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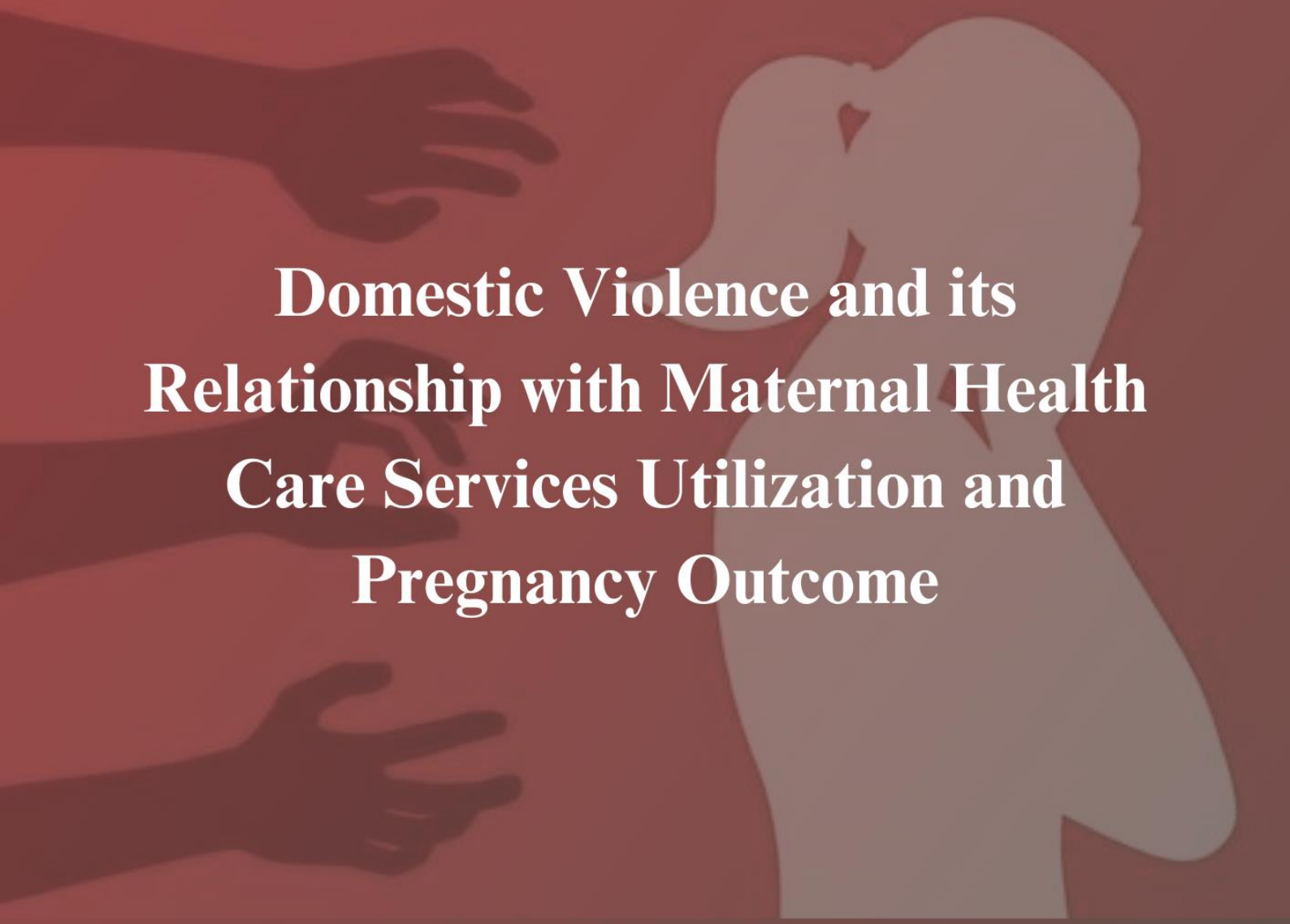
DEPARTMENT OF STATISTICS



Domestic Violence and its Relationship with Maternal Health Care Services Utilization and Pregnancy Outcome

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CERTIFICATE

This is to certify that the following students of MSc, have successfully completed the project entitled

"Domestic Violence and its Relationship with Maternal Health Care Services Utilization and Pregnancy Outcome"

Academic year, 2022-2023

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This research project is to the best of our knowledge and belief is original.

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ABSTRACT

The issue of domestic violence affecting women in India is an enduring and prevalent concern that affects a substantial proportion of women, both physically and mentally. This research paper examines the prevalence, characteristics, and socio-economic determinants of domestic violence in India using National Family Health Survey (NFHS). The study compares the NFHS-4 (2015-16) and NFHS-5 (2019-20) data to assess any alterations in the frequency and trends of domestic violence over the years among women aged 15-49. The data indicates that there is a slight decline in the overall prevalence of domestic violence in India between the two survey periods. However, the analysis also demonstrates significant regional differences, with certain states reporting concerningly high levels of domestic violence. The main objective of this study is to focus on to investigate prevalence and patterns of domestic violence in India between 2015 and 2021, explore the factors influencing domestic violence, and explore its impact on pregnancy outcomes. The study found that physical violence is the most prevalent type of domestic violence across all age groups, with the highest prevalence among women aged 35 and above (33.6 percent). Women from poor households (37.6 percent) and those who are illiterate (38.5 percent) also experience a higher prevalence of physical violence. The chi-square test results also indicate that women aged 35 and above are more likely to experience domestic violence than younger women. Women from rural areas are more likely to experience domestic violence than urban women. The study also found consumption of alcohol by the husband to be the most determinant factor of violence according to the fairlie decomposition results. The percentage of women who experienced any type of violence was much higher among women whose husbands drank alcohol (58.4 percent in NFHS-4 and 56.0 percent in NFHS-5) compared to those whose husbands did not drink (27.9 percent in NFHS-4 and 27.5 percent in NFHS-5). The prevalence of domestic violence during pregnancy is high, with around 6 percent of women experiencing any violence and 6 percent experiencing physical violence during pregnancy in both NFHS-4 and NFHS-5. Furthermore, domestic violence was found to be a significant determinant of maternal and child health outcomes in India. Women who experienced any form of domestic violence were less likely to utilize maternal health services, such as institutional delivery and antenatal care. The logistic regression results indicate that women who experienced any type of violence had lower odds of receiving antenatal care. Women who experienced sexual violence had lower odds of receiving antenatal care in both NFHS-4 and NFHS-5, but the association was stronger in NFHS-4. Women who experienced physical violence had lower odds of receiving antenatal care in both surveys, but the association was weaker in NFHS-5 than in NFHS-4. The result suggests that women living in rural areas had a higher proportion of low birth weight babies than those living in urban areas.

CHAPTER I

INTRODUCTION, DATA SOURCE, METHODS

1.1 BACKGROUND

The Indian culture has always regarded women as powerful and empowering force. India has a rich tradition of worshipping women as goddesses of different virtues, such as courage, compassion, wisdom, and prosperity. According to an Ancient Hindu text Manu smriti “Where women are worshiped, there the gods dwell; and where they are not, there all works and efforts come to naught”. We even refer to our country as “Bharat Mata” and refer to our planet as “Mother Earth”. Despite of this veneration for women, they face violence and discrimination in the society.

Women have played important roles in society as mothers, wives and daughters. The contribution of women to the society are critical in both public and private aspects of life. From being responsible for the nurturing and taking care of the family to contributing significantly to society through their work in different fields, women have played a crucial role in shaping the course of history.

Women comprise of around 50 percent of the population, yet they are given a second class status throughout the world which makes them more vulnerable towards abuse and injustice done by male dominated society where men are traditionally considered the head of the household and have more power and control over women. “Violence against women is a manifestation of historically unequal power relations between men and women, which have led to domination over and discrimination against women by men...”[1].

Domestic Violence or “Intimate Partner Violence" is one such form of abuse/injustice that women around the world have been facing for centuries now. The United States Department of Justice - (OVW) defines domestic violence as “Domestic violence is a pattern of abusive behavior in any relationship that is used by one partner to gain or maintain power and control over another intimate partner”[2]. It is a form of violence that takes place in the household which can involve physical, sexual or emotional abuse by a partner against the other. It is one of the main cause of female injuries in most countries around the world.

According to WHO, 30 percent of women worldwide i.e. (1 in 3 women) at some point in their lives, have been a victim of either physical or sexual violence, out of which nearly one third i.e., 27 percent of women aged 15-49 have been subjected to some form of physical and/or sexual violence by their intimate partner (or domestic violence). In India, the situation is no better than the rest of the world. Women in India experience violence in various forms throughout their lives.

[1] Declaration on the Elimination of Violence against Women Proclaimed by General Assembly resolution 48/104 of 20 December 1993

[2] United States Department of Justice - Office on Violence Against Women

The equality of status guaranteed by the Constitution of India is only a myth to millions of women who are victims of violence within the family. Wife beating, abortion of female fetuses, dowry deaths and bride burning are all forms of violence that happen to women within the privacy of home.

A study conducted by Patrikar S, Basannar D, Bhatti V, Chatterjee K, and Mahen A in the year 2017 found that the analysis indicated all forms of violence to be prevalent in India. The prevalence of lifetime intimate partner violence (IPV) reported was 35.3 percent. The Indian society is patriarchal and the men being the head of the households, control the lives of the women and decide what behavior is appropriate for women. Most of the Indian women are dependent upon the men in their house and thus do not have a say in anything in the household.

Domestic violence is a major cause of health and social issues in India. It is a major hurdle in the path of empowering women. This violence cuts across boundaries of caste, religion, class, education and region. A study found that women who belonged to poorest economic background, lived in rural areas, had low level of education or no education were at more risk in experiencing violence from their husband (Tanu Das & Dr Tamal Basu, 2020). It is a tragedy that until a few years ago, domestic violence was not even considered to be a criminal offence in India. As a result of the lack of strict laws against domestic violence, women are being physically abused and mistreated by their husbands, in-laws and relatives.

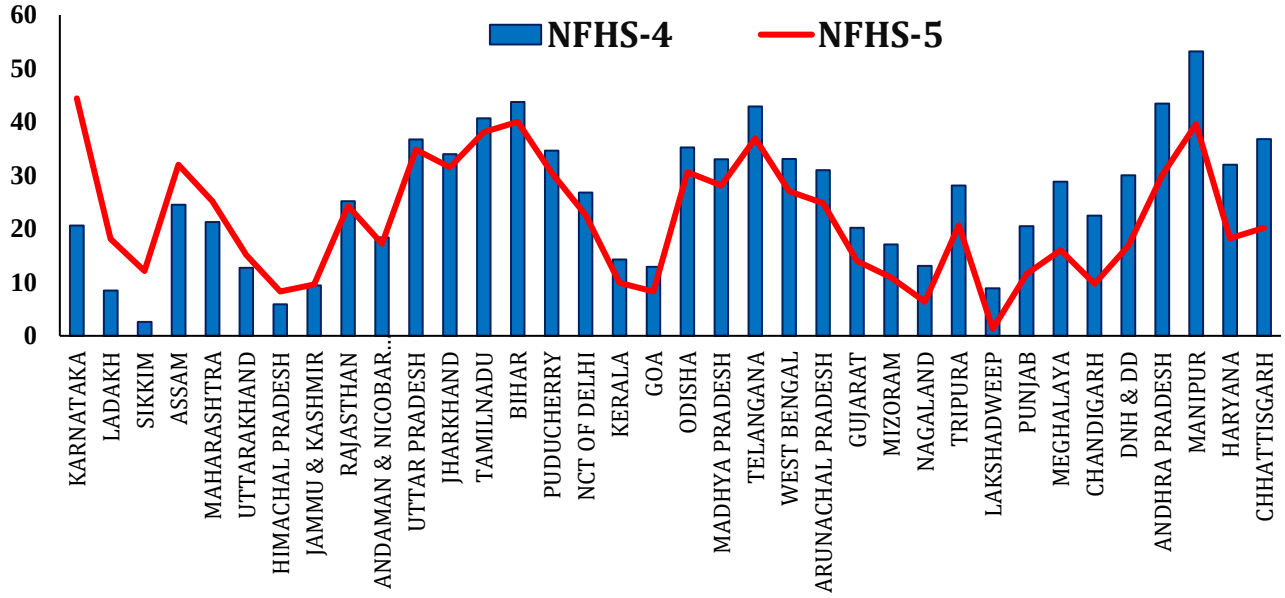
Indian scenario:

Through a comparison of the data from NFHS-4 and NFHS-5, this study will be able to identify trends in the prevalence and nature of domestic violence against women. Furthermore, the study seeks to investigate how these trends differ amongst different socio-economic backgrounds. The overall percentage of domestic violence against women in India is highlighted in the table below. The States/UT's above India in the table have a higher percentage of violence against women compared to the national overall average and they contribute in increasing the national average.

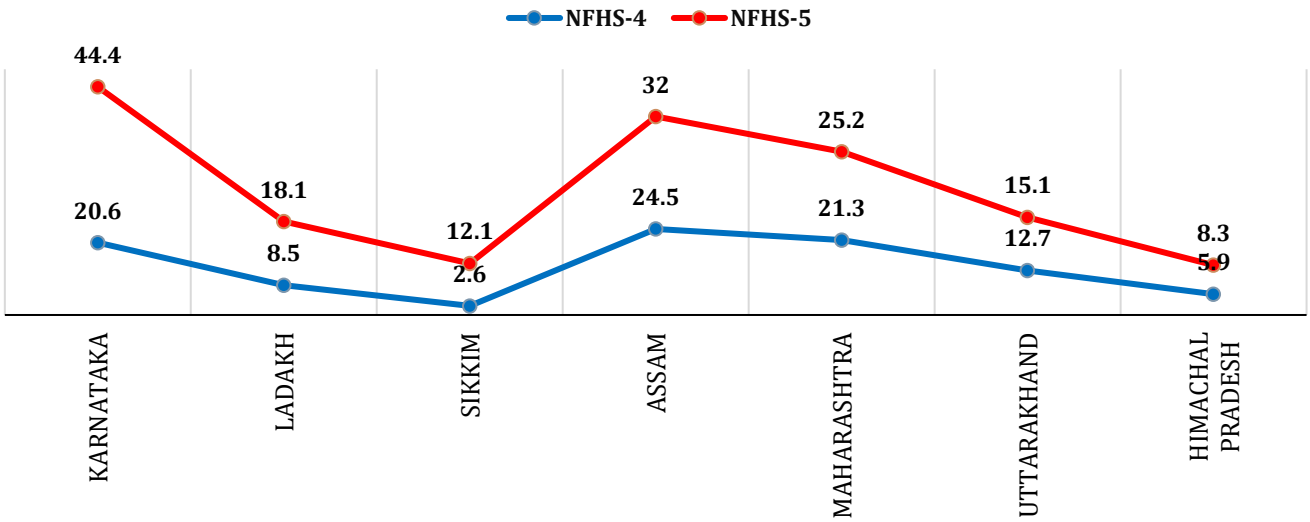
Domestic violence can vary significantly from state to state. According to the National Family Health Survey (NFHS-5) conducted in India, there were notable regional differences in the prevalence of violence against women. Domestic violence against married women and sexual violence against young women has increased by over two times its previous survey findings in Karnataka. 44 percent of married women surveyed claimed they had faced domestic violence. This is over 100 percent increase from the 2015 figures when the numbers were reported to be 21 percent, followed by Bihar (40%) and Manipur (40%) where 1 in 4 women experience domestic violence. Lakshadweep had the lowest percentage of violence against women, with only 1.3 percent of women experiencing intimate partner violence.

Table 1.1 : Prevalence of Domestic Violence Against Women in Indian States/UT'S: A Comparison of NFHS-4 and NFHS-5 Data

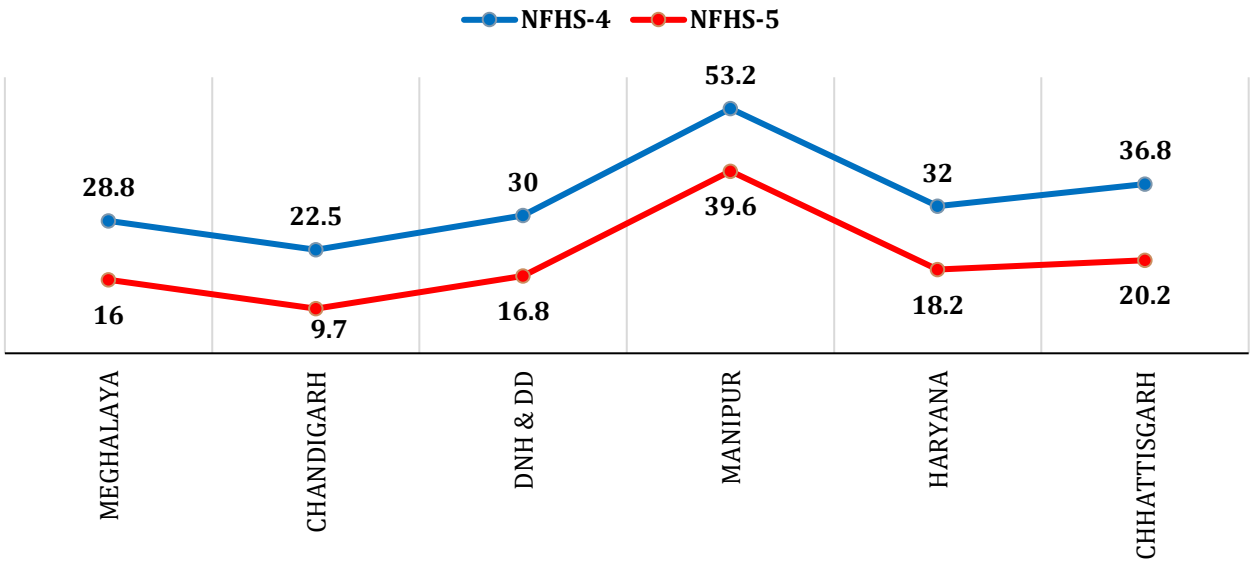
STATES /UT's	NFHS-4	NFHS-5
KARNATAKA	20.6	44.4
BIHAR	43.7	40.0
MANIPUR	53.2	39.6
TAMILNADU	40.7	38.1
TELANGANA	42.9	36.9
UTTAR PRADESH	36.7	34.8
ASSAM	24.5	32.0
JHARKHAND	34.0	31.5
ODISHA	35.2	30.6
PUDUCHERRY	34.6	30.5
INDIA	31.2	29.3
MADHYA PRADESH	33.0	28.1
WEST BENGAL	33.1	27.0
MAHARASHTRA	21.3	25.2
ARUNACHAL PRADESH	31.0	24.8
RAJASTHAN	25.2	24.3
NCT OF DELHI	26.8	22.6
TRIPURA	28.1	20.7
CHHATTISGARH	36.8	20.2
HARYANA	32.0	18.2
LADAKH	8.5	18.1
ANDAMAN & NICOBAR ISLANDS	18.4	17.2
DNH & DD	30.0	16.8
MEGHALAYA	28.8	16.0
UTTARAKHAND	12.7	15.1
GUJARAT	20.2	14.0
SIKKIM	2.6	12.1
PUNJAB	20.5	11.6
MIZORAM	17.1	10.9
KERALA	14.3	9.9
CHANDIGARH	22.5	9.7
JAMMU & KASHMIR	9.4	9.6
HIMACHAL PRADESH	5.9	8.3
GOA	12.9	8.3
NAGALAND	13.1	6.4
LAKSHADWEEP	8.9	1.3



