds of women's perception based on sexual violence suggest that married women are 3 times more likely to perceive on sexual violence compared to single women (reference category). The 95% confidence interval

suggests that the magnitude of the effect could be anywhere from a 1.093 to a 6.521 fold increase in married women.

Women’s occupation has positive influence on the women’s perception based on sexual violence. This effect is found to be statistically significant at 10% level. The odds of women’s perception based on sexual violence suggest that women with occupation are 2 times more likely to perceive on sexual violence than women with non-occupation (reference category). The 95% confidence interval suggests that the magnitude of the effect could be anywhere from a 0.854 to a 7.044 fold increase.

#### **4.7 Binary Logistic Regression Analysis for Women’s Perceptions about Overall Gender-based Violence**

The value of omnibus test of model coefficient give Chi-square, Hosmer and Lemeshow (H-L) tests, -2 Log Likelihood, Cox & Snell R Square and Nagelkerke R Square are included in the model fitting information for overall gender-based violence Table (4.21).

**Table (4.21) Model Fitting Information for Overall Gender-based Violence**

Model fitting criteria	$\chi^2$ value	Df	p-value
Omnibus Test of Model Coefficient	89.294	10	0.000
Hosmer and Lemeshow (H-L) Tests	10.083	8	0.259
-2 Log Likelihood	171.212		
Cox & Snell R Square	0.353		
Nagelkerke R Square	0.491		

Source: Survey Data (2019)

According to the omnibus test of model coefficient gives Chi-square of 89.294 on df 10. It has been concluded that the model for the perception based on overall gender-based violence with women’s age, income, marital status and education are significant beyond 0.000. There is no evidence of lack of fit base on the H-L statistic (Chi-square =10.083,df=8, p-value =0.259). Since -2 log likelihood statistic is 171.212, it can be said that the existence of a relationship between the independent variables and dependent variables is supported. The model fitting information

includes two different ways of estimation R square (Cox & Snell  $R^2$  and Nagelkerke  $R^2$ ). These pseudo  $R^2$  estimate indicates that 35.3% of variation in perception based on overall gender-based violence and 49.1% of variation in perception based on overall gender-based violence can be explained by the variation in independent variables.

The result of perception based on over all gender-based violence in Binary Logistic with selected socio-economic and demographic characteristics model are shown in Table (4.22).

**Table (4.22) Parameter Estimates of Binary Logistic Regression Model for Women's Perceptions about Overall Gender-based Violence**

Independent variables		B	Standard Error	P-value	Odds ratio	95% Confidence Interval	
						Lower	Upper
Constant		-3.639	0.930	0.000***	0.026		
Age	50 and above (ref)						
	Below 30	1.155	0.475	0.015**	3.175	1.251	8.062
	30-49	1.986	0.560	0.000***	7.284	2.428	21.846
Income	Below 1lakh (ref)						
	1lakh - 3lakh	1.257	0.593	0.034**	3.514	1.098	11.242
	Above 3lakh	1.790	0.613	0.004***	5.987	1.799	19.924
Education	Primary (ref)						
	Middle	1.157	0.790	0.143	3.181	0.677	14.950
	High	1.925	0.796	0.016**	6.857	1.441	32.634
HH size	1-3 (ref)						
	4-6	0.472	0.509	0.354	1.603	0.591	4.345
	7 and above	0.252	0.564	0.655	1.286	0.426	3.886
Marital Status	Single (ref)						
	Married	0.868	0.459	0.059*	2.381	0.969	5.851
Occupation	No (ref)						
	Yes	0.326	0.509	0.522	1.385	0.511	3.754

Note :\*\*\*, \*\*, \* represent 1%, 5% and 10% levels of significance.

Binary logistic regression model is performed on the women's perception based on overall gender-based violence using the independent variables (age, income, education level, household size, marital status and occupation). The results are shown in Table (4.22).

According to the results, women's age has positive influence on the women's perceptions based on overall gender-based violence. Women's aged below 30 years is found to be statistically significant at 5% and women aged 30-49 years is significant of 1% level. The odds of women's perceptions based on overall gender-based violence suggest that women with aged below 30 years are 3 times more likely to perceive the perceptions on overall gender-based violence than women with aged 50 years and above (reference category). The 95% confidence interval suggests that the magnitude of the effect could be anywhere from a 1.251 to a 8.062 fold increase. Women with the aged 30-49 years are 7 times more likely to perceive the perceptions on overall gender-based violence than women with the aged 50 years and above (reference category). The 95% confidence interval suggests that the magnitude effect could be anywhere from a 2.428 to a 21.846 fold increase.

Women's income has positive influence on the women's perceptions based on overall gender-based violence. The coefficient of women's income 1 lakh - 3 lakh is statistically significant at 5% level. The odds of women's perceptions based on overall gender-based violence suggests that women with income 1 lakh - 3 lakh are 4 times more likely to perceive on overall gender-based violence than women with below 1 lakh (reference category). The 95% confidence interval suggests that the magnitude of the effect could be anywhere from a 1.098 to a 11.242 fold increase. Women with income above 3 lakh is statistically significant at 1% level. The odds of women's perceptions based on overall gender-based violence suggest that women with income above 3 lakh are 6 times more likely to perceive on overall gender-based violence than women with below 1 lakh (reference category). The 95% confidence interval suggests that the magnitude of the effect could be anywhere from a 1.799 to a 19.924 fold increase.

Women's education level has positive influence on the women's perceptions based on overall gender-based violence. The coefficient of women's higher level is statistically significant at 5% level. The odds of women's perceptions based on overall gender-based violence suggests that women with higher level education are 7 times more likely to perceive on overall gender-based violence compared to women

with primary level education (reference category). The 95% confidence interval suggests that the magnitude of the effect could be anywhere from a 1.441 to a 32.634 fold increase in women's with higher level.

Women's marital status has positive influence on the women's perception based on overall gender-based violence. The coefficients of women marital status is statistically significant at 10% level. The odds of women's perception based on overall gender-based violence suggests that married women are 2 times more likely to perceive on overall gender-based violence compared to single women (reference category). The 95% confidence interval suggests that the magnitude of the effect could be anywhere from a 0.969 to a 5.851 fold increase in women's with married.

## CHAPTER V

### CONCLUSION

#### 5.1 Findings

This study is used logistic regression analysis to determine the relationship between the women's perceptions on gender-based violence and socio-economic and demographic characteristics. The study is selected five wards from twenty-four wards in urban area of Dala Township. Women's perceptions on physical violence, emotional violence, sexual violence and overall gender-based violence using the dependent variables are performed with binary logistic regression model.

According to the result, it has been found that women's age, income, marital status and education relationship are significant and positive influence on women's perceptions than women with aged above 50 years and women are less than with income above 3 lakh have high perceptions than women with income below 1 lakh. Married women have high perceptions than single women. Perceptions of women with high level education and middle level education are high than women with primary level of education.

It has been observed that women's age, education and occupation relationship have significant and positive influence on women's perceptions about emotional violence. Women with aged below 30 years and 30-49 years have high perceptions more than above 50 years old women. Women with higher level education have high perceptions about emotional violence than those with primary level. Women's occupation have high perceptions about emotional violence than those with non-occupation.

It has been noticed that women's age, income, education, occupation and marital status have significant and positive influence on women's perceptions on sexual violence. Women with aged below 30 years and aged 30-49 years than women's with aged 50 and above years. Women with income above 3 lakh have high perceptions than women with income below 1 lakh. Women with higher level education have high perceptions than those with primary level education. Working women have higher perceptions than women do not working. Married women have higher perceptions than single women.

As of the overall results, the study is used six variables such as age, income, education, size and marital status, occupation. It has been found that women's age, income, education and marital status have significant and positive influence on women's perceptions on overall gender-based violence. Women with below 30 years and 30-49 years have higher perceptions than women with aged 50 and above years. Women with higher level education have higher perceptions than those with primary level education. Married women have higher perceptions than single women.

## **5.2 Suggestions**

Regarding the results of this study, it would like to suggest that government, CSO, NGO, INGO need to provide more awareness raising education program on gender-based violence among women. According to the study, government, NGO and INGO do not implement about awareness and prevention of gender violence in this area. Therefore, government should be emphasized plans and program for prevention of gender violence in local and national level.

## **5.3 Further Research**

This study is used the binary logistic regression model for perceptions on gender-based violence of women with age above 18 years old. Therefore, additional research should be conducted to further explore women's perceptions with aged under 18 years, men's perspectives of gender-based violence and girls and boys perspective of gender-based violence. The further study should be done about help seeking behaviors of women when they experience the gender-based violence.