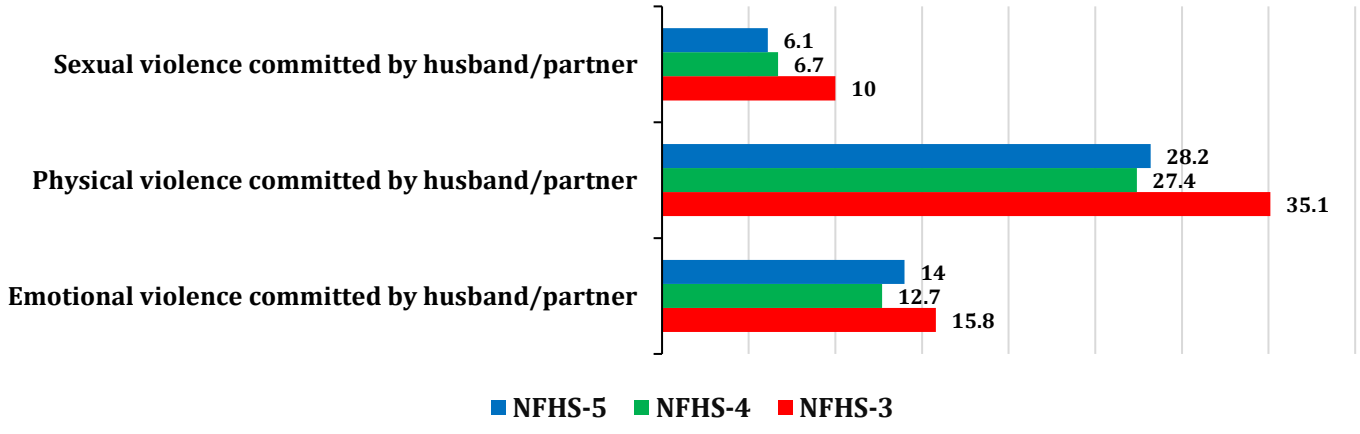
Top States Where Violence Increased After NFHS-4

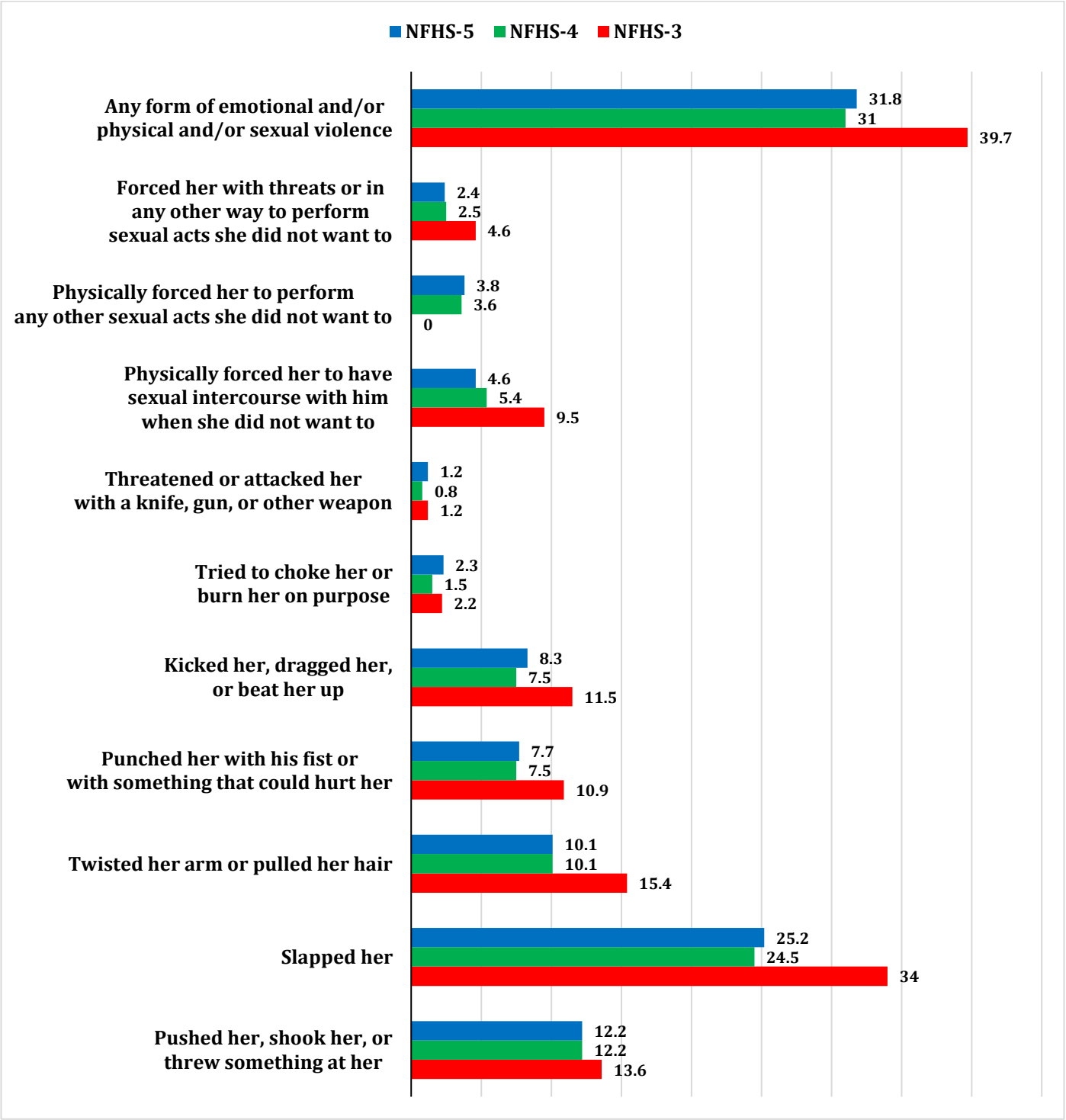


Top States Where Violence Decreased After NFHS-4



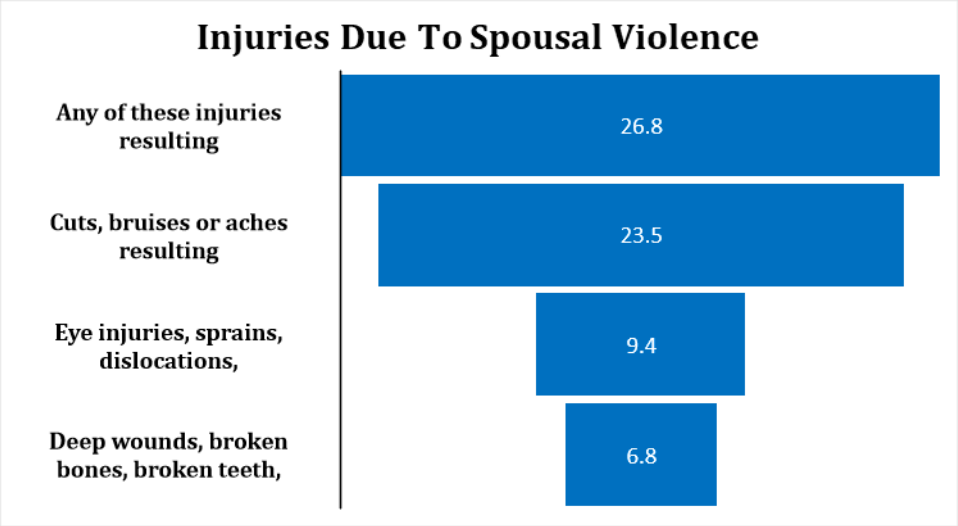
Percentage of physical,sexual or emotional violence committed by husband/male partner





Domestic violence is the most common type of violence faced by married women. According to the NFHS-5 report,

- Nearly one in three(31.8 percent) married women has experienced domestic violence according to the recent survey.
- 28 percent of the married women have been victims of physical violence, 6 percent have experienced sexual violence, and 14 percent have faced emotional violence.
- Out of all types of physical violence, slapping is the most prevalent action.
- 25 percent of the women had been slapped, 12 percent had been pushed, shaken, or had objects thrown at them, and 10 percent had been physically restrained through the twisting of their arms or pulling of their hair by their husband.



Almost 27 percent of the women who have experienced domestic violence reported having injuries. Among those injured, 23 percent reported experiencing cuts, bruises, or aches, while 9 percent had more severe injuries such as eye injuries, sprains, dislocations, or burns and almost 7 percent of the women reported suffering from even more serious injuries such as deep wounds, broken bones, or broken teeth.

Hence, by identifying the key socio-economic factors that contribute to domestic violence against women, this study can provide a robust basis for developing targeted interventions that address these underlying factor, ultimately leading to a reduction in the prevalence of domestic violence against women in India.

Provision under IPC which aim to protect women :

Section 376 B : Marital Rape

Having sexual intercourse with one's own wife without her consent is illegal and can result in imprisonment for a period of 2 to 7 years.

Section 498 A : Husband or In-laws Subjecting Her to Cruelty

The offense is cognizable, non-bailable and non-compoundable with a punishment of imprisonment for up to three years and a fine.

Section 312 to 314 : The Causing of Miscarriage

A person causing miscarriage or abortion without the woman's consent have to provide penalties of imprisonment of 3 to 10 years and/or fine for the same.

Section 304 B : Dowry Death

If a woman dies under suspicious circumstances within 7 years of her marriage, and it is shown that before her death, she was subjected to cruelty or harassment by her husband or his relatives for dowry, then the husband or his relatives can be charged with dowry death with minimum imprisonment term of seven years and may face imprisonment for life as well.

Section 354 : Assault to Outrage Modesty

It deals with outraging modesty of women. Any act of molestation with intent to outrage the modesty of a women is punishable (3 to 7 years of imprisonment).

Protection of women from domestic violence Act, 2005

The Domestic Violence Act 2005 is an Indian law aimed at preventing and addressing domestic violence against women which includes physical, sexual, verbal, emotional, and economic abuse. The act recognizes domestic violence as a violation of women's human rights and provides for various reliefs and assistance for women who have been victimized by domestic violence, including protection orders, monetary relief, custody orders, and compensation.

The prevention of domestic violence is not as straightforward as it may seem. Domestic violence is a complex issue and laws alone cannot solve it. Despite of having several laws in place to prevent domestic violence, the situation hasn't changed significantly. There can be underlying factors contributing to the ineffectiveness of the laws in preventing domestic violence. One factor could be the unawareness about the laws and lack of understanding of the laws and provisions. Women who are not well educated or have less exposure/access to information may not know that there are laws and provisions to protect themselves from domestic violence. Another factor could be the ineffectiveness in the implementation of the laws. Even if the government comes up with strict laws on paper, they are not implemented properly. There could be many reasons behind it such as corruption, prejudice, attitude of the society that condones or normalizes domestic violence, or lack of resources. Another factor that could contribute to this issue is the patriarchal nature of Indian society, where women are often dependent on their husbands. Even if women face violence in their marriage, they refrain from reporting those incident thinking that doing so would affect her and her children's livelihood. The success of the Domestic Violence Act hinges on its proper enforcement and implementation. Moreover, creating awareness among women and educating them about their rights under the act and empowering them to seek protection in case of domestic violence are of equal importance.

1.2 REVIEW OF LITERATURE

Domestic violence not only causes physical and emotional harm to victims but also affects society and the economy. Investigating the relationship between domestic violence, socio-economic status, and healthcare utilization is key to understanding this complex issue and developing effective prevention and intervention strategies. This review aims to summarize existing literature and identify areas for further research. The high prevalence of intimate partner violence (IPV) in India have been linked to poor maternal and child health outcomes. This trend is accompanied by a decreasing sex ratio at birth. (Metheny, 2019; Brahmapurkar, 2017). Women experiencing IPV are less likely to opt for sterilization if they intended to use contraception and their partners wanted more children. IPV is also associated with a higher risk of HIV/STIs, indicating new possible connections between IPV and HIV transmission. Adolescent and young adult married women who experience IPV are at a higher risk of unintended pregnancy, indicating the need for violence prevention programs and responsive healthcare systems in South Asian countries. (Forrest, 2017; Patrikar; Anand, 2017). Reproductive age group tribal women in Siliguri subdivision of Darjeeling district have a high prevalence of IPV. Women who were married and had encountered physical, sexual, or emotional violence from their spouses or partners had a probability of testing positive for HIV that was nearly twice as high as that of married women who did not undergo such violence. (Jyotirmay, 2022; Neha Shri & T. Muhammad,

2021). Furthermore, a correlation was observed between experiencing violence from a spouse over one's lifetime and being underweight in women from India. The preference for informal assistance over formal assistance was discovered. Additionally, women from lower castes and those with children were found to be less inclined to seek formal aid. (Pengpid & Peltzer, 2018; Daruwala et al., 2022).

I. Domestic violence and Factors responsible

Domestic violence is a widespread problem in India, and alcohol consumption has been identified as a significant risk factor for it (Bhatnagar et al., 2018). Research has shown a strong connection between domestic violence and the husband's alcohol addiction (Bhattacharya et al., 2020). Women who have children and those who believe in a husband's right to hit his wife are less likely to seek help when they experience domestic violence (Leonardsson & San Sebastian, 2017). Intimate partner violence is more common among individuals from the poorest socioeconomic backgrounds and those with lower levels of education (Goyal et al., 2021). Cultural preferences for male children and gender discrimination against females who have a first-born girl increase the risk of intimate partner violence against mothers (Weitzman, 2019). Furthermore, women from marginalized communities and those with low economic status are more likely to experience spousal violence (Ahmad et al., 2021). Socio-economic and demographic factors such as poverty, education, cultural norms, and gender discrimination contribute significantly to domestic violence prevalence in India. Improvements in men's education levels have a more significant positive impact on reducing domestic violence incidence compared to women's education levels and literacy (Suri et al., 2022).

II. Changes overtime and Factors affecting

The occurrence of intimate partner violence (IPV) among women in India has decreased over time, as demonstrated by a comparison of NFHS 4 and NFHS 3. However, the prevalence of IPV still varies significantly across different states (Goyal et al., 2019).Women's experience of IPV has a negative relationship with adequate ANC utilization, particularly the utilization of four or more ANC visits, the number of ANC visits, and the utilization of facility care at birth. This association remains significant even after adjusting for country of residence, subnational region of residence, and additional individual-level covariates. However, there is no statistically significant association between experience of any IPV and postnatal care. The only form of IPV significantly associated with care utilization is physical IPV (Leight & Wilson, 2021).Young mothers with favorable attitudes towards domestic violence are less likely to use four or more ANC and health-center-based delivery care than mothers with opposite attitudes (Afroz et al., 2022).A high prevalence of all forms of violence against women was found in an urban area of Burdwan, India. Older age, lower age at marriage, longer duration of marriage, lower education of husband and wife, lower family income, unemployment of the husband, and alcohol consumption of husband were associated with the occurrence of domestic violence (Bhattacharya et al., 2020).Women's and partner's education, socio-economic status, women empowerment, urban-rural residence, and partner's controlling behaviors are significant predictors of IPV (Garg et al., 2021). Domestic violence during pregnancy is more common in younger women with lower literacy and lower socio-economic status (Samal & Poornesh, 2022). Illiteracy

of women, love marriage, and non-registration of marriage were found to be significantly associated with domestic violence (George et al., 2016). Policies aimed at enhancing political representation for women may increase the likelihood of violence, potentially due to opposition from men or increased reporting by women (Mathur & Slayoy, 2017). Exposure to media, particularly through mobile phones and SMS services, has been associated with a reduction in intimate partner violence among women in India (Dalal et al., 2022).

III. Domestic violence and Pregnancy outcome

Domestic violence during pregnancy can lead to negative health outcomes for both the mother and the child at birth, including abortions, low birth weight, preterm delivery, and postpartum depression (El-Hosary et al., 2017; Garg et al., 2020). One in three women experience violence from their husbands, and battered women are more likely to experience adverse pregnancy outcomes and reproductive health problems compared to non-battered women (Bramhankar & R. S. Reshmi, 2021). Women who have experienced any type of violence are more likely to give birth to a low birth weight baby (Rahman et al., 2021), and sexual IPV has been linked to high-risk fertility behaviors in women from India (Das et al., 2022). Furthermore, women who have experienced physical IPV are more likely to have abortions, including self-administered abortions, compared to those who have not undergone physical IPV (Goemans et al., 2021)

1.3 NEED FOR STUDY

Domestic violence against women represents a widespread and complex social problem that affects women from all age groups, races, and economic conditions. Despite the issue's recognition, a significant gap in knowledge still exists concerning the correlation between domestic violence and socio-economic background, as well as how this relationship has changed over the course of time. Through a comparison of the data from NFHS-4 and NFHS-5, this study tried to identify trends in the prevalence and nature of domestic violence against women. Furthermore, the study sought to investigate how these trends differ amongst different socio-economic backgrounds . According to the NFHS-5 report, nearly one in three married women has experienced domestic violence. Humankind's success is closely related to the well-being and empowerment of women. Until women receive the respect and dignity they deserve, it will be difficult for an economy to thrive. We as a society should try to create a world in which all women can live free. Hence, by identifying the key socio-economic factors that contribute to domestic violence against women, this study can provide a robust basis for developing targeted interventions that address these underlying factor, ultimately leading to a reduction in the prevalence of domestic violence against women in India.

1.4 Research Questions

In this context, the present research is interested in analyzing the following questions:

1. Has there been any significant change in the pattern of Domestic violence during the period 2015-2021?
2. What is the impact of Domestic violence on maternal care services received by mother? Do individual family, social & demographic characteristics influence such a relationship in India?

3. What is the level & pattern of Domestic violence among women prevailing? Are there any changes in them over time and socio-demographic setting in India?
4. To what extent Domestic violence create disparity in maternal care services?
5. Does Domestic violence play any significant role for deterioration of socio-economic status and maternal care services?

1.5 Objectives

The study has following specified objectives;

1. To study the differential in domestic violence and changes over time from 2015 to 2021 among women in India.
2. To examine the factors affecting on domestic violence among women in India during 2015-2021.
3. To examine the effect of domestic violence on pregnancy outcome and maternal healthcare services utilization among women in India.

1.6 Research Hypothesis

- **H_1 :** Domestic violence does not affect maternal child care services utilization
- **H_2:** Domestic violence does not have any significant association with pregnancy outcome.

1.7 Data Source

This study is based on the National Family Health Survey (NFHS) data from India, which was conducted by the Ministry of Health and Family Welfare to collect comprehensive information on the health and demographic characteristics of the population. The dataset used in this study was obtained from the latest two rounds of NFHS, which were conducted between 2015-2016 (NFHS-4) and 2019-2021 (NFHS-5). The data was made freely available to the public through the official NFHS website, but researchers had to enroll and request access to the data.

The NFHS survey is a large-scale, nationally representative survey that covers both rural and urban areas across different regions of India. The sample was selected to ensure adequate representation of various socio-economic and demographic groups. The survey focused on women aged 15-49 and used structured questionnaires administered face-to-face by trained interviewers to gather data on domestic violence, maternal and child health, and other socio-economic and demographic factors. The analysis included a sample size of approximately 11,78,200 women, with 5,68,200 women in NFHS-4 and 6,10,000 women in NFHS-5.

The NFHS survey collects data on various health and demographic indicators, such as maternal and child health, fertility, and domestic violence, among others. The survey employs a rigorous sampling methodology and covers all states and union territories of India, making it a comprehensive source of information on the country's health and social issues. The survey data is widely used in research and policy-making related to public health and social issues in India.

Independent variable

The independent variables of this chapter are various socio-economic and demographic factors such as age, education, employment, and wealth index. Additionally, the chapter also discusses the construction of a composite empowerment index using decision making involvement, justification of physical violence, ownership/bank account, and permission as variables. The empowerment index is used as an independent variable to explore the relationship between women's empowerment and domestic violence.

Dependent variable

The dependent variables are types of domestic violence i.e. physical violence, sexual violence and emotional violence. We have also formed 'any violence' that gives value as 1 if any of the three types of violence are present and the value 0 if none of them are present. Other variables include access to maternal care services utilization, pregnancy outcome, and birth weight.

1.8 METHODOLOGY

Principal Component Analysis

Despite the present effort, a few studies attempted to build a composite index of women empowerment. Therefore the present study tries to understand the role of women's empowerment on domestic violence using a composite empowerment index. An attempt has been made to create a composite index using principal components analysis (PCA) scores which is a method of factor analysis. Empowerment index is created based on the empowerment scores categorized into three categories: low, medium, high (Table 1.3).

The variables used in indices are a: Decision making involvement, b: Justification of physical violence, c: Ownership/Bank account and d: Permission. The scoring patterns with corresponding variables are shown in detail in the table 1.2. The list of items was prepared, and the scoring system was used to assign scores of 0 for negative response and scores of 1 for positive response. In principal components analysis, our goal is to identify a smaller set of m components or factors from a collection of p variables that can explain the majority of the variance in a larger set of p variables. The ultimate goal is to simplify the complexity of a large data set by identifying the underlying dimensions or factors that are most significant and relevant to the data. These underlying factors can be inferred from the correlations between the p variables. The p variables are weighted and added together to estimate each factor. The i^{th} factor is thus

$$F_i = W_{i1}X_1 + W_{i2}X_2 + \ldots + W_{ip}X_p$$

One may also express each of the *p* variables as a linear combination of the *m* factors,

$$X_j = A_{1j}F_1 + A_{2j}F_2 + \ldots + A_{mj}F_m + U_j$$

where W_{ip} is the weight for m^{th} principal component and p_{th} variable. Uj is the variance that is unique to variable j, variance that cannot be explained by any of the common factors.

1.8.1 CONSTRUCTION OF WOMEN EMPOWERMENT INDEX

Variables used in constructing Women Empowerment Index are shown in the table below.

Table 1.2 : Description of Variables Used to Construct Women's Empowerment Index	
Variables	**Coded Response**
Decision making involvement	
Decision about spend of respondent's earnings	0: No involvement, 1: Involvement
Decides on respondent health care	0: No involvement, 1: Involvement
Decision about large household purchases	0: No involvement, 1: Involvement
Decision about visits to family or relatives	0: No involvement, 1: Involvement
Decision about what to do with money husband earns	0: No involvement, 1: Involvement
Justification of Physical Violence	
Beating justified if wife goes out without telling husband	0: Justified, 1: Not Justified
Beating justified if wife neglects the children	0: Justified, 1: Not Justified
Beating justified if wife argues with husband	0: Justified, 1: Not Justified
Beating justified if wife refuses to have sex with husband	0: Justified, 1: Not Justified
Beating justified if wife does not cook food properly	0: Justified, 1: Not Justified
Ownership/Bank account	
Owns a house alone or jointly	0: Does not own, 1: Owns
Owns land alone or jointly	0: Does not own, 1: Owns
Has bank or savings account that respondent uses	0: Does not have, 1: Has
Permission	
Usually allowed to go to the market	0: Not allowed, 1: Allowed
Usually allowed to go to the health facility	0: Not allowed, 1: Allowed
Usually allowed to go to places outside this village	0: Not allowed, 1: Allowed

Table 1.3 : Descriptive Statistics of Women's Empowerment index for NFHS-4 and NFHS-5 is given below :

Descriptive Statistics of Women's Empowerment index for NFHS-4					
Women Empowerment	**Observations**	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
Low	6472	-2.736	0.006	-1.163	0.960
Medium	5841	0.006	0.618	0.478	0.177
High	7101	0.618	0.964	0.667	0.059

Descriptive Statistics of Women's Empowerment index for NFHS-5					
Women Empowerment	**Observations**	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
Low	6555	-2.970	0.354	-1.127	1.040
Medium	6412	0.413	0.565	0.494	0.055
High	6713	0.565	1.006	0.628	0.075

CHAPTER II

DOMESTIC VIOLENCE AND FACTORS AFFECTING

2.1 INTRODUCTION

Domestic violence, defined as any form of abuse occurring within a home or intimate relationship, remains a significant social problem with far-reaching consequences for individuals, families, and communities. While the level and pattern of domestic violence vary across different societies and cultures, it is widely recognized as a pervasive issue affecting countless individuals around the world. The causes of domestic violence are complex and multifaceted, involving a combination of individual, relational, societal, and cultural factors. These factors may include gender inequality, poverty, substance abuse, mental illness, and childhood trauma, among others. Addressing the root causes of domestic violence is essential to developing effective prevention and intervention strategies, and requires a multidisciplinary approach that involves law enforcement, healthcare providers, social workers, and community members.

In India, domestic violence has been a longstanding issue, with a reported increase in cases over the years, as stated by the National Crime Records Bureau (NCRB). However, the true number of cases is likely to be much higher due to underreporting. Domestic violence in India is influenced by several factors, including patriarchal attitudes, gender inequality, poverty, alcoholism, and lack of education. Women are disproportionately affected, with the majority of reported cases being against women. The COVID-19 pandemic has further aggravated this issue, with an increase in domestic violence cases reported during lockdown periods due to the exacerbation of existing issues such as economic stress, mental health problems, and social isolation.

While the Indian government has taken steps to address domestic violence through policies and initiatives such as the Protection of Women from Domestic Violence Act and the One Stop Centre scheme, much remains to be done to promote gender equality and women's empowerment in India. This chapter aims to provide a comprehensive overview of the level and pattern of domestic violence in India between 2015-2021, as well as the factors that contribute to its prevalence. By shedding light on this issue, we hope to promote greater awareness and understanding of domestic violence and encourage more effective and coordinated efforts to prevent and address this critical social problem.

Dependent variables: In this chapter our dependent variables are different types of violence which consists of physical violence, emotional violence, sexual violence and any violence each coded at 0 and 1 where 0 indicates no violence and 1 indicates violence.

Independent variables: Independent variables in this chapter include socio-economic and demographic characteristics in India which consists of age of women, wealth , education of women ,education of husband, working status of women, residence, caste, religion, household size ,women empowerment ,whether husband drinks alcohol, exposure to media ,sex of household head ,sex of child and parity.

2.2 METHODOLOGY

1.Chi square- Test of independence

Chi-square is a statistical test used to determine whether two categorical variables are associated or related to each other. We explored whether there was any association between the independent variables and the distinct dependent variables affiliated with each objective.

Hypothesis:

Null hypothesis = H0: There is no relationship between the two variables.

Alternative hypothesis = H1 : There is a relationship between the two variables.

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

Here, O = Observed frequency count and E = Expected frequency count.

If the p-value for chi-square test of independence is less than the chosen level of significance then we reject the null hypothesis and conclude that there is a significant association between the two categorical variables.

2.Logistic regression

Logistic regression is a statistical analysis technique used to model the relationship between a binary dependent variable and one or more independent variables. The purpose of logistic regression is to estimate the probability of the dependent variable given a set of independent variables. We used binary logistic regression to find out which variables have a significant effect on domestic violence and thereby identified the risk factors. Also, we used it to understand the factors affecting women's access to maternal care services utilization and pregnancy outcome(birth weight, pregnancy ended in terms of live or non-live birth).

We express the formula for regression model in terms of the *logit*. Logit is the natural logarithm of the odds of outcome .Odds is a numerical expression used to represent the probability of an event occurring and is expressed as the number of favorable to the number of non-favorable outcomes.

$$logit = L_i = B_0 + B_1X_1 + \ldots + B_KX_K$$

where each Xi is a predictor and each Bi is the regression coefficient.

3. Fairlie decomposition

Fairlie decomposition is a statistical method used for identifying the factors that contribute to disparities in outcomes between groups. It allows researchers to break down the gap into smaller components and estimate the contribution of each component. It helps to isolate the main drivers of inequality, making it easier to design interventions that are tailored to the specific needs of each group.

Using fairlie decomposition, we examined the factors that drive changes in the prevalence of domestic violence between NFHS-4 and NFHS-5, and evaluated whether their contributions increased or decreased overtime. We combined NFHS-4 and NFHS-5, and coded the time variable V007 as 0 for NFHS-4 and 1 for NFHS-5. If the contribution value of a factor has a positive sign, it indicates that there has been an increase in the contribution of that factor in domestic violence and negative sign indicates that there has been a

decrease in the contribution of that factor in domestic violence. Domestic violence coded as no violence and violence (0= no violence denoted as B in the equation and 1=violence denoted as W in the equation) is the dependent variables.

Non-linear decomposition technique

As stressed by Fairlie (2016), applying standard Blinder Oaxaca decomposition to a linear probability model provides misleading estimates when dependent variables are binary, particularly if the group differences for an influential independent variable are relatively large. In this case, it is preferable to apply a relatively straightforward simulation technique for non-linear decomposition. Accordingly, in estimating the contributions of socio-economic and demographic factors to identified differences in diet pattern among women. We follow Fairlie (1999) by employing a non-linear decomposition approach when the dependent variable is binary. Mother diet pattern coded as below average and above average (0=inadequate denoted as B in the equation and 1=adequate denoted as W in the equation) is the dependent variables. For linear regression the standard Blinder-Oaxaca decomposition method in the average value of the dependent variable, Y, can be expressed as:

$$\bar{Y}^W - \bar{Y}^B = \left[(\bar{X}^W - \bar{X}^B)\hat{\beta}^W\right] + \left[\bar{X}^B(\hat{\beta}^W - \hat{\beta}^B)\right] \quad \text{……...…….. (1)}$$

Where $\bar{X}^j$ is a row vector of average values of the independent variables and $\hat{\beta}$ is vector of coefficient estimate for j. Following Fairlie's decomposition for the non-linear equation such as Y= F (X$\hat{\beta}$), can be expressed as,

$$\bar{Y}^W - \bar{Y}^B = \left[\sum_{i=1}^{N^W}\frac{F(X_i^W\hat{\beta}^W)}{N^W} - \sum_{i=1}^{N^B}\frac{F(X_i^B\hat{\beta}^W)}{N^B}\right] + \left[\sum_{i=1}^{N^B}\frac{F(X_i^B\hat{\beta}^W)}{N^B} - \sum_{i=1}^{N^B}\frac{F(X_i^B\hat{\beta}^B)}{N^B}\right], \quad \text{…. (2)}$$

The where Nj is the sample size for j. This alternative expression for the decomposition is used because Y does not necessarily equal F(X$\hat{\beta}$). In both (1) and (2), the first term in brackets represents the part of the gap that is due to group differences in distributions of X, and the second term represents the part due to differences in the group processes determining levels of Y. The second term also captures the portion of the gap due to group differences in unmeasurable or unobserved endowments. To calculate the decomposition, define $\bar{Y}$j as the average probability of the binary outcome of sample of interest for j and F as the cumulative

distribution function from the logistic distribution. F would be defined as the cumulative distribution function from the standard normal distribution.

An equally valid expression for the decomposition is:

$$\overline{Y}^{W} - \overline{Y}^{B} = \left[\sum_{i=1}^{N^{W}} \frac{F(X_i^{W} \hat{\beta}^{B})}{N^{W}} - \sum_{i=1}^{N^{B}} \frac{F(X_i^{B} \hat{\beta}^{B})}{N^{B}} \right] + \left[\sum_{i=1}^{N^{W}} \frac{F(X_i^{W} \hat{\beta}^{W})}{N^{W}} - \sum_{i=1}^{N^{W}} \frac{F(X_i^{W} \hat{\beta}^{B})}{N^{W}} \right],$$

In this equation, the $\hat{\beta}$B coefficient estimates, are used as weights for the first term in the decomposition, and the w distributions of the independent variables, $\bar{X}$W are used as weights for the second term. This alternative method of calculating the decomposition often provides different estimates, which is the familiar index problem with the Blinder-Oaxaca decomposition technique. A third alternative, used in Neumark (1988) and Oaxaca and Ransom (1994), is to weight the first term of the decomposition expression using coefficient estimates from a pooled sample of the two groups. Ultimately, the choice across these alternative methods of calculating the first term of the decomposition is difficult and depends on the application with many studies reporting results for more than one specification. The first term in 2 and 3 provide an estimate of contribution of diet pattern differences in the entire set of independent variables to the gap in diet pattern. Estimation of the total contribution is relatively simple as one only needs to calculate two sets of predicted probabilities and take the difference between the average values of the two. Identifying the contribution of group differences in specific variables to the gap, however, is not as straightforward. To simplify, first assume that $N^B=N^W$ and that there exists a natural one-to-one matching of B and W observations. Using coefficient estimates from a logit regression for a pooled sample, $\hat{\beta}*$ the independent contribution of Xi to the gap can then be expressed as:

$$\frac{1}{N^{B}} \sum_{i=1}^{N^{B}} F(\hat{\alpha}^{*} + X_{1i}^{W} \hat{\beta}_{1}^{*} + X_{2i}^{W} \hat{\beta}_{2}^{*}) - F(\hat{\alpha}^{*} + X_{1i}^{B} \hat{\beta}_{1}^{*} + X_{2i}^{W} \hat{\beta}_{2}^{*}).$$

Similarly, the contributions of X2 can be expressed as:

$$\frac{1}{N^{B}} \sum_{i=1}^{N^{B}} F(\hat{\alpha}^{*} + X_{1i}^{B} \hat{\beta}_{1}^{*} + X_{2i}^{W} \hat{\beta}_{2}^{*}) - F(\hat{\alpha}^{*} + X_{1i}^{B} \hat{\beta}_{1}^{*} + X_{2i}^{B} \hat{\beta}_{2}^{*}).$$

The contribution of each variable to the gap is thus equal to the change in the average predicted probability from replacing the B distribution with the W distribution of that variable while holding the distributions of the other variable constant. A useful property of this technique is that the sum of the contributions from individual variables will be equal to the total contribution from all of the variables evaluated with the full sample. Standard errors can also be calculated for these estimates. Following Oaxaca and Ransom (1998), I use the delta method to approximate standard errors. To simplify notation, rewrite (2.4) as:

$$\hat{D}_1 = \frac{1}{N^B}\sum_{i=1}^{N^B} F(X_i^{WW}\hat{\beta}^*) - F(X_i^{BW}\hat{\beta}^*). \qquad \text{..... (7)}$$

The variance of $\widehat{D}1$ can be approximated as:

$$Var(\hat{D}_1) = \left(\frac{\delta\hat{D}_1}{\delta\hat{\beta}^*}\right)' Var(\hat{\beta}^*)\left(\frac{\delta\hat{D}_1}{\delta\hat{\beta}^*}\right).$$

where, $$\frac{\delta\hat{D}_1}{\delta\hat{\beta}^*} = \frac{1}{N^B}\sum_{i=1}^{N^B} f(X_i^{WW}\hat{\beta}^*)X_i^{WW} - f(X_i^{BW}\hat{\beta}^*)X_i^{BW}$$

and f is the logistics probability density function. In practice, the sample sizes of the two groups are rarely the same and a one-to-one matching of observations from the two samples is needed to calculate. In this example, it is likely that the B sample size is substantially smaller than the W sample size. To address this problem, first use the pooled coefficient estimates to calculate predicted probabilities, Yˆ, for each B and W observation in the sample. Next, draw a random sub sample of W equal in size to the full B sample (NB). Each observation in the W sub sample and full B sample is then separately ranked by the predicted probabilities and matched by their respective rankings. This procedure matches W who have characteristics, such as wealth and education, placing them at the bottom (top) of their distribution with B who have characteristics placing them at the bottom (top) of their distribution. The decomposition estimates obtained from this procedure depend on the randomly chosen subsample of W. Ideally, the results from the decomposition should approximate those from matching the entire W sample to the B sample. A simple method of approximating this hypothetical decomposition is to draw a large number of random subsamples of W, match each of these random subsamples of W to the B sample, and calculate separate decomposition estimates. The mean value of estimates from the separate decompositions is calculated and used to approximate the results for the entire W sample.

2.3 Statistical analysis for different types of domestic violence

2.3.1 Distribution of Domestic violence according to socio-economic and demographic characteristics in India; 2015-16 & 2019-21

Table 2.1: The following table shows the frequency and percentage of socio-economic and demographic characteristics along with types of domestic violence by surveyed women. There has been a marginal decrease in any type of violence experienced by women in NFHS-5 (35.6 percent) compared to NFHS-4 (38.9 percent).