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**Appendix**

Questionnaire Number

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**WOMEN'S PERCEPTIONS ON GENDER-BASED VIOLENCE IN DALA  
TOWNSHIP: AN EMPHASIS ON SOCIO-ECONOMIC AND  
DEMOGRAPHIC CHARACTERISTICS**

Are you happy to proceed with the interview?

Yes

No

**Information of Respondent**

State/Division	
Township	
Ward	
Date	
Respondent Name	

**Section: (1) Socio-Economic and Demographic Characteristics**

1.1	Age	..... Year s	
1.2	Religion	1. Buddhism 2. Christianity 3. Hinduism 4. Islam 5. Other (Specify) .....	
1.3	Education	1. Primary 2. Secondary 3. High school 4. Graduate 5. Other	

		.....	
1.4	Marital status	1. Single 2. Married 3. Divorced 4. Widowed 5. Other (Specify) .....	
1.5	Length residency (Years)	----- Years	
1.6	Do you have a job?  If yes, occupation	1. Yes 2. No  -----	
1.7	Respondent income	-----	
1.8	Family (HH) income	-----	
1.9	Family (HH) expenditure	-----	
1.10	Household size	-----	

**Section: (2) Perceptions of Physical Violence**

2.1	Physical violence is be made hurt the physical with something, hurt the hitting, pushing, kicking., etc.  1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
2.2	Husbands can not use physical punishment like hitting or slapping when their wife does something wrong or does not obey him.  1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree

	5. Strongly Agree
2.3	<p>Husbands can not hit their wives when they are angry.</p> <ol style="list-style-type: none"> <li>1. Strongly Disagree</li> <li>2. Disagree</li> <li>3. Neutral</li> <li>4. Agree</li> <li>5. Strongly Agree</li> </ol>
2.4	<p>A person who poor, uneducated as well as rich , educated are perpetrating physically violence that likely to beating, kicking, pushing and bleeding., etc.</p> <ol style="list-style-type: none"> <li>1. Strongly Disagree</li> <li>2. Disagree</li> <li>3. Neutral</li> <li>4. Agree</li> <li>5. Strongly Agree</li> </ol>
2.5	<p>When you met the physical violence, ever tried to seek help to someone who friends, families, wards authorities .,etc.</p> <ol style="list-style-type: none"> <li>1. Strongly Disagree</li> <li>2. Disagree</li> <li>3. Neutral</li> <li>4. Agree</li> <li>5. Strongly Agree</li> </ol>

### Section: (3) Perceptions of Emotional Violence

3.1	<p>Psychological violence is be made hurt the mental with verbally, discrimination, neglect, deprive the opportunity, pent the couldn't out , etc.</p> <ol style="list-style-type: none"><li>1. Strongly Disagree</li><li>2. Disagree</li><li>3. Neutral</li><li>4. Agree</li><li>5. Strongly Agree</li></ol>
3.2	<p>Psychological violence couldn't out aren't normally, it must be solved the problem.</p> <ol style="list-style-type: none"><li>1. Strongly Disagree</li><li>2. Disagree</li><li>3. Neutral</li><li>4. Agree</li><li>5. Strongly Agree</li></ol>
3.3	<p>It can be occurred the big problems due to psychological violence that made hurt the mental, neglect.,etc.</p> <ol style="list-style-type: none"><li>1. Strongly Disagree</li><li>2. Disagree</li><li>3. Neutral</li><li>4. Agree</li><li>5. Strongly Agree</li></ol>
3.4	<p>Girls education is as important as boys, pent the teaching continuous of girls is psychological violence</p> <ol style="list-style-type: none"><li>1. Strongly Disagree</li><li>2. Disagree</li><li>3. Neutral</li><li>4. Agree</li><li>5. Strongly Agree</li></ol>
3.5	<p>When you met the emotional violence, ever tried to seek help to someone who friends, families, wards authorities .,etc.</p> <ol style="list-style-type: none"><li>1. Strongly Disagree</li><li>2. Disagree</li><li>3. Neutral</li><li>4. Agree</li><li>5. Strongly Agree</li></ol>