Table 2.1 : Sample Distribution Table of Domestic violence according to socio-economic and demographic characteristics in India; 2015-16 & 2019-21

	NFHS-4		NFHS-5		2015-2021	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Experienced Any Violence						
No	42944	61.1	42678	64.4	85622	62.5
Yes	24930	38.9	22193	35.6	47123	37.5
Experienced Physical Violence						
No	56812	70.4	52092	71.3	108904	70.9
Yes	22917	29.6	20228	28.7	43145	29.1
Experienced Sexual Violence						
No	61641	93	60331	93.9	121972	93.5
Yes	4372	7	3520	6.1	7892	6.5
Experienced Emotional Violence						
No	57641	86.2	55843	86	113484	86.1
Yes	8372	13.8	8008	14	16380	13.9
Age of Women						
15-24	247833	34.6	241180	24	489013	29.6
25-34	212124	30.5	219428	32.3	431552	31.3
35 & above	239729	34.6	263507	43.7	503236	39.1
Wealth						
Poor	233227	29.2	241371	29.9	474598	29.5
Middle	233231	32.5	241372	33.8	474603	33.1
Rich	233228	38.3	241372	36.3	474600	37.4
Education of Women						
Illiterate	133249	16.8	84983	16.7	173273	16.7
Primary	149466	64.9	370012	62.8	704939	63.7
Secondary & higher	285670	18.3	101816	20.6	181729	19.4
Education of Husband						
Illiterate	13648	18.6	11523	18.7	25171	18.7
Primary	48314	63.8	43526	63.5	91840	63.7
Secondary & higher	12093	17.6	11576	17.8	23669	17.7
Working Status of Women						
Not working	93713	76.2	80443	71	174156	73.7
Working	28638	23.8	28342	29	56980	26.3
Residence						
Rural	204735	64.5	179535	67.7	384270	66
Urban	494951	35.5	544580	32.3	1039531	34

Continue….

Continue…Table 2.1 : Sample Distribution Table of Domestic violence according to socio-economic and demographic characteristics in India; 2015-16 & 2019-21

	NFHS-4		NFHS-5		2015-2021	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Caste						
SC/ST	251946	29.8	275196	31.9	527142	30.8
OBC	273700	45.7	276881	44.8	550581	45.3
Other	144738	24.6	137377	23.3	282115	24
Religion						
Hindu	519281	80.2	546007	78.3	1065288	79.3
Muslim	94591	14.3	90729	16.4	185320	15.3
Other	85814	5.5	87379	5.3	173193	5.4
Household Size						
0-4 members	240334	38.9	288313	43.5	528647	41.1
5-8 members	372277	49.9	368869	48.4	741146	49.2
9 & above members	87035	11.2	66933	8.2	153968	9.8
Women Empowerment						
Low	6472	33.3	6555	35.2	13027	34.3
Medium	5841	28.1	6412	31.9	12253	30.1
High	7101	38.6	6713	32.9	13814	35.5
Husband drinks alcohol						
No	45122	71.1	46019	76.1	91141	73.6
Yes	20891	28.9	17832	23.9	38723	26.4
Exposure to Media						
No	142234	17.9	172014	23.6	314248	20.6
Yes	557452	82.1	552101	76.4	1109553	79.4
Sex of Household Head						
Male	604912	84.7	607789	83.1	1212701	84
Female	94774	15.3	116318	16.9	211092	16
Sex of Child						
Male	278017	57.6	289007	57	567024	57.3
Female	198602	42.4	205012	43	403614	42.7
Parity						
0-2 Children	474651	69.7	514227	67.4	988878	68.6
Above 2	225034	30.3	209888	32.6	434922	31.4
Institutional Delivery						
Home	42152	18.1	21219	10.1	63371	14.4
Institutional	148645	81.9	155624	89.9	304269	85.6
Antenatal care visit						
0-4	123595	56.9	102932	54	226527	55.6
Above 4	67303	43.1	73201	46	140504	44.4
Birth weight						
Low	122732	16.9	134343	16.7	257075	83.2
Normal	25029	83.1	27253	83.3	52282	16.8
Pregnancy Outcome						
live birth	668009	95.4	694413	95.5	1362422	95.5
Non live birth	31677	4.6	29702	4.5	61379	4.5

2.3.2 Association of types of domestic violence with socio-economic and demographic characteristics among women in India; 2015-16 & 2019-21

Table 2.2: The table displays the association of types of domestic violence with socio-economic and demographic characteristics among women in India. The association of background characteristics with different types of violence have marginally decreased from NFHS-4 to NFHS-5. The results show that there is a significant association of age with physical violence ($\chi2$=514.340, P≤0.000) and emotional violence ($\chi2$=18.337, P≤0.000). Certain factors such as wealth, education of women and husband, women empowerment, working status of women, and exposure to mass media are strongly associated with the prevalence of violence.

Table 1.2 : Association of types of domestic violence according to socio-economic and demographic characteristics among women in India; 2015-16 & 2019-21

Background Characteristics	National Family Health Survey-4 Type of Violence			National Family Health Survey-5 Type of Violence		
	Sexual	Physical	Emotional	Sexual	Physical	Emotional
Age of Women						
15-24	6.4	21.0	12.0	5.4	20.8	11.9
25-34	7.2	32.9	13.5	6.3	29.7	14.0
35 & above	7.0	35.1	14.8	6.2	32.2	14.7
	$\chi2$= 4.307, P≤0.116	$\chi2$=832.473 , P≤0.000	$\chi2$=27.227 , P≤0.000	$\chi2$=5.657 , P≤0.059	$\chi2$=514.340 , P≤0.000	$\chi2$=18.337 , P≤0.000
Wealth						
Poor	10.5	38.2	18.0	9.4	36.9	17.8
Middle	6.9	31.3	15.1	5.6	30.5	14.6
Rich	4.2	21.5	9.5	3.6	20.2	10.1
	$\chi2$=558.339 , P≤0.000	$\chi2$=1933.234 , P≤0.000	$\chi2$=631.768 , P≤0.000	$\chi2$= 259.649 , P≤0.000	$\chi2$=1121.846 , P≤0.000	$\chi2$= 329.22, P≤0.000
Education of Women						
Illiterate	8.5	37.7	15.8	7.7	34.0	15.3
Primary	5.6	24.6	11.5	5.2	26.1	12.9
Secondary & higher	2.9	16.0	6.3	2.7	14.7	7.4
	$\chi2$=186.484 , P≤0.000	$\chi2$=1075.443 , P≤0.000	$\chi2$=253.424 , P≤0.000	$\chi2$= 97.474, P≤0.000	$\chi2$=819.621 , P≤0.001	$\chi2$= 165.05, P≤0.000
Education of Husband						
Illiterate	8.9	40.0	16.2	8.1	37.0	16.6
Primary	6.2	31.1	12.7	5.3	28.8	12.8
Secondary & higher	3.1	20.5	6.9	2.9	19.6	8.1
	$\chi2$=233.053 , P≤0.000	$\chi2$=796.303 , P≤0.000	$\chi2$=310.807 , P≤0.000	$\chi2$=132.817 , P≤0.000	$\chi2$=579.995 , P≤0.000	$\chi2$= 239.24, P≤0.000

Continue….

Continue…..Table 1.2 : Association of types of domestic violence according to socio-economic and demographic characteristics among women in India; 2015-16 & 2019-21

Background Characteristics	National Family Health Survey-4			National Family Health Survey-5		
	Type of Violence			Type of Violence		
	Sexual	Physical	Emotional	Sexual	Physical	Emotional
Working Status of Women						
Not working	6.2	27.1	12.1	5.1	26.0	11.9
Working	9.3	37.5	19.0	8.4	35.2	19.0
	$\chi2$= 219.049, P≤0.000	$\chi2$=669.015 , P≤0.000	$\chi2$= 408.253, P≤0.000	$\chi2$= 172.791, P≤0.000	$\chi2$=602.348 , P≤0.000	$\chi2$=464.284 , P≤0.000
Residence						
Urban	5.2	25.3	12.0	4.7	23.7	12.1
Rural	7.9	31.9	14.8	6.7	31.0	14.9
	$\chi2$= 62.542, P≤0.000	$\chi2$=200.881 , P≤0.000	$\chi2$=30.445 , P≤0.000	$\chi2$=22.336 , P≤0.000	$\chi2$=174.921 , P≤0.001	$\chi2$= ,43.452 P≤0.000
Caste						
SC/ST	9.0	34.4	16.8	7.0	32.9	16.4
OBC	6.8	30.9	14.1	5.8	30.0	13.6
Other	4.8	22.6	10.0	5.1	22.1	11.9
	$\chi2$=134.711 , P≤0.000	$\chi2$=563.426 , P≤0.000	$\chi2$=236.536 , P≤0.000	$\chi2$=40.850 , P≤0.000	$\chi2$=392.069 , P≤0.001	$\chi2$=71.575 , P≤0.000
Religion						
Hindu	7.0	30.7	14.0	6.0	29.7	14.2
Muslim	6.7	25.0	14.1	7.1	26.0	13.7
Other	6.8	25.2	10.7	4.6	22.4	12.1
	$\chi2$=21.455 , P≤0.000	$\chi2$=427.561 , P≤0.000	$\chi2$=42 , P≤0.000	$\chi2$=18.199 , P≤0.000	$\chi2$=509.309 , P≤0.000	$\chi2$=53.822 , P≤0.000
Household Size						
0-4 members	6.5	31.0	14.2	5.7	28.8	14.2
5-8 members	7.4	28.9	14.0	6.6	28.9	14.2
9 & above members	6.8	27.5	11.8	5.0	27.0	12.2
	$\chi2$=16.5 , P≤0.000	$\chi2$=12.264 , P≤0.002	$\chi2$=0.692 , P≤0.708	$\chi2$=3.860 , P≤0.145	$\chi2$=5.324 , P≤0.070	$\chi2$=3.556 , P≤0.169
Women Empowerment						
Low	12.7	47.4	22.8	11.0	45.0	26.0
Medium	7.2	39.1	16.2	4.0	28.8	10.5
High	6.3	40.7	16.0	7.2	37.2	16.4
	$\chi2$=167.77 , P≤0.000	$\chi2$=110.979 , P≤0.000	$\chi2$=126.820 , P≤0.000	$\chi2$=166.641 , P≤0.000	$\chi2$=266.938 , P≤0.000	$\chi2$=323.708 , P≤0.000
Husband drinks alcohol						
No	4.1	24.9	9.2	3.9	24.4	10.3
Yes	14.0	55.1	25.2	13.2	52.9	26.1
	$\chi2$=1667.249 , P≤0.000	$\chi2$=4730.068 , P≤0.000	$\chi2$=2430.677 , P≤0.000	$\chi2$=1370.786 , P≤0.000	$\chi2$=3362.122 , P≤0.000	$\chi2$=1944.309 , P≤0.000

Continue….

Continue…..Table 1.2 : Association of types of domestic violence according to socio-economic and demographic characteristics among women in India; 2015-16 & 2019-21

Background Characteristics	National Family Health Survey-4			National Family Health Survey-5		
	Type of Violence			Type of Violence		
	Sexual	Physical	Emotional	Sexual	Physical	Emotional
Exposure to Media						
No	9.6	37.6	17.3	8.1	33.7	16.0
Yes	6.3	27.8	13.0	5.4	27.1	13.4
	$\chi2$=168.277 , P≤0.000	$\chi2$=547.148 , P≤0.000	$\chi2$=150.389 , P≤0.000	$\chi2$=47.080 , P≤0.000	$\chi2$=199.493 , P≤0.000	$\chi2$=47.989 , P≤0.000
Sex of Head of Household						
Male	6.6	29.1	13.2	5.9	28.1	13.4
Female	8.8	31.9	17.6	7.1	31.3	17.1
	$\chi2$=28.140 , P≤0.000	$\chi2$=4.044 , P≤0.044	$\chi2$=65.186 , P≤0.000	$\chi2$=24.016 , P≤0.000	$\chi2$=6.908 , P≤0.032	$\chi2$=52.591 , P≤0.000
Sex of Child						
Male	7.4	34.7	13.8	6.3	32.0	14.5
Female	6.7	34.5	14.4	6.1	31.6	13.8
	$\chi2$=0.015 , P≤0.901	$\chi2$=0.186 , P≤0.667	$\chi2$=5.068 , P≤0.024	$\chi2$=0.002 , P≤0.968	$\chi2$=0.001 , P≤0.974	$\chi2$=0.124 , P≤0.724
Parity						
0-2 children	5.9	25.2	12.4	5.3	24.6	13.1
Above 2	8.7	39.7	16.1	7.4	37.1	15.6
	$\chi2$=142.308 , P≤0.000	$\chi2$=1415.391 , P≤0.000	$\chi2$=185.431 , P≤0.000	$\chi2$=61.777, P≤0.000	$\chi2$=850.6 , P≤0.000	$\chi2$=80.109 , P≤0.000

2.3.3 Association of types of domestic violence according to socio-economic and demographic characteristics among women in India; 2015-21

Table 2.3: The table shows the association between different types of domestic violence and socio-economic/demographic characteristics of women in India, based on data from 2015-21. Physical violence is the most prevalent type of domestic violence across all age groups, with the highest prevalence among women aged 35 and above (33.6%). Women who are categorized as having low empowerment (46.1%) and whose husbands are illiterate (38.5%) experience a higher prevalence of physical violence. Women whose husbands drink alcohol have the highest likelihood of experiencing all types of domestic violence. Working women also experience a higher prevalence of all types of violence compared to women not working.

Table 1.3 : Association of types of domestic violence according to socio-economic and demographic characteristics among women in India; 2015-16 & 2019-21

Background Characteristics	2015-2021		
	Type of Violence		
	Sexual	Physical	Emotional
Age of Women			
15-24	5.9	20.9	11.9
25-34	6.8	31.3	13.8
35 & above	6.6	33.6	14.8
	$\chi2$=6.494 , P≤0.039	$\chi2$=1309.796 , P≤0.000	$\chi2$=44.403 , P≤0.000
Wealth			
Poor	10.0	37.6	17.9
Middle	6.2	30.9	14.8
Rich	3.9	20.9	9.8
	$\chi2$=792.524 , P≤0.000	$\chi2$=2988.066 , P≤0.000	$\chi2$=938.910 , P≤0.000
Education of Women			
Illiterate	8.1	35.9	15.6
Primary	5.4	25.3	12.2
Secondary & higher	2.8	15.3	6.9
	$\chi2$=280.930 , P≤0.000	$\chi2$=1862.100 , P≤0.000	$\chi2$=406.456 , P≤0.000
Education of Husband			
Illiterate	8.5	38.5	16.4
Primary	5.7	29.9	12.7
Secondary & higher	3.0	20.0	7.5
	$\chi2$=365.291 , P≤0.000	$\chi2$=1373.535 , P≤0.000	$\chi2$=547.071 , P≤0.000
Working Status ff Women			
Not working	5.7	26.6	12.0
Working	8.8	36.3	19.0
	$\chi2$=572.056 , P≤0.000	$\chi2$=1254.029 , P≤0.000	$\chi2$=867.580 , P≤0.000
Residence			
Urban	5.0	24.6	12.1
Rural	7.3	31.5	14.9
	$\chi2$=73.951 , P≤0.000	$\chi2$=367.141 , P≤0.000	$\chi2$=71.656 , P≤0.000

Continue….

Continue….Table 1.3 : Association of types of domestic violence according to socio-economic and demographic characteristics among women in India; 2015-16 & 2019-21

Background Characteristics	2015-2021		
	Type of Violence		
	Sexual	Physical	Emotional
Caste			
SC/ST	7.9	33.7	16.6
OBC	6.3	30.5	13.8
Other	4.9	22.3	10.9
	$\chi2$=160.049 , P≤0.000	$\chi2$=940.396 , P≤0.000	$\chi2$=288.022 , P≤0.000
Religion			
Hindu	6.5	30.2	14.1
Muslim	6.9	25.5	13.8
Other	5.8	23.9	11.4
	$\chi2$=28.232 , P≤0.000	$\chi2$=882.453 , P≤0.000	$\chi2$=95.069 , P≤0.000
Household Size			
0-4 members	6.1	29.9	14.2
5-8 members	7.0	28.9	14.1
9 & above members	6.0	27.3	11.9
	$\chi2$=18.677 , P≤0.000	$\chi2$=14.373 , P≤0.001	$\chi2$=1.009 , P≤0.604
Women Empowerment			
Low	11.8	46.1	24.5
Medium	5.4	33.2	13.0
High	6.8	38.9	16.2
	$\chi2$=307.322 , P≤0.000	$\chi2$=341.446 , P≤0.000	$\chi2$=414.398 , P≤0.000
Husband drinks alcohol			
No	4.0	24.6	9.8
Yes	13.6	54.1	25.6
	$\chi2$=3077.099 , P≤0.000	$\chi2$=8111.420 , P≤0.000	$\chi2$=4369.405 , P≤0.000
Exposure to Media			
No	8.8	35.5	16.5
Yes	5.9	27.5	13.2
	$\chi2$=185.047 , P≤0.000	$\chi2$=686.454 , P≤0.000	$\chi2$=180.267 , P≤0.000
Sex of Household Head			
Male	6.3	28.7	13.3
Female	7.9	31.6	17.4
	$\chi2$=49.510 , P≤0.000	$\chi2$=10.386 , P≤0.006	$\chi2$=116.913 , P≤0.000
Sex of Child			
Male	6.8	33.3	14.2
Female	6.4	33.0	14.1
	$\chi2$=0.007 , P≤0.933	$\chi2$=0.122 , P≤0.727	$\chi2$=1.837 , P≤0.175
Parity			
0-2 children	5.6	24.9	12.7
Above 2	8.0	38.4	15.9
	$\chi2$=204.320 , P≤0.000	$\chi2$=2241.564 , P≤0.000	$\chi2$=256.537 , P≤0.000

2.3.4 Association between any type of violence and socio-economic and demographic characteristics among women in India

Table 2.4 : The table shows the association between different socio-economic and demographic characteristics of women in India and any type of violence. According to the findings, there is a statistically significant decrease in violence against women across all educational levels. The percentage of women who experienced any type of violence was much higher among women whose husbands drank alcohol (57.3%) compared to those whose husbands did not drink (27.7%). Women empowerment has a high association with domestic violence for both survey periods ($\chi2=449.864$, $P\leq0.000$).

Table 2.4 : Association between any type of violence and socio-economic and demographic characteristics among women in India

Background Characteristics	NFHS-4	NFHS-5	2015-2021
Age of Women			
15-24	44.4	37.7	41.5
25-34	37.4	34.5	36.0
35 & above	38.4	35.7	37.0
	$\chi2=164.600$, $P\leq0.000$	$\chi2=20.242$, $P\leq0.000$	$\chi2=170.135$, $P\leq0.000$
Wealth			
Poor	49.0	43.4	46.2
Middle	41.4	37.6	39.5
Rich	29.9	26.7	28.3
	$\chi2=1743.774$, $P\leq0.000$	$\chi2=994.667$, $P\leq0.000$	$\chi2=2664.319$, $P\leq0.000$
Education of Women			
Illiterate	43.9	38.1	41.0
Primary	36.0	33.3	34.6
Secondary & higher	26.1	24.5	25.3
	$\chi2=512.928$, $P\leq0.000$	$\chi2=308.383$, $P\leq0.000$	$\chi2=814.534$, $P\leq0.000$
Education of Husband			
Illiterate	43.4	40.3	41.8
Primary	34.3	31.9	33.1
Secondary & higher	22.9	22.5	22.7
	$\chi2=781.920$, $P\leq0.000$	$\chi2=600.090$, $P\leq0.000$	$\chi2=1381.817$, $P\leq0.000$
Working Status Of Women			
Not working	36.7	32.8	34.8
Working	47.3	42.4	44.6
	$\chi2=598.681$, $P\leq0.000$	$\chi2=558.278$, $P\leq0.000$	$\chi2=1119.091$, $P\leq0.000$
Residence			
Urban	34.4	31.2	32.9
Rural	42.0	37.6	39.8
	$\chi2=164.413$, $P\leq0.000$	$\chi2=121.949$, $P\leq0.001$	$\chi2=266.637$, $P\leq0.000$
Caste			
SC/ST	45.2	40.1	42.6
OBC	40.9	36.7	38.9
Other	30.7	29.0	29.9
	$\chi2=599.970$, $P\leq0.000$	$\chi2=358.613$, $P\leq0.000$	$\chi2=926.539$, $P\leq0.000$

Continue….

Continue...Table 2.4 : Association between any type of violence and socio-economic and demographic characteristics among women in India

Background Characteristics	NFHS-4	NFHS-5	2015-2021
Religion			
Hindu	40.2	36.4	38.3
Muslim	36.2	33.5	34.7
Other	34.8	30.7	32.8
	$\chi2$=199.164 , P≤0.000	$\chi2$=321.148 , P≤0.000	$\chi2$=476.304 , P≤0.000
Household Size			
0-4 members	39.7	35.5	37.5
5-8 members	39.6	36.2	37.9
9 & above members	37.2	33.0	35.5
	$\chi2$=11.094 , P≤0.004	$\chi2$=4.905 , P≤0.086	$\chi2$=6.883 , P≤0.032
Women Empowerment			
Low	50.8	50.3	50.5
Medium	42.2	30.9	35.7
High	43.3	40.0	41.7
	$\chi2$=135.589 , P≤0.000	$\chi2$=366.640 , P≤0.000	$\chi2$=449.864 , P≤0.000
Husband drinks alcohol			
No	27.9	27.5	27.7
Yes	58.4	56.0	57.3
	$\chi2$=4676.670 , P≤0.000	$\chi2$=3332.241 , P≤0.000	$\chi2$=8024.520 , P≤0.000
Exposure to Media			
No	45.7	39.2	42.0
Yes	37.8	34.4	36.2
	$\chi2$=278.826 , P≤0.000	$\chi2$=99.494 , P≤0.000	$\chi2$=332.328 , P≤0.000
Sex of Household Head			
Male	38.8	34.9	36.8
Female	42.6	39.5	41.0
	$\chi2$=18.462 , P≤0.000	$\chi2$=20.744 , P≤0.000	$\chi2$=36.785 , P≤0.000
Sex of Child			
Male	37.6	35.2	36.4
Female	37.6	34.8	36.2
	$\chi2$=0.088 , P≤0.767	$\chi2$=0.147 , P≤0.701	$\chi2$=0.002 , P≤0.968
Parity			
0-2 children	37.2	33.0	35.1
Above 2	42.9	40.1	41.5
	$\chi2$=240.816 , P≤0.000	$\chi2$=231.286 , P≤0.000	$\chi2$=477.743 , P≤0.000

2.3.5 Effect of socio-economic and demographic characteristics on domestic violence among women in India; 2015-16 & 2019-21

Table 2.5 : The table shows the odds ratio and 95 percent confidence interval for the effect of various socio-economic and demographic factors on domestic violence against women in India. The odds ratio for each characteristic represents the likelihood of experiencing domestic violence compared to a reference group.. The odds of experiencing domestic violence were lower for women from middle wealth category and rich wealth category with odds ratio of 0.81 and 0.55 respectively as compared to women from poor wealth category. The odds for domestic violence among women whose husband drank alcohol was 3.1 which was three times higher than the odds for domestic violence among women whose husband did not drink alcohol indicating a very strong relationship between alcohol consumption and domestic violence.

Table 1.5 :Effect of socio-economic and demographic characteristics on domestic violence among women in India; 2015-16 & 2019-21

Background Characteristics	NFHS-4		NFHS-5		2015-2021	
	Odds Ratio	95% CI	Odds Ratio	95% CI	Odds Ratio	95% CI
Age of Women						
15-24						
25-34	0.96	(0.814 , 1.132)	1.09	(0.923 , 1.283)	0.97	(0.865 , 1.095)
35 & above	1.06	(0.895 , 1.259)	1.01	(0.852 , 1.191)	0.92	(0.816 , 1.045)
Wealth						
Poor						
Middle	0.81**	(0.707 , 0.929)	0.97	(0.859 , 1.087)	0.91*	(0.836 , 0.999)
Rich	0.55***	(0.468 , 0.652)	0.77***	(0.665 , 0.889)	0.69***	(0.617 , 0.768)
Education of Women						
Illiterate						
Primary	0.92	(0.811 , 1.042)	0.94	(0.836 , 1.055)	0.94	(0.866 , 1.027)
Secondary & higher	0.52***	(0.425 , 0.647)	0.64***	(0.529 , 0.771)	0.61***	(0.530 , 0.703)
Education of Husband						
Illiterate						
Primary	0.99	(0.868 , 1.136)	0.92	(0.813 , 1.040)	0.96	(0.873 , 1.047)
Secondary & higher	0.79*	(0.648 , 0.974)	0.70***	(0.584 , 0.843)	0.75***	(0.651 , 0.855)
Working Status of Women						
Not working						
Working	0.98	(0.862 , 1.109)	1.08	(0.954 , 1.220)	1.03	(0.939 , 1.119)

Continue….

Continue….Table 1.5 :Effect of socio-economic and demographic characteristics on domestic violence among women in India; 2015-16 & 2019-21

Background Characteristics	NFHS-4		NFHS-5		2015-2021	
	Odds Ratio	95% CI	Odds Ratio	95% CI	Odds Ratio	95% CI
Residence						
Urban						
Rural	0.82***	(0.731 , 0.928)	0.97	(0.864 , 1.087)	0.90*	(0.829 , 0.978)
Caste						
SC/ST						
OBC	1.17*	(1.036 , 1.319)	1.10	(0.993 , 1.226)	1.14**	(1.054 , 1.235)
Other	0.96	(0.833 , 1.117)	0.86*	(0.743 , 0.986)	0.92	(0.827 , 1.013)
Religion						
Hindu						
Muslim	0.91	(0.720 , 1.150)	0.87	(0.701 , 1.090)	0.87	(0.743 , 1.025)
Other	0.71***	(0.617 , 0.819)	0.60***	(0.523 , 0.686)	0.65***	(0.586 , 0.712)
Household Size						
0-4 members						
5-8 members	0.96*	(0.924 , 0.990)	0.89***	(0.860 , 0.922)	0.85***	(0.789 , 0.914)
9 & above members	0.90**	(0.842 , 0.964)	0.87***	(0.804 , 0.941)	0.89	(0.742 , 1.073)
Women Empowerment						
Low						
Medium	0.66***	(0.581 , 0.754)	0.44***	(0.391 , 0.489)	0.52***	(0.475 , 0.562)
High	0.75***	(0.665 , 0.843)	0.60***	(0.539 , 0.668)	0.65***	(0.601 , 0.705)
Husband drinks alcohol						
No						
Yes	3.01***	(2.714 , 3.332)	2.66***	(2.425 , 2.926)	2.80***	(2.612 , 2.999)
Exposure to Media						
No						
Yes	0.98	(0.820 , 1.178)	1.19*	(1.033 , 1.367)	1.13*	(1.010 , 1.260)
Sex of Household Head						
Male						
Female	1.01	(0.863 , 1.178)	1.04	(0.907 , 1.182)	1.02	(0.925 , 1.131)
Parity						
0-2 children						
Above 2	1.31***	(1.262 , 1.350)	1.31***	(1.295 , 1.389)	1.25***	(1.153 , 1.357)

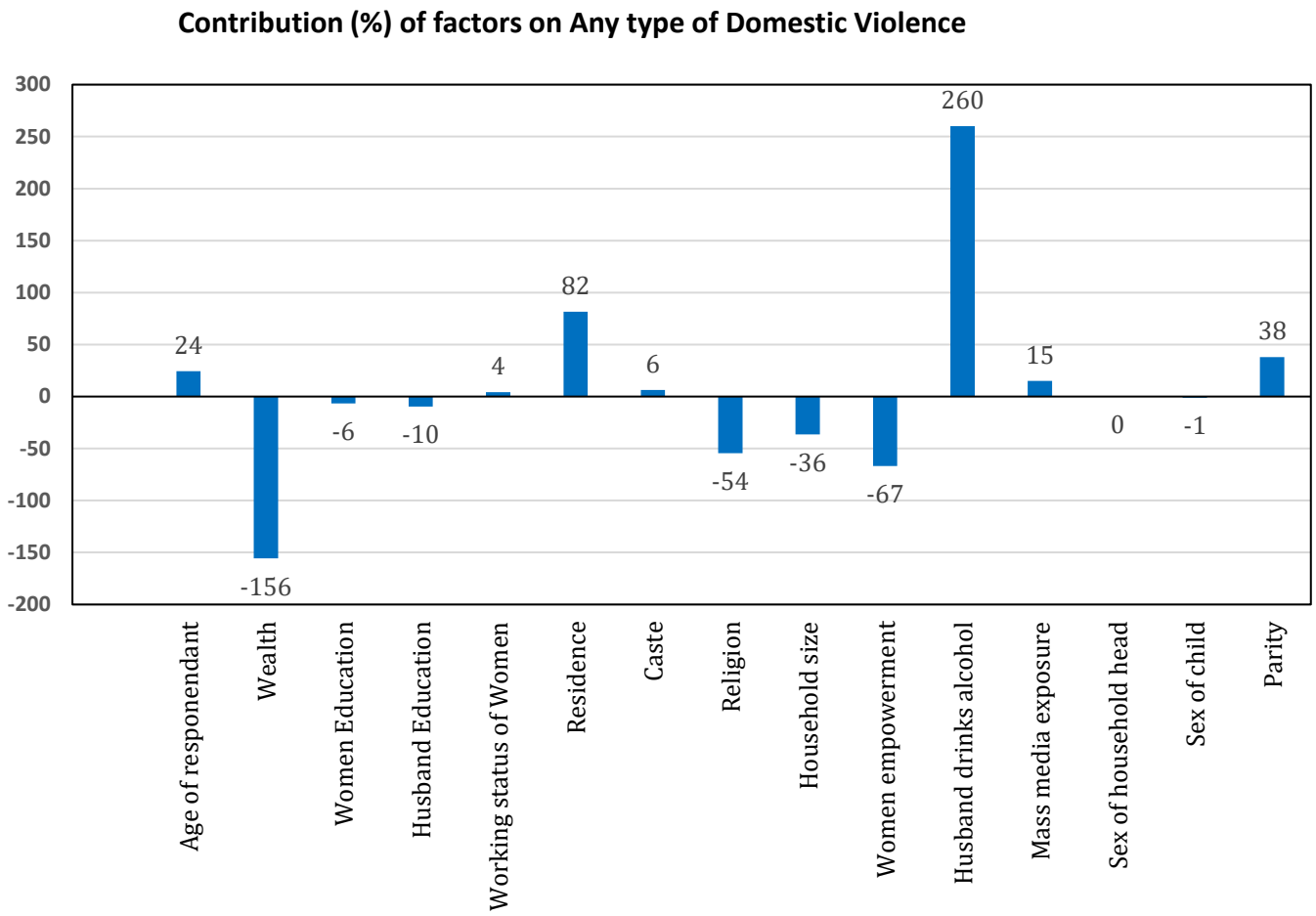
2.3.6 Contribution of various socioeconomic factors associated with violence

Result of Fair lie Decomposition

The table presents the coefficients, p-values, 95 percent confidence intervals, and contributions of various factors to any violence against women. The table shows that the factors having a considerable positive contribution for any type of violence against women are type of residence (81.7 percent, P-value<=0.003), age of respondent (24.4 percent, P-value<=0.076), parity (37.8 percent, P-value<=0.003) and husband's alcohol consumption (260 percent, P-value<=0.000). Husband's alcohol consumption has the highest positive contribution among all factors. Factors such as wealth (-156 percent, P-value=0.000) and women empowerment (-67 percent, P-value=0.000) have the highest negative influence on any type of domestic violence. The total explained variation is 0.0036, and the total change in any violence against women is approximately 22 percent.

Any Violence	Coefficient (β)	P-Value	95% CI		Contribution (%)	Sign (+/-)
Age of respondent	0.001	0.076	-0.0001	0.0019	24.4	(+)
Wealth	-0.006	0.000	-0.0075	-0.0039	-155.7	-
Women Education	0.000	0.030	-0.0004	0.0000	-6.5	-
Husband Education	0.000	0.027	-0.0007	0.0000	-9.6	-
Working status of Women	0.000	0.710	-0.0006	0.0009	4.1	(+)
Residence	0.003	0.003	0.0010	0.0049	81.7	(+)
Caste	0.000	0.718	-0.0010	0.0015	6.4	(+)
Religion	-0.002	0.000	-0.0027	-0.0012	-54.5	-
Household size	-0.001	0.007	-0.0023	-0.0004	-36.3	-
Women empowerment	-0.002	0.000	-0.0035	-0.0014	-66.9	-
Husband drinks alcohol	0.009	0.000	0.0086	0.0103	260.0	(+)
Mass media exposure	0.001	0.542	-0.0012	0.0023	15.2	(+)
Sex of household head	0.000	0.981	-0.0005	0.0004	-0.1	-
Sex of child	0.000	0.227	-0.0001	0.0000	-1.2	-
Parity	0.001	0.003	0.0005	0.0023	37.8	(+)
Difference						0.0164
Total explained						0.0036
Total change in any violence against women (%)						22.1174
Number of obs	15,747		Pr(Y!=0G=0)			0.3792
N of obs G=0	7012		Pr(Y!=0G=1)			0.3628
N of obs G=1	8735					

Note : Obs=Observations, N=Number, Pr=Probability


Contribution (%) of factors on Any type of Domestic Violence
300
250
200
150
100
50
0
-50
-100
-150
-200
24
-156
-6
-10
4
82
6
-54
-36
-67
260
15
0
-1
38
Age of responendant
Wealth
Women Education
Husband Education
Working status of Women
Residence
Caste
Religion
Household size
Women empowerment
Husband drinks alcohol
Mass media exposure
Sex of household head
Sex of child
Parity

CHAPTER III

EFFECT OF DOMESTIC VIOLENCE ON MATERNAL HEALTH CARE SERVICES UTILIZATION

3.1 INTRODUCTION

Domestic violence is a pervasive and complex issue that has significant consequences for individuals, families, and communities worldwide. In India, domestic violence against women is a prevalent problem that is influenced by various factors, including patriarchal attitudes, poverty, and lack of education. Women who experience domestic violence may suffer from a range of physical and mental health problems, including decreased access and utilization of maternal health care services.

Maternal health care services are essential for ensuring healthy pregnancies, deliveries, and postpartum periods for women. However, domestic violence can significantly impact women's ability to access and utilize these services, leading to adverse maternal and fetal health outcomes. Women who experience domestic violence may be less likely to seek maternal health care services due to fear, shame, or lack of support. This can lead to an increased risk of preterm birth, low birth weight, and maternal mortality.

Understanding the effect of domestic violence on maternal health care services utilization is crucial in developing effective interventions to address this issue. A multidisciplinary approach that involves collaboration between healthcare providers, social workers, and community members is necessary. By addressing the root causes of domestic violence and promoting access to maternal health care services, we can work towards improving maternal and fetal health outcomes for women affected by domestic violence.

This chapter aims to explore the impact of domestic violence on maternal health care services utilization in India between 2015-2021. It will examine the various factors that contribute to this issue and explore potential interventions that can be implemented to address it. By shedding light on this critical issue, we hope to raise awareness and promote actions to improve maternal and fetal health outcomes for women affected by domestic violence in India.

Dependent variables: In this chapter our dependent variables are institutional delivery, antenatal care, pregnancy outcome and birth weight of child.

Description of Dependent Variables		
Variables	**Coded Response**	
Institutional delivery	0: Home delivery	1: Institutional delivery
Pregnancy outcome	0: Live birth	1: Non live birth
Birthweight of child	0: Not low	1: Low birth weight
Number of antenatal care visits	0: 0-4 Visits	1: More than 4 visits
Note - Non live birth includes miscarriage , abortion and still birth		

Independent variables: Independent variables in this chapter include physical violence, emotional violence, sexual violence and any violence. Socio-economic and demographic characteristics which consists of age of women, wealth, education of women ,education of husband, working status of women, residence, region of residence, caste, religion, household size, women empowerment, whether husband drinks alcohol, exposure to media, sex of household head, sex of child and parity are the other independent variables.

3.2 METHODOLOGY

The methods used to carry out the analysis in this chapter are Chi-Square, Logistic Regression and Fairlie Decomposition.

3.3 STATISTICAL ANALYSIS OF MATERNAL HEALTHCARE SERVICES UTILIZATION

For Type of place of delivery

3.3.1 Association of domestic violence and socio-economic and demographic characteristics on institutional delivery among women aged 15-49; 2015-16 & 2019-21

Table 3.1.1 : The table shows the association between domestic violence and various socio-economic and demographic characteristics on institutional delivery among women aged 15-49. The results suggest that institutional delivery has a significant association with all types of violence. With the exceptions of women empowerment in NFHS-5 and sex of household head in NFHS-4, institutional delivery has a strong association with every socio-economic and demographic characteristics. Women who have exposure to mass media are more likely to have an institutional delivery (90.6 percent) compared to those women who don't have exposure to media (71.4 percent).