### Section: (4) Perceptions of Sexual Violence

4.1	<p>Women can refuse sex to their husband.</p> <ol style="list-style-type: none"><li>1. Strongly Disagree</li><li>2. Disagree</li><li>3. Neutral</li><li>4. Agree</li><li>5. Strongly Agree</li></ol>
4.2	<p>Sexual violence is be made sexual intercourse without consent among husband and wife.</p> <ol style="list-style-type: none"><li>1. Strongly Disagree</li><li>2. Disagree</li><li>3. Neutral</li><li>4. Agree</li><li>5. Strongly Agree</li></ol>
4.3	<p>Rape is sexual violence.</p> <ol style="list-style-type: none"><li>1. Strongly Disagree</li><li>2. Disagree</li><li>3. Neutral</li><li>4. Agree</li><li>5. Strongly Agree</li></ol>
4.4	<p>Sexual violence is be showed and sent the sexual photo, video, messages with sexual nature .., etc.</p> <ol style="list-style-type: none"><li>1. Strongly Disagree</li><li>2. Disagree</li><li>3. Neutral</li><li>4. Agree</li><li>5. Strongly Agree</li></ol>
4.5	<p>When you met the sexual violence, ever tried to seek help to someone who friends, families, wards authorities...,etc.</p> <ol style="list-style-type: none"><li>1. Strongly Disagree</li><li>2. Disagree</li><li>3. Neutral</li><li>4. Agree</li><li>5. Strongly Agree</li></ol>

### Dala Township Population and Household List

Sr.	Ward Name	Houses	Household	Above 18		
				Male	Female	Total
1	ThamadaKan Cha	795	971	1465	1604	3069
2	Ent Gyi (East)	1166	1319	1948	2197	4145
3	Ent Gyi (West)	1005	1091	1793	1876	3669
4	No. (6) Ward	530	583	858	906	1764
5	No.(11/14) Ward	1466	1498	2149	2278	4427
6	NyungGon Ward	1205	1300	2172	2427	4599
7	Myoma (1)	223	265	440	477	917
8	Myoma (2)	326	391	624	694	1318
9	Myoma (3)	119	125	159	191	350
10	Myoma (4)	735	870	1190	1520	2710
11	Aung Mingalar Ward	446	502	929	968	1897
12	Bo Yan Pyay Ward	525	550	1201	1335	2536
13	KamarKathway Ward	640	652	1536	1576	3112
14	Set Myae Ward	541	584	968	966	1934
15	KamarKasit Ward	1633	1915	3028	3140	6168
16	Maw Set Ward	1037	1072	1375	1427	2802
17	Kyun Mar Yay Housing	736	760	944	1070	2014
18	Kyung Su Ward	756	824	1215	1273	2488
19	Kyun Sit Thar Ward	2874	3178	4163	4262	8425
20	Tapin Shwe Hti Ward	2213	2755	1287	2378	3665
21	BayintNaung Ward	626	635	978	1196	2174
22	BanyunDala Ward	563	647	1341	1328	2669
23	YazaThingyun Ward	1379	1551	2027	2298	4325
24	Tar Gyi Ward	920	975	667	671	1338
	<b>Total</b>	<b>22459</b>	<b>25013</b>	<b>34457</b>	<b>38058</b>	<b>72515</b>