Table 3.1.1 Association of domestic violence according to socio-economic and demographic characteristics on institutional delivery among women aged 15-49; 2015-16 & 2019-21

Background	Institutional Delivery		
	NFHS-4	NFHS-5	2015-2021
Experienced Any Violence			
No	84.7	90.8	87.7
Yes	77.3	86.7	81.5
	$\chi2$=171.866 , P≤0.000	$\chi2$=60.109 , P≤0.000	$\chi2$=253.289 , P≤0.000
Experienced Physical Violence			
No	84.4	90.7	87.5
Yes	77.3	86.5	81.4
	$\chi2$= 167.202, P≤0.000	$\chi2$=52.130 , P≤0.000	$\chi2$=241.895 , P≤0.000
Experienced Sexual Violence			
No	82.8	89.6	86.1
Yes	71.5	86	77.9
	$\chi2$=90.568 , P≤0.000	$\chi2$= 16.509, P≤0.000	$\chi2$=122.740 , P≤0.000
Experienced Emotional Violence			
No	82.9	89.8	86.3
Yes	76.2	86.6	81
	$\chi2$= 69.222, P≤0.000	$\chi2$= 21.189, P≤0.000	$\chi2$=91.401 , P≤0.000

Continue….

Continue…..Table 3.1.1 Association of domestic violence according to socio-economic and demographic characteristics on institutional delivery among women aged 15-49; 2015-16 & 2019-21

Background	Institutional Delivery		
	NFHS-4	NFHS-5	2015-2021
Age of Women			
15-24	84.5	91.6	88.4
25-34	81.5	90.3	85.6
35 & above	69.2	85.2	75.4
	$\chi2$=2237.811 , P≤0.000	$\chi2$= 1034.388, P≤0.000	$\chi2$=3188.473 , P≤0.000
Wealth			
Poor	66.8	81.3	73.2
Middle	86.2	92.9	89.6
Rich	94.5	97.1	96.2
	$\chi2$=16414.685 , P≤0.000	$\chi2$=10828.829 , P≤0.000	$\chi2$=27129.176 , P≤0.000
Education of Women			
Illiterate	75.7	86	80.6
Primary	89.4	93.6	91.6
Secondary & higher	97	98.4	97.9
	$\chi2$=5594.738 , P≤0.000	$\chi2$=3825.304 , P≤0.000	$\chi2$=10073.526 , P≤0.000
Education of Husband			
Illiterate	74.6	84.9	79.3
Primary	86.7	92.1	89
Secondary & higher	95.3	97.3	96.4
	$\chi2$= 878.906, P≤0.000	$\chi2$=495.783 , P≤0.000	$\chi2$=1426.405 , P≤0.000
Working Status of Women			
Not working	83.6	90.3	86.5
Working	77	88.4	81.1
	$\chi2$=145.460 , P≤0.000	$\chi2$=78.227 , P≤0.000	$\chi2$=194.244 , P≤0.000
Residence			
Urban	90.5	94.9	92.7
Rural	77.6	88.5	82.7
	$\chi2$=4135.708 , P≤0.000	$\chi2$=1962.015 , P≤0.000	$\chi2$=5530.635 , P≤0.000
Caste			
SC/ST	77.3	87.5	82
OBC	82.4	91.2	86.2
Other	85.8	92.9	89.3
	$\chi2$=3077.453 , P≤0.000	$\chi2$=2856.882 , P≤0.000	$\chi2$=5451.037 , P≤0.000
Religion			
Hindu	83.2	91.1	86.7
Muslim	72.1	86.5	80.9
Other	83.2	89.6	86.4
	$\chi2$=3216.297 , P≤0.000	$\chi2$=4086.138 , P≤0.000	$\chi2$=6753.259 , P≤0.000
Household Size			
0-4 members	85.3	92	88.5
5-8 members	80.1	89.6	84.9
9 & above members	79.6	89.6	82.7
	$\chi2$=428.990 , P≤0.000	$\chi2$=98.6 , P≤0.000	$\chi2$=520.905 , P≤0.000

Continue….

Continue…..Table 3.1.1 Association of domestic violence according to socio-economic and demographic characteristics on institutional delivery among women aged 15-49; 2015-16 & 2019-21

Background	Institutional Delivery		
	NFHS-4	NFHS-5	2015-2021
Women Empowerment			
Low	75.9	89.2	81.2
Medium	76.1	88.9	81.6
High	81.5	88.0	83.0
	$\chi2$=48.156 , P≤0.000	$\chi2$=3.320 , P≤0.190	$\chi2$=28.953 , P≤0.000
Husband drinks alcohol			
No	83.4	90.3	86.7
Yes	78.4	86.4	82.2
	$\chi2$=126.362 , P≤0.000	$\chi2$=128.938, P≤0.000	$\chi2$=290.448 , P≤0.000
Exposure to Media			
No	62.9	80.3	71.4
Yes	87.4	93.9	90.6
	$\chi2$=11669.411 , P≤0.000	$\chi2$=6791.402 , P≤0.000	$\chi2$=17578.354 , P≤0.000
Sex of Household Head			
Male	81.7	90.7	86.0
Female	79	88.1	83.2
	$\chi2$=3.389 , P≤0.066	$\chi2$=183.055, P≤0.000	$\chi2$=39.619 , P≤0.000
Sex of Child			
Male	81.7	90.3	85.5
Female	81	90.2	85.7
	$\chi2$=23.824 , P≤0.000	$\chi2$=6.916 , P≤0.009	$\chi2$=24.823 , P≤0.000
Parity			
0-2 Children	88	94.1	91.2
Above 2	67.4	81.2	73.2
	$\chi2$=11214.478 , P≤0.000	$\chi2$=7159.302 , P≤0.000	$\chi2$=19012.695 , P≤0.000

3.3.2 Effect of socio-economic and demographic characteristics on institutional delivery among women aged 15-49; 2015-16 & 2019-21

Table 3.3.2 : The table presents the odds ratio and confidence interval for the effect of domestic violence on institutional delivery, categorized by different socio-economic and demographic characteristics of women aged 15-49. The confidence interval provides a range of values within which the true odds ratio is likely to fall, with a wider interval indicating greater uncertainty. Physical violence (Odds=0.719 in NFHS-4 and Odds=0.769 in NFHS-5) has a significant negative effect on the type of place of delivery. The results indicate that in both rounds of the survey, the odds of institutional delivery were higher for rich women compared to middle class women .For NFHS-4 the odds for institutional delivery were 5.933 in rich women which was almost four times more than odds for institutional delivery in middle class which was 1.408.

Similarly, in both rounds of the survey, the odds of institutional delivery were higher for women with secondary and higher education compared to illiterate women. However, the difference in odds between

women with secondary and higher education and illiterate women increased significantly in NFHS-5 (OR=4.031, CI=1.831-8.875) compared to NFHS-4 (OR=1.804, CI=1.039-3.132).

Table 3.2.2. Effect of socio-economic and demographic characteristics on institutional delivery among women aged 15-49; 2015-16 & 2019-21

Background	NFHS-4		NFHS-5		2015-2021	
	Odds Ratio	CI (95%)	Odds Ratio	CI (95%)	Odds Ratio	CI (95%)
Experienced Any Violence						
No						
Yes	1.002	(0.784, 1.281)	1.131	(0.825,1.551)	1.472	(0.816,2.653)
Experienced Physical Violence						
No						
Yes	0.719***	(0.671,0.771)	0.769***	(0.700,0.846)	0.666	(0.378,1.173)
Experienced Sexual Violence						
No						
Yes	0.747***	(0.666,0.839)	0.875	(0.733,1.045)	0.689*	(0.489,0.970)
Experienced Emotional Violence						
No						
Yes	0.909	(0.825,1.001)	0.915	(0.801,1.045)	1.24	(0.920,1.672)
Age of Women						
15-24						
25-34	1.42*	(1.069, 1.890)	0.878	(0.591,1.304)	1.265*	(1.009,1.587)
35 & above	1.75*	(1.119, 2.751)	0.851	(0.499,1.453)	1.414*	(1.012,1.976)
Wealth						
Poor						
Middle	1.408*	(1.075, 1.843)	2.325***	(1.662,3.253)	1.637***	(1.336,2.006)
Rich	5.933***	(3.590, 9.806)	4.041***	(2.278,7.169)	4.893***	(3.369,7.107)
Education of Women						
Illiterate						
Primary	1.34*	(1.026, 1.751)	1.351	(0.963,1.895)	1.465***	(1.192,1.801)
Secondary & higher	1.804*	(1.039, 3.132)	4.031**	(1.831,8.875)	2.596***	(1.666,4.046)
Education of Husband						
Illiterate						
Primary	1.188	(0.895, 1.578)	1.033	(0.721,1.48)	1.153	(0.927,1.433)
Secondary & higher	0.938	(0.566, 1.556)	1.008	(0.539,1.886)	1.048	(0.713,1.538)
Working Status of Women						
Not working						
Working	0.760	(0.578, 1.000)	1.268	(0.904,1.779)	0.975	(0.790,1.204)
Residence						
Urban						
Rural	0.879	(0.634, 1.220)	0.679	(0.413,1.116)	0.851	(0.650,1.114)
Caste						
SC/ST						
OBC	1.432*	(1.069,1.919)	1.411	(0.962,2.069)	1.358**	(1.080,1.706)
Other	1.065	(0.734,1.545)	0.809	(0.48,1.363)	0.892	(0.662,1.203)
Religion						
Hindu						

Muslim	0.803	(0.489,1.32)	0.492*	(0.256,0.944)	0.663*	(0.448,0.980)

Continue….Table 3.2.2 Effect of socio-economic and demographic characteristics on institutional delivery among women aged 15-49; 2015-16 & 2019-21

Background	NFHS-4		NFHS-5		2015-2021	
	Odds Ratio	CI (95%)	Odds Ratio	CI (95%)	Odds Ratio	CI (95%)
Other	0.44***	(0.329,0.588)	0.281***	(0.201,0.393)	0.353***	(0.284,0.432)

Continue….

Household Size						
0-4 members						
5-8 members	1.238	(0.944,1.624)	1.194	(0.857,1.663)	1.22	(0.993,1.499)
9 & above members	0.732	(0.464,1.156)	0.623	(0.349,1.113)	0.682*	(0.479,0.970)
Women Empowerment						
Low						
Medium	1.103	(0.83,1.466)	0.996	(0.698,1.42)	1.084	(0.872,1.349)
High	1.318	(0.989,1.756)	0.938	(0.658,1.336)	1.156	(0.928,1.441)
Husband drinks alcohol						
No						
Yes	0.917	(0.717,1.174)	0.937	(0.691,1.271)	0.917	(0.759,1.107)
Exposure to Media						
No						
Yes	1.459*	(1.069,1.992)	1.72**	(1.248,2.371)	1.423**	(1.145,1.768)
Sex of Household Head						
Male						
Female	0.964	(0.671,1.385	1.094	(0.73,1.64)	1.082	(0.830,1.410)
Sex of Child						
Male						
Female	1.163	(0.925,1.463)	1.077	(0.813,1.429)	1.133	(0.951,1.350)
Parity						
0-2 Children						
Above 2	0.405***	(0.306,0.536)	0.558**	(0.395,0.788)	0.452***	(0.365,0.560)

For number of Antenatal care visits

3.3.3 Association of domestic violence according to socio-economic and demographic characteristics on Antenatal Care among women aged 15-49; 2015-16 & 2019-21

Table 3.3.3 : The table shows the association of domestic violence with socio-economic and demographic characteristics among women aged 15-49 who received antenatal care in India during the year 2015-2016 and 2019-2021. Antenatal care has statistically significant association with all the factors in NFHS-4 and NFHS-5 except for women empowerment, working status of women and sex of child in NFHS-5. The chances of women receiving antenatal care are more than twice for women who have mass media exposure (52.1 percent) compared to women who don't have mass media exposure (22.8 percent).

Table 3.3.3 Association of socio-economic and demographic characteristics on Antenatal Care among women aged 15-49; 2015-16 & 2019-21

Background	Antenatal Care Visits		
	NFHS-4	NFHS-5	2015-2021
Experienced Any Violence			
No	47.7	46.4	47.9
Yes	38.4	38.7	37.9
	$\chi2$=210.085 , P≤0.000	$\chi2$=119.590 , P≤0.000	$\chi2$=333.744 , P≤0.000
Experienced Physical Violence			
No	47.5	46.2	47.7
Yes	38.0	38.4	37.3
	$\chi2$=221.624 , P≤0.000	$\chi2$=102.2 , P≤0.000	$\chi2$=325.046 , P≤0.000
Experienced Sexual Violence			
No	45.2	44.5	45.2
Yes	32.9	33.3	33.6
	$\chi2$=112.132 , P≤0.000	$\chi2$=65.573 , P≤0.000	$\chi2$=182.564 , P≤0.000
Experienced Emotional Violence			
No	45.2	44.7	45.4
Yes	38.6	38.3	38.1
	$\chi2$=63.891 , P≤0.000	$\chi2$=76..044 , P≤0.000	$\chi2$=139.754 , P≤0.000
Age of Women			
15-24	42.1	42.2	45.6
25-34	41.9	44.1	45.1
35 & above	30.0	40.5	36.7
	$\chi2$=466.377 , P≤0.000	$\chi2$=169.488 , P≤0.000	$\chi2$=598.336 , P≤0.000
Wealth			
Poor	21.8	29.2	26.4
Middle	45.3	45.0	47.4
Rich	59.9	55.9	62.8
	$\chi2$=18268.399 , P≤0.000	$\chi2$=8377.979 , P≤0.000	$\chi2$=25830.980 , P≤0.000
Education of Women			
Illiterate	33.9	35.7	36.1
Primary	49.7	47.1	51.3
Secondary & higher	63.3	57.6	64.3
	$\chi2$=4598.676 , P≤0.000	$\chi2$=2275.446 , P≤0.000	$\chi2$=6787.670 , P≤0.000
Education of Husband			
Illiterate	36.3	39.6	38.6
Primary	47.6	46.3	47.9
Secondary & higher	60.7	53.5	58.5
	$\chi2$=607.224 , P≤0.000	$\chi2$=193.750 , P≤0.000	$\chi2$=766.254 , P≤0.000
Working Status of Women			
Not working	44.3	43.3	44.5
Working	43.1	45.7	44.2
	$\chi2$=4.132 , P≤0.042	$\chi2$=1.835 , P≤0.176	$\chi2$=0.103 , P≤0.748

Residence			
Urban	56.4	55.0	58.5
Rural	34.3	38.5	38.7
	$\chi2$=6051.772 , P≤0.000	$\chi2$=3042.915 , P≤0.000	$\chi2$=8543.714 , P≤0.000

Continue…Table 3.3.3 Association of socio-economic and demographic characteristics on Antenatal Care among women aged 15-49; 2015-16 & 2019-21

Background	Antenatal Care Visits		
	NFHS-4	NFHS-5	2015-2021
Caste			
SC/ST	37.1	40.6	40.2
OBC	38.5	42.0	42.3
Other	49.7	48.7	53.4
	$\chi2$=2041.090 , P≤0.000	$\chi2$=1267.636 , P≤0.000	$\chi2$=3107.226 , P≤0.000
Religion			
Hindu	40.6	43.4	44.1
Muslim	38.6	40.5	43.3
Other	53.3	49.3	54.9
	$\chi2$=62.938 , P≤0.000	$\chi2$=605.365 , P≤0.000	$\chi2$=369.660 , P≤0.000
Household Size			
0-4 members	46.6	47.3	49.7
5-8 members	39.8	42.5	43.6
9 & above members	35.4	38.4	37.5
	$\chi2$=443.725 , P≤0.000	$\chi2$=218.229 , P≤0.000	$\chi2$=698.438 , P≤0.000
Women Empowerment			
Low	40.2	45.6	43.8
Medium	42.5	45.9	43
High	53.7	50.1	51.2
	$\chi2$=97.722 , P≤0.000	$\chi2$=0.958 , P≤0.619	$\chi2$=59.803 , P≤0.000
Husband drinks alcohol			
No	45.8	43.8	45.5
Yes	40.4	44.2	41.2
	$\chi2$=86.176 , P≤0.000	$\chi2$=10.109 , P≤0.001	$\chi2$=87.952 , P≤0.000
Exposure to Media			
No	16.1	26.6	22.8
Yes	49.0	49.2	52.1
	$\chi2$=12479.646 , P≤0.000	$\chi2$=5963.889 , P≤0.000	$\chi2$=17512.316 , P≤0.000
Sex of Household Head			
Male	41.5	43.8	45.3
Female	36.2	39.9	39.1
	$\chi2$=14.646 , P≤0.000	$\chi2$=66.395 , P≤0.000	$\chi2$=47.114 , P≤0.000
Sex of Child			
Male	40.6	43.1	43.2
Female	41.3	43.2	45.8
	$\chi2$=6.032, P≤0.014	$\chi2$=0.080 , P≤0.777	$\chi2$=4.632 , P≤0.031
Parity			
0-2 Children	48.3	48.2	51.7
Above 2	25.1	31.1	28.3
	$\chi2$=7053.128 , P≤0.000	$\chi2$=3345.252 , P≤0.000	$\chi2$=10378.983 , P≤0.000

3.3.4 Effect of various socio-economic and demographic characteristics on antenatal care among women aged 15-49; 2015-16 & 2019-21.

Table 3.3.4 : The table presents odds ratios and their 95 percent confidence intervals for the effect of various socio-economic and demographic characteristics on antenatal care among women aged 15-49, based on their socio-economic and demographic characteristics. Physical (Odds=0.701 in NFHS-4 and Odds=0.803 in NFHS-5) and sexual violence (Odds=0.691 in NFHS-4 and Odds=0.737 in NFHS-5) have a significantly negative effect on antenatal care visits for both NFHS-4 and NFHS-5 The results suggest that exposure to media increased the odds of receiving antenatal care among women in both NFHS-4 and NFHS-5 with odds of 2.022 and 1.622 as compared to no exposure to media. Women who had more than two children had lower odds of receiving antenatal care. This gap was wider in NFHS-4 with odds of 0.49 of receiving antenatal care for women who had more than two children as compared to women who had less than two children.

Effect of various socio-economic and demographic characteristics on antenatal care among women aged 15-49; 2015-16 & 2019-21

Background	NFHS-4		NFHS-5		2015-2021	
	Odds Ratio	CI (95%)	Odds Ratio	CI (95%)	Odds Ratio	CI (95%)
Experienced Any Violence						
No						
Yes	1.052	(0.868, 1.274)	0.827*	(0.693, 0.988)	0.938	(0.645,1.364)
Experienced Physical Violence						
No						
Yes	0.701***	(0.659,0.746)	0.803***	(0.751,0.86)	1.035	(0.725,1.479)
Experienced Sexual Violence						
No						
Yes	0.691***	(0.615,0.776)	0.737***	(0.64,0.849)	0.679**	(0.523,0.881)
Experienced Emotional Violence						
No						
Yes	0.969	(0.886,1.061)	0.824***	(0.746,0.909)	1.016	(0.824,1.253)
Age of Women						
15-24						
25-34	1.231*	(0.987,1.534)	1.136	(0.92,1.403)	1.173*	(1.008,1.364)
35 & above	1.835*	(1.307,2.576)	1.595**	(1.174,2.167)	1.662***	(1.326,2.082)
Wealth						
Poor						
Middle	1.872*	(1.492,2.348)	1.64***	(1.336,2.012)	1.737***	(1.493,2.020)
Rich		(1.642,2.984)	1.675***	(1.284,2.183)	1.919***	(1.576,2.337)
Education of Women						
Illiterate						
Primary	1.435*	(1.134,1.816)	1.342*	(1.056,1.706)	1.408***	(1.192,1.663)
Secondary & higher	1.51*	(1.058,2.155)	1.779**	(1.274,2.484)	1.698***	(1.334,2.161)
Education of Husband						
Illiterate						
Primary	0.871	(0.678,1.118)	0.883	(0.69,1.13)	0.873	(0.733,1.040)
Secondary & higher	1.011	(0.706,1.448)	0.854	(0.614,1.188)	0.902	(0.709,1.146)
Working Status of Women						

Not working

Effect of various socio-economic and demographic characteristics on antenatal care among women aged 15-49; 2015-16 & 2019-21

Background	NFHS-4		NFHS-5		2015-2021	
	Odds Ratio	CI (95%)	Odds Ratio	CI (95%)	Odds Ratio	CI (95%)
Working	1.148	(0.931,1.416)	1.094	(0.89,1.344)	1.128	(0.975,1.306)

Continue….

Residence						
Urban						
Rural	0.949	(0.767,1.174)	0.867	(0.702,1.072)	0.895	(0.771,1.039)
Caste						
SC/ST						
OBC	1.16*	(0.941,1.431)	1.001	(0.827,1.211)	1.058	(0.919,1.218)
Other	1.269	(0.982,1.64)	1.092	(0.842,1.417)	1.166	(0.973,1.397)
Religion						
Hindu						
Muslim	1.204	(0.842,1.722)	0.929	(0.653,1.321)	1.048	(0.816,1.345)
Other	0.738*	(0.586,0.929)	0.523***	(0.418,0.655)	0.625***	(0.533,0.733)
Household Size						
0-4 members						
5-8 members	1.028	(0.846,1.248)	0.926	(0.776,1.106)	0.969	(0.850,1.104)
9 & above members	0.794	(0.554,1.139)	0.75	(0.518,1.086)	0.787	(0.609,1.016)
Women Empowerment						
Low						
Medium	1.079	(0.863,1.35)	1.056	(0.866,1.289)	1.05	(0.905,1.217)
High	1.352	(1.097,1.667)	1.007	(0.827,1.227)	1.160*	(1.006,1.339)
Husband drinks alcohol						
No						
Yes	1.049	(0.866,1.27)	1.107	(0.923,1.327)	1.107	(0.971,1.262)
Exposure to Media						
No						
Yes	2.022*	(1.48,2.763)	1.435**	(1.13,1.821)	1.622***	(1.344,1.957)
Sex of Household Head						
Male						
Female	0.8	(0.61,1.048)	0.971	(0.773,1.22)	0.886	(0.745,1.053)
Sex of Child						
Male						
Female	1.123	(0.946,1.334)	1.052	(0.897,1.233)	1.081	(0.962,1.214)
Parity						
0-2 Children						
Above 2	0.49***	(0.393,0.611)	0.754**	(0.612,0.929)	0.626***	(0.539,0.728)

For Pregnancy outcome

3.3.5 Association of socio-economic and demographic characteristics on Pregnancy Outcome among women aged 15-49; 2015-16 & 2019-21

Table 3.3.5 : The table presents the association between domestic violence and pregnancy outcome among women aged 15-49 in India, based on data from two national surveys conducted in 2015-16 and 2019-21. The results indicate that the prevalence of domestic violence during pregnancy is relatively high, with around 6 percent of women experiencing any violence and 6 percent experiencing physical violence during pregnancy in both NFHS-4 and NFHS-5. The prevalence of sexual violence during pregnancy is slightly higher (NFHS-4, 8.1 percent) (NFHS-5, 7.4 percent) compared to other types of violence.

Table 3.3.5 Association of socio-economic and demographic characteristics on Pregnancy Outcome among women aged 15-49; 2015-16 & 2019-21

Background	Pregnancy Outcome		
	NFHS-4	NFHS-5	2015-2021
Experienced Any Violence			
No	5.4	5.6	5.2
Yes	6.6	6.0	5.6
	$\chi2$=60.265 , P≤0.000	$\chi2$=19.957 , P≤0.000	$\chi2$=78.649 , P≤0.000
Experienced Physical Violence			
No	4.4	4.9	4.1
Yes	6.7	6.1	5.6
	$\chi2$=229.733 , P≤0.000	$\chi2$=79.267 , P≤0.000	$\chi2$=295.871 , P≤0.000
Experienced Sexual Violence			
No	5.9	5.7	5.4
Yes	8.1	7.4	7.5
	$\chi2$=56.603 , P≤0.000	$\chi2$=19.36 , P≤0.000	$\chi2$=76.004 , P≤0.000
Experienced Emotional Violence			
No	5.8	5.8	5.4
Yes	7.7	5.8	6.1
	$\chi2$=54.885 , P≤0.000	$\chi2$=1.729 , P≤0.189	$\chi2$=40.178 , P≤0.000
Age of Women			
15-24	4.3	4.0	5.0
25-34	7.8	8.2	7.8
35 & above	1.5	1.5	1.6
	$\chi2$=10252.622 , P≤0.000	$\chi2$=11335.946 , P≤0.000	$\chi2$= 21569.625, P≤0.000
Wealth			
Poor	4.6	4.3	4.8
Middle	4.4	4.4	4.7
Rich	4.2	4.3	4.2
	$\chi2$=10.458 , P≤0.005	$\chi2$=9.112 , P≤0.011	$\chi2$=7.227 , P≤0.027
Education of Women			
Illiterate	4.9	4.5	4.6
Primary	4.6	4.6	5
Secondary & higher	4.5	5.0	4.5
	$\chi2$=8.198 , P≤0.017	$\chi2$=40.735 , P≤0.000	$\chi2$=16.924 , P≤0.000
Education of Husband			
Illiterate	5.1	4.9	4.8

Primary	6.4	6.2	6.1
Secondary & higher	6.5	7.0	6.3
	$\chi2=50.159$, P≤0.000	$\chi2=67.4$, P≤0.000	$\chi2=109.813$, P≤0.000
Working Status of Women			
Not working	4.8	4.7	4.9
Working	3.5	3.5	3.4
	$\chi2=30.901$, P≤0.000	$\chi2=60.981$, P≤0.000	$\chi2=90.591$, P≤0.000

Continue….. Table 3.3.5 Association of socio-economic and demographic characteristics on Pregnancy Outcome

Background	Pregnancy Outcome		
	NFHS-5	2015-2021	2015-2021
Residence			
Urban	4.4	4.4	4.4
Rural	4.4	4.3	4.6
	$\chi2=8.672$, P≤0.003	$\chi2=3.838$, P≤0.05	$\chi2=16.988$, P≤0.000
Caste			
SC/ST	4.2	4.3	4.3
OBC	4.4	4.4	4.5
Other	4.6	4.6	4.9
	$\chi2=167.682$, P≤0.000	$\chi2=97.762$, P≤0.000	$\chi2=270.687$, P≤0.000
Religion			
Hindu	4.3	4.4	4.4
Muslim	5.4	4.5	5.5
Other	3.6	3.5	3.3
	$\chi2=413.858$, P≤0.000	$\chi2=147.871$, P≤0.000	$\chi2=441.101$, P≤0.000
Household Size			
0-4 members	4.2	4.1	4.2
5-8 members	4.2	4.3	4.4
9 & above members	5.8	5.8	6.5
	$\chi2=384.936$, P≤0.000	$\chi2=367.867$, P≤0.000	$\chi2=752.652$, P≤0.000
Women Empowerment			
Low	5.9	4.3	4.7
Medium	4.4	4.7	4.1
High	4.2	4.5	4.1
	$\chi2=2.557$, P≤0.279	$\chi2=2.285$, P≤0.319	$\chi2=0.021$, P≤0.990
Husband drinks alcohol			
No	5.9	5.6	5.4
Yes	6.4	6.4	5.9
	$\chi2=15.975$, P≤0.000	$\chi2=27.092$, P≤0.000	$\chi2=44.462$, P≤0.000
Exposure to Media			
No	4.6	4.3	4.8
Yes	4.3	4.4	4.5
	$\chi2=2.765$, P≤0.096	$\chi2=21.718$, P≤0.000	$\chi2=25.045$, P≤0.000
Sex of Household Head			
Male	4.5	4.4	4.6
Female	3.9	4.0	4.1
	$\chi2=56.6$, P≤0.000	$\chi2=31.396$, P≤0.000	$\chi2=93.052$, P≤0.000
Sex of Child			

Male	4.9	4.8	4.6
Female	5.8	5.9	5.7
	$\chi2$=210.184 , P≤0.000	$\chi2$=225.579 , P≤0.000	$\chi2$=436.088 , P≤0.000
Parity			
0-2 Children	4.8	4.8	5.1
Above 2	3.4	3.3	3.3
	$\chi2$=661.368 , P≤0.000	$\chi2$=703.039 , P≤0.000	$\chi2$=1330.153 , P≤0.000

3.3.6 Effect of socio-economic and demographic characteristics on pregnancy outcome among women aged 15-49; 2015-16 & 2019-21

Table 3.3.6 : The table presents the odds ratios and confidence intervals for the effect of domestic violence on pregnancy outcome among women aged 15-49, based on socio-economic and demographic characteristics.

Physical (Odds=1.299 in NFHS-4 and Odds=1.237 in NFHS-5) and sexual violence (Odds=1.243 in NFHS-4 and Odds=1.253 in NFHS-5) have significant effect on pregnancy outcome for both NFHS-4 and NFHS-5. In NFHS-5 working women had odds of 0.788 of experiencing negative pregnancy outcome which was lower as compared to odds of experiencing negative pregnancy outcome for non-working women. Women aged 35 and above had very less odds(0.224 in NFHS-4 and 0.197 NFHS-5) of experiencing negative pregnancy outcome as compared to younger girls.

Table 3.3.6 Effect of socio-economic and demographic characteristics on pregnancy outcome among women aged 15-49; 2015-16 & 2019-21

Background	NFHS-4		NFHS-5		2015-2021	
	Odds Ratio	CI (95%)	Odds Ratio	CI (95%)	Odds Ratio	CI (95%)
Experienced Any Violence						
No						
Yes	1.420***	(1.297 , 1.555)	1.352	(1.232 , 1.485)	1.115	(0.920,1.351)
Experienced Physical Violence						
No						
Yes	1.299***	(1.208 , 1.397)	1.237***	(1.144 , 1.339)	1.217*	(1.013,1.462)
Experienced Sexual Violence						
No						
Yes	1.243***	(1.104 , 1.399)	1.253**	(1.085 , 1.447)	1.201**	(1.055,1.368)
Experienced Emotional Violence						
No						
Yes	1.119*	(1.015 , 1.233)	0.892*	(0.797 , 0.999)	1.035	(0.928,1.154)
Age of Women						
15-24						
25-34	0.847**	(0.761 , 0.942)	0.767***	(0.686 , 858)	0.806***	(0.746,0.871)
35 & above	0.224***	(0.192 , 0.261)	0.197***	(0.169 , 0.230)	0.210***	(0.188,0.234)
Wealth						
Poor						
Middle	1.018	(0.901 , 1.150)	0.963	(855 , 1.085)	0.996	(0.915,1.084)

Rich	0.802**	(0.694 , 0.927)	0.899	(0.782 , 1.035)	0.853**	(0.771,0.943)

Continue… Table 3.3.6 Effect of socio-economic and demographic characteristics on pregnancy outcome among women aged 15-49; 2015-16 & 2019-21

Background	NFHS-4		NFHS-5		2015-2021	
	Odds Ratio	CI (95%)	Odds Ratio	CI (95%)	Odds Ratio	CI (95%)
Education of Women						
Illiterate						
Primary	1.045	(0.929 , 1.175)	1.131	(0.992 , 1.289)	1.08	(0.990,1.178)
Secondary & higher	1.251*	(1.051 , 1.489)	1.495***	(1.254 , 1.784)	1.364***	(1.206,1.543)

Continue….

Education of Husband						
Illiterate						
Primary	1.135	(0.993 , 1.299)	1.132	(0.981 , 1.306)	1.133*	(1.028,1.250)
Secondary & higher	1.238*	(1.040 , 1.474)	1.144	(0.956 , 1.369)	1.188**	(1.049,1.346)
Working Status of Women						
Not working						
Working	0.901	(0.808 , 1.004)	0.788***	(0.708 , 0.876)	0.834***	(0.773,0.900)
Residence						
Urban						
Rural	0.864*	(0.781 , 0.954)	0.908	(0.816 , 1.010)	0.885***	(0.823,0.951)
Caste						
SC/ST						
OBC	0.927	(0.834 , 1.030)	0.979	(0.879 , 1.089)	0.952	(0.883,1.026)
Other	1.068	(0.949 , 1.201)	1.164*	(1.028 , 1.316)	1.111*	(1.021,1.210)
Religion						
Hindu						
Muslim	1.297***	(1.123 , 1.498)	1.035	(0.881 , 1.215)	1.167**	(1.049,1.299)
Other	0.841*	(0.732 , 0.967)	0.823**	(0.712 , 0.952)	0.838***	(0.758,0.927)
Household Size						
0-4 members						
5-8 members	1.028	(0.936 , 1.128)	1.044	(0.950 , 1.148)	1.036	(0.970,1.107)
9 & above members	1.256**	(1.068 , 1.476)	1.043	(0.863 , 1.260)	1.158*	(1.025,1.310)
Husband drinks alcohol						
No						
Yes	1.282***	(1.167 , 1.407)	1.333***	(1.208 , 1.470)	1.292***	(1.207,1.383)
Exposure to Media						
No						
Yes	0.97	(0.834 , 1.127)	0.9611	(0.846 , 1.091)	0.972	(0.883,1.071)
Sex of Household Head						
Male						
Female	0.995	(0.879 , 1.126)	1.019	(0.902 , 1.150)	1.005	(0.921,1.096)
Sex of Child						

Male						
Female	1.197***	(1.101 , 1.302)	1.181***	(1.084 , 1.288)	1.190***	(1.120,1.264)
Parity						
0-2 Children						
Above 2	0.759***	(0.677 , 0.85)	0.792***	(0.704 , 0.891)	0.775***	(0.714,0.841)

For Birth weight of child

3.3.7 Association of socio-economic and demographic characteristics on Birth weight of child among women aged 15-49; 2015-16 & 2019-21

Table 3.3.7 : The table shows the association between domestic violence and birth weight of a child among women aged 15-49. The result suggests that Women living in rural areas had a higher proportion of low birth weight babies than those living in urban areas. The difference was statistically significant for both surveys (NFHS-4: $\chi2$=11.762, P≤0.001; NFHS-5: $\chi2$=22.03, P≤0.000). Muslim women had a slightly lower proportion of low birth weight babies. The difference was statistically significant for both surveys (NFHS-4: $\chi2$=483.309, P≤0.000; NFHS-5: $\chi2$=386.37, P≤0.000). In NFHS-5, based on the women empowerment index, it has been found that women who have low and medium empowerment (around 18 percent) are more likely to have low birth weight babies compared to highly empowered women (13.9%).

Table 3.3.7 Association of socio-economic and demographic characteristics on Birth weight of child among women aged 15-49; 2015-16 & 2019-21

Background	Birth weight		
	NFHS-4	NFHS-5	2015-2021
Experienced Any Violence			
No	16.1	17.3	15.9
Yes	18.6	18.9	18.7
	$\chi2$=6.668 , P≤0.010	$\chi2$=24.09 , P≤0.000	$\chi2$=27.877 , P≤0.000
Experienced Physical Violence			
No	16.2	17.5	16.1
Yes	18.6	18.6	18.5
	$\chi2$=6.006 , P≤0.014	$\chi2$=18.915 , P≤0.000	$\chi2$=22.946 , P≤0.000
Experienced Sexual Violence			
No	16.9	17.7	16.7
Yes	18.1	19.8	18.4
	$\chi2$=1.973 , P≤0.160	$\chi2$=4.364 , P≤0.037	$\chi2$=5.988 , P≤0.014
Experienced Emotional Violence			
No	16.5	17.4	16.5
Yes	20.4	20.4	19.6
	$\chi2$=6.402 , P≤0.011	$\chi2$=15.898 , P≤0.000	$\chi2$=21.227 , P≤0.000
Age of Women			
15-24	19.0	19.7	18.3
25-34	16.5	16.8	15.9

35 & above	17.3	16.8	16.9

Continue… Table 3.3.7 Association of socio-economic and demographic characteristics on Birth weight of child among women aged 15-49; 2015-16 & 2019-21

Background	Birth weight		
	NFHS-4	NFHS-5	2015-2021
	$\chi2$=189.973 , P≤0.000	$\chi2$=234.049 , P≤0.000	$\chi2$=423.328 , P≤0.000
Wealth			
Poor	19.3	20.2	18.5
Middle	17.8	17.7	17.2
Rich	15.7	15.5	14.9
	$\chi2$=215.648 , P≤0.000	$\chi2$=286.841 , P≤0.000	$\chi2$=498.990 , P≤0.000
Education of Women			
Illiterate	19.7	20.6	19.7
Primary	17.3	17.8	16.7
Secondary & higher	13.3	13.8	12.2
	$\chi2$=239.291 , P≤0.000	$\chi2$=260.021 , P≤0.000	$\chi2$=496.874 , P≤0.000
Education of Husband			
Illiterate	16.7	20.3	17.7
Primary	17.0	17.3	16.4
Secondary & higher	14.3	16.0	14.3
	$\chi2$=11.728 , P≤0.003	$\chi2$=18.671 , P≤0.000	$\chi2$=29.462 , P≤0.000
Working Status of Women			
Not working	16.8	17.9	16.8
Working	16.9	17.9	17.2
	$\chi2$=0.035 , P≤0.852	$\chi2$=1005 , P≤0.316	$\chi2$=0.679 , P≤0.410
Residence			
Urban	16.7	16.8	16.3
Rural	17.9	18.1	17.1
	$\chi2$=11.762 , P≤0.001	$\chi2$=22.03 , P≤0.000	$\chi2$=32.207 , P≤0.000
Caste			
SC/ST	18.8	19.0	18.5
OBC	17.1	17.3	17.2
Other	16.5	17.0	14.5
	$\chi2$=10.512 , P≤0.005	$\chi2$=1.117 , P≤0.572	$\chi2$=8.289 , P≤0.016
Religion			
Hindu	17.8	18.0	17.3
Muslim	16.6	16.6	14.9
Other	15.8	17.0	15.7
	$\chi2$=483.309 , P≤0.000	$\chi2$=386.37 , P≤0.000	$\chi2$=856.711 , P≤0.000
Household Size			
0-4 members	17.5	18.2	17.4
5-8 members	17.5	17.5	16.9
9 & above members	17.6	17.6	15.6

	$\chi2$=9.001 , P≤0.011	$\chi2$=3.478 , P≤0.176	$\chi2$=10.703 , P≤0.005
Women Empowerment			
Low	16.2	18.9	17.2
Medium	16.9	18.8	15.5
High	16.0	13.9	15.8
	$\chi2$=1.197 , P≤0.550	$\chi2$=9.408 , P≤0.009	$\chi2$=8.190 , P≤0.017
Husband drinks alcohol			
No	16.6	17.3	16.4
Yes	18.1	19.6	18.2
	$\chi2$=0.023 , P≤0.880	$\chi2$=0.97 , P≤0.325	$\chi2$=0.629 , P≤0.428

Continue….