Source: Dala Township Administration Office

**List of Wards and Number of Households in Dala Township**

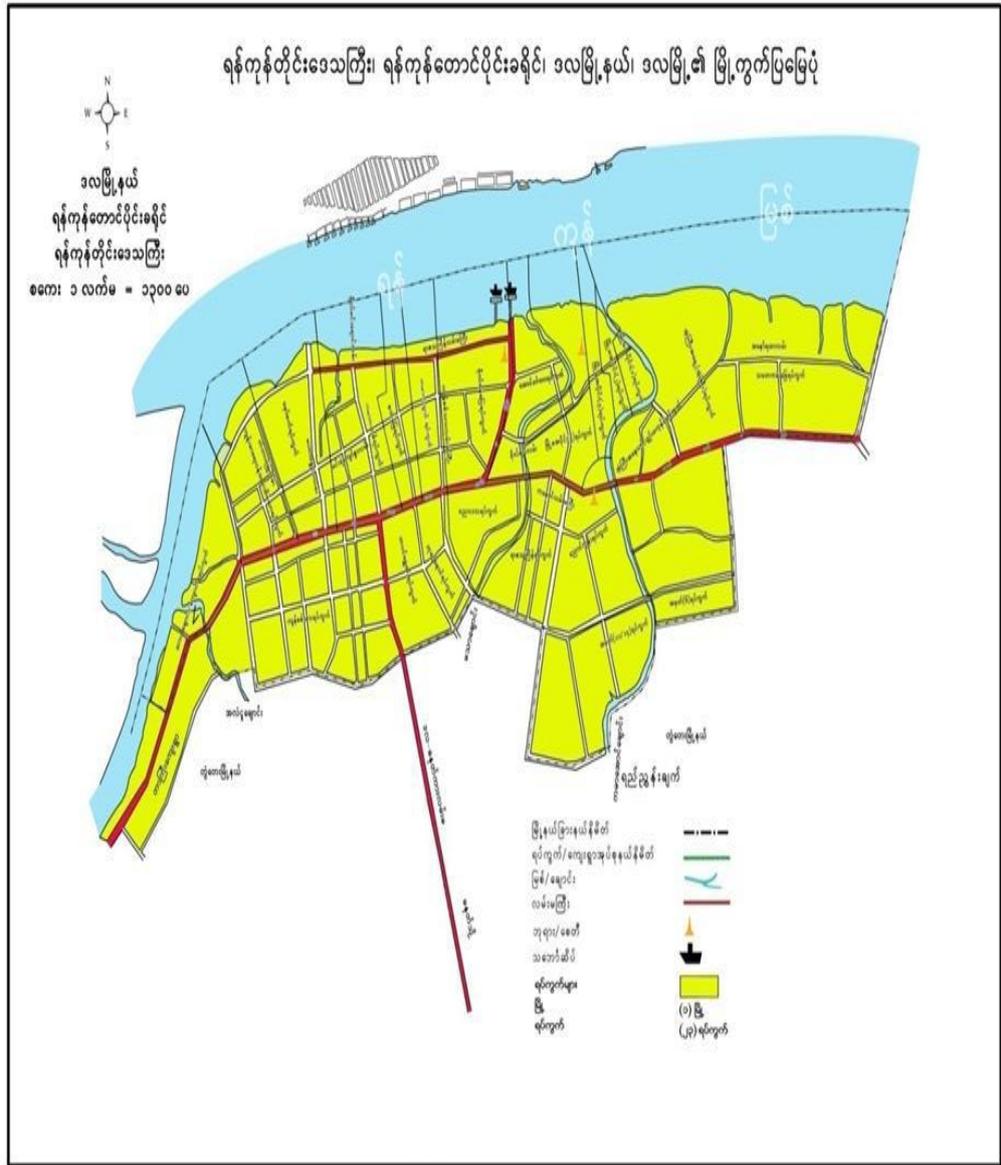
<b>Ward Name</b>	<b>Number of Household</b>	<b>Number of Female</b>
ThamadaKan Cha	971	1604
Ent Gyi (East)	1319	2197
Ent Gyi (West)	1091	1876
No. (6) Ward	583	906
No.(11/14) Ward	1498	2278
NyungGon Ward	1300	2427
Myoma (1)	265	477
Myoma (2)	391	694
Myoma (3)	125	191
Myoma (4)	870	1520
Aung Mingalar Ward	502	968
Bo Yan Pyay Ward	550	1335
KamarKathway Ward	652	1576
Set Myae Ward	584	966
KamarKasit Ward	1915	3140
Maw Set Ward	1072	1427
Kyun Mar Yay Housing	760	1070
Kyung Su Ward	824	1273
Kyun Sit Thar Ward	3178	4262
Tapin Shwe Hti Ward	2755	2378
BayintNaung Ward	635	1196
BanyunDala Ward	647	1328
YazaThingyun Ward	1551	2298
Tar Gyi Ward	975	671
<b>Total</b>	<b>25013</b>	<b>38058</b>

Source: Survey Data (2019)

**List of Selected Wards and Number of Households in Dala Township**

<b>Selected Wards</b>	<b>Number of Households</b>	<b>Pi</b>	<b>Number of Selected Households</b>
No.(11/14) Ward	1498	0.2656	54
Myoma (3)	125	0.0222	5
Aung Mingalar Ward	502	0.0890	18
Kyun Mar Yay Housing	760	0.1348	28
Tapin Shwe Hti Ward	2755	0.4885	100
Total	5640		205

Source: Survey Data (2019)



Source: Dala Township Administration Office