Continue… Table 3.3.7 Association of socio-economic and demographic characteristics on Birth weight of child among women aged 15-49; 2015-16 & 2019-21

Background	Birth weight		
	NFHS-4	NFHS-5	2015-2021
Exposure to Media			
No	19.5	20.1	18.6
Yes	17.0	17.0	16.3
	$\chi2$=167.427 , P≤0.000	$\chi2$=248.691 , P≤0.000	$\chi2$=512.030 , P≤0.000
Sex of Household Head			
Male	17.4	17.7	16.7
Female	18.3	17.9	17.4
	$\chi2$=0.029 , P≤0.865	$\chi2$=0.515 , P≤0.773	$\chi2$=0.420 , P≤0.811
Sex of Child			
Male	16.4	16.4	15.6
Female	18.9	19.3	18.2
	$\chi2$=155.584 , P≤0.000	$\chi2$=178.173 , P≤0.000	$\chi2$=333.541 , P≤0.000
Parity			
0-2 Children	17.4	17.7	16.6
Above 2	17.7	17.8	17.5
	$\chi2$=0.045 , P≤0.831	$\chi2$=1.531 , P≤0.216	$\chi2$=0.558 , P≤0.455

3.3.8 Effect of socio-economic and demographic characteristics on birth weight among women aged 15-49; 2015-16 & 2019-21

Table 3.3.8 : The table presents odds ratios and confidence intervals for the impact of domestic violence on birth weight among women aged 15-49. The odds of having a low birth baby were lower for women belonging to other religions in both NFHS-4 and NFHS-5 (0.654 in NFHS-4 and 0.625 in NFHS-5) as compared to women who belonged to Hindu or Muslim religion. Women who did secondary and higher education had an odds of 0.525 of having a low birth baby which was lower than the odds for women who were illiterate or did only primary education.

Table 3.3.8 Effect of socio-economic and demographic characteristics on birth weight among women aged 15-49; 2015-16 & 2019-21

Background	NFHS-4	NFHS-5	2015-2021

	Odds Ratio	CI (95percent)	Odds Ratio	CI (95percent)	Odds Ratio	CI (95percent)

Continue… Table 3.3.8 Effect of socio-economic and demographic characteristics on birth weight among women

Background	NFHS-4		NFHS-5		2015-2021	
	Odds Ratio	CI (95percent)	Odds Ratio	CI (95percent)	Odds Ratio	CI (95percent)
Experienced Any Violence						
No						
Yes	1.11	(0.855,1.448)	1.371*	(1.073 , 1.752)	1.135	(0.674,1.913)
Experienced Physical Violence						
No						
Yes	1.07	(0.977 , 1.171)	1.149**	(1.048 , 1.260)	1.019	(0.623,0.668)
Experienced Sexual Violence						
No						
Yes	1.029	(0.873 , 1.213)	1.017	(0.850 , 1.217)	1.153	(0.813,1.634)

Continue….

Experienced Emotional Violence						
No						
Yes	1.107	(0.973 , 1.261)	1.158*	(1.018 , 1.317)	1.099	(0.824,1.466)
Age of Women						
15-24						
25-34	1.005	(0.739 , 1.366)	0.911	(0.681 , 1.219)	0.953	(0.772,1.176)
35 & above	1.326	(0.847 , 2.074)	1.057	(0.693 , 1.612)	1.14	(0.840,1.546)
Wealth						
Poor						
Middle	1.262	(0.903 , 1.762)	0.897	(0.665 , 1.210)	1.053	(0.844,1.314)
Rich	1.228	(0.798 , 1.888)	0.878	(0.593 , 1.300)	1.031	(0.773,1.374)
Education of Women						
Illiterate						
Primary	0.818	(0.587 , 1.140)	1.018	(0.727 , 1.424)	0.912	(0.722,1.153)
Secondary & higher	0.525*	(0.309 , 0.891)	0.822	(0.504 , 1.341)	0.670*	(0.469,0.955)
Education of Husband						
Illiterate						
Primary	0.857	(0.603 , 1.216)	0.91	(0.645 , 1.283)	0.875	(0.686,1.117)
Secondary & higher	0.779	(0.461 , 1.316)	1.085	(0.677 , 1.741)	0.909	(0.642,1.287)
Residence						
Urban						
Rural	1.127	(0.824 , 1.54)	0.961	(0.702 , 1.315)	1.046	(0.839,1.303)
Caste						
SC/ST						
OBC	1.362*	(1.010 , 1.837)	0.984	(0.750 , 1.292)	1.155	(0.946,1.411)
Other	1.201	(0.825 , 1.748)	0.871	(0.588 , 1.291)	1.047	(0.801,1.368)
Religion						
Hindu						
Muslim	0.892	(0.524 , 1.521)	1.418	(0.886 , 2.271)	1.132	(0.798,1.607)
Other	0.654*	(0.448 , 0.956)	0.625*	(0.432 , 0.904)	0.641***	(0.493,0.835)
Household Size						
0-4 members						

5-8 members	0.916	(0.706 , 1.189)	1.003	(0.786 , 1.280)	0.953	(0.798,1.138)
9 & above members	0.839	(0.481 , 1.464)	0.945	(0.547 , 1.631)	0.894	(0.606,1.318)
Women Empowerment						
Low						
Medium	0.806	(0.576 , 1.126)	1.049	(0.788 , 1.396)	0.938	(0.755,1.165)
High	1.067	(0.794 , 1.432)	0.933	(0.698 , 1.248)	1.016	(0.827,1.248)
Exposure to Media						
No						
Yes	0.723	(0.474 , 1.103)	0.734	(0.529 , 1.018)	0.747*	(0.578,0.964)
Sex of Child						
Male						
Female	1.412**	(1.102 , 1.809)	1.037	(0.822 , 1.309)	1.197*	(1.011,1.418)

3.3.9 Result of Fairlie Decomposition for maternal health service utilization and pregnancy outcome

For Type of place of delivery

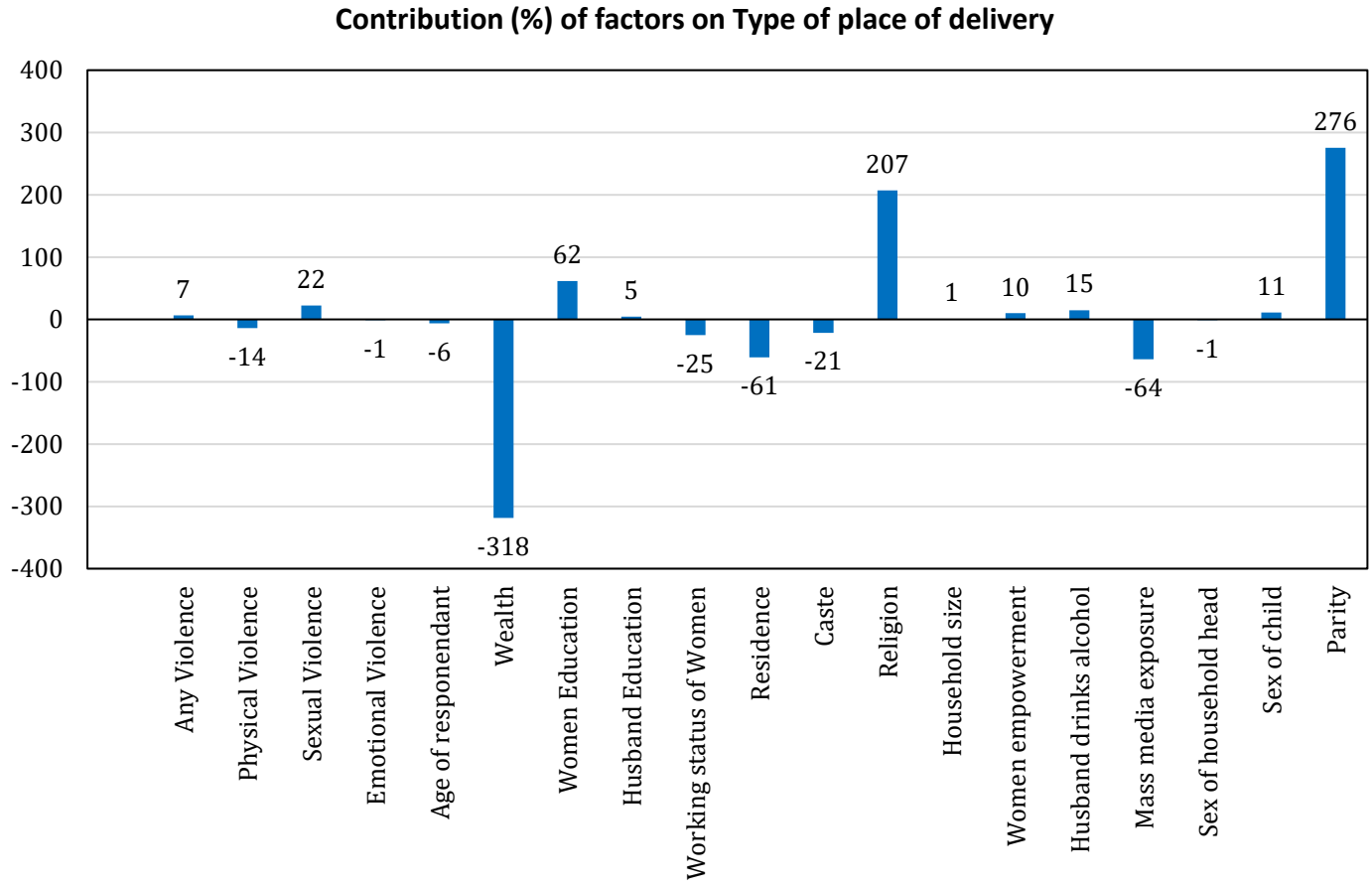
Table 3.3.9 : Factors Affecting Institutional Delivery and Their Contributions in India between 2015-2021

The table presents the coefficients, p-values, 95 percent confidence intervals, contribution percentages, and signs of various factors that affect institutional delivery (type of place of delivery). It was found that parity, religion, and women's education are the key factors that have the largest contribution to institutional delivery. Specifically, the results indicate that parity has the highest impact, accounting for 275.6 percent of the total effect, followed by religion with 207 percent, and women's education with 61.8 percent. Factors such as wealth (-318 percent, P-value=0.000), Exposure to mass media (-64 percent, P-value=0.058) and residence (-61 percent, P-value=0.158) have the highest negative influence on type of place of delivery.

Type of place of Delivery	Coefficient (β)	P-Value	95% CI		Contribution (%)	Sign (+/-)
Any Violence	0.000	0.918	-0.0048	0.0043	6.5	(+)
Physical Violence	0.001	0.834	-0.0043	0.0053	-13.9	-
Sexual Violence	-0.001	0.184	-0.0020	0.0004	22.1	(+)
Emotional Violence	0.000	0.736	-0.0002	0.0003	-1.4	-
Age of respondent	0.000	0.460	-0.0004	0.0009	-6.5	-
Wealth	0.012	0.000	0.0077	0.0157	-318.4	-
Women Education	-0.002	0.004	-0.0038	-0.0007	61.8	(+)
Husband Education	0.000	0.594	-0.0008	0.0005	4.6	(+)
Working status of Women	0.001	0.057	0.0000	0.0019	-25.1	-
Residence	0.002	0.158	-0.0009	0.0053	-60.8	-
Caste	0.001	0.180	-0.0004	0.0019	-21.4	-
Religion	-0.008	0.000	-0.0106	-0.0046	207.0	(+)
Household size	0.000	0.969	-0.0021	0.0020	1.1	(+)
Women empowerment	0.000	0.165	-0.0009	0.0001	9.9	(+)
Husband drinks alcohol	-0.001	0.521	-0.0022	0.0011	14.8	(+)
Mass media exposure	0.002	0.058	-0.0001	0.0048	-63.9	-
Sex of household head	0.000	0.950	-0.0012	0.0013	-1.1	-
Sex of child	0.000	0.203	-0.0010	0.0002	11.2	(+)
Parity	-0.010	0.000	-0.0141	-0.0062	275.6	(+)

Difference			-0.0797
Total explained			-0.0037
Total change in the place of child delivery (%)			4.6060
Number of obs	5,110	Pr(Y!=0G=0)	0.8255
N of obs G=0	2441	Pr(Y!=0G=1)	0.9052
N of obs G=1	2669		

Note : Obs=Observations, N=Number, Pr=Probability



For Number of Antenatal Care Visits

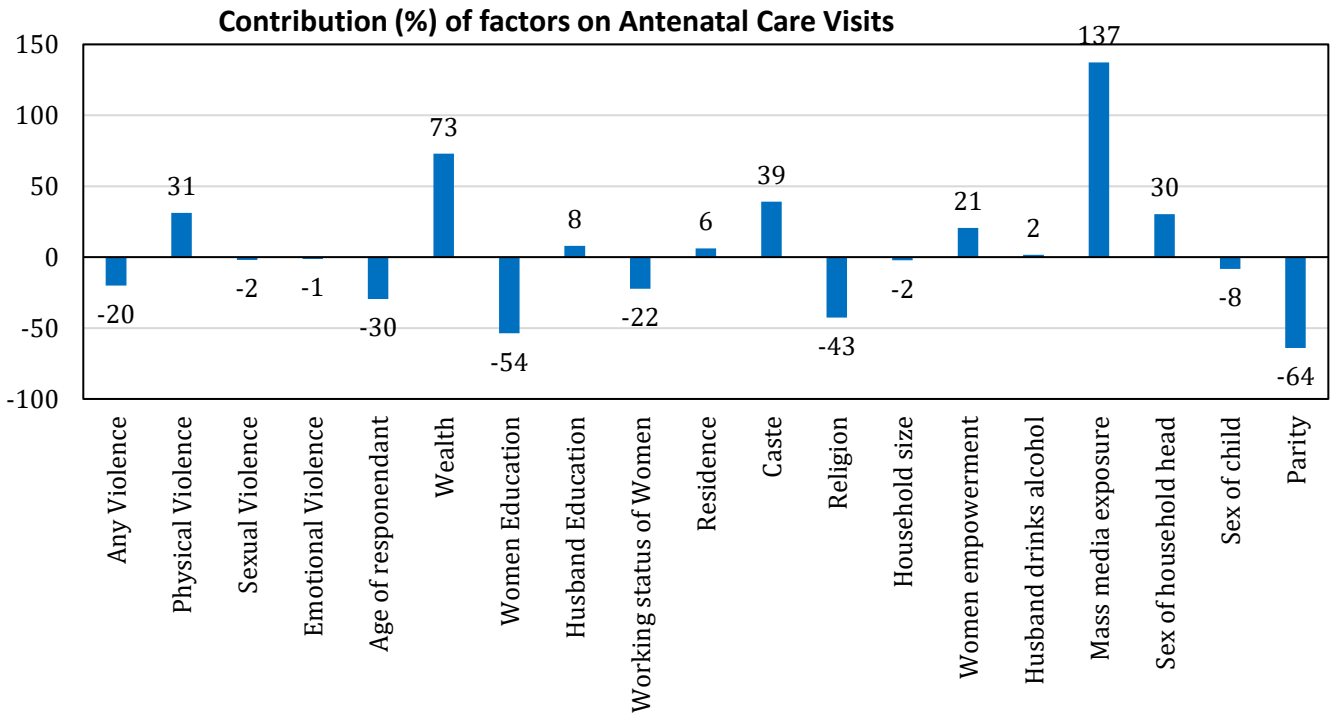
Table 3.3.10 : Factors affecting the number of antenatal visits in women in India between 2015-2021

The table shows the results of a statistical analysis that examined the association between various factors and the number of antenatal visits made by women in India. The factors that were found to have a significantly high positive association with the number of antenatal visits made were caste (39%), wealth (73%), and mass media exposure being the highest contributor (137.3%). The total change in the number of antenatal visits explained by these factors is 27.9718 percent. Some factors having significant negative impact on the

number of antenatal visits are Parity (-64 percent, P-value=0.000) and women Education (-54 percent, P-value=0.013). Any violence also has a non-significant negative impact on number of antenatal visits (-20 percent, P-value=0.567).

Antenatal Visit	Coefficient (β)	P-Value	95% CI		Contribution (%)	Sign (+/-)
Any Violence	-0.001	0.567	-0.0042	0.0023	-20.0	-
Physical Violence	0.001	0.423	-0.0021	0.0051	31.1	(+)
Sexual Violence	0.000	0.883	-0.0013	0.0011	-1.9	-
Emotional Violence	0.000	0.601	-0.0003	0.0002	-1.3	-
Age of respondent	-0.001	0.004	-0.0024	-0.0005	-29.5	-
Wealth	0.003	0.000	0.0022	0.0048	72.8	(+)
Women Education	-0.003	0.013	-0.0046	-0.0005	-53.8	-
Husband Education	0.000	0.688	-0.0015	0.0023	8.0	(+)
Working status of Women	-0.001	0.199	-0.0027	0.0006	-22.2	-
Residence	0.000	0.814	-0.0022	0.0028	6.2	(+)
Caste	0.002	0.023	0.0003	0.0035	39.0	(+)
Religion	-0.002	0.025	-0.0038	-0.0003	-42.6	-
Household size	0.000	0.628	-0.0005	0.0003	-2.2	-
Women empowerment	0.001	0.009	0.0002	0.0017	20.5	(+)
Husband drinks alcohol	0.000	0.949	-0.0023	0.0024	1.6	(+)
Mass media exposure	0.007	0.000	0.0041	0.0091	137.3	(+)
Sex of household head	0.001	0.099	-0.0003	0.0032	30.3	(+)
Sex of child	0.000	0.223	-0.0010	0.0002	-8.3	-
Parity	-0.003	0.000	-0.0041	-0.0020	-64.0	-
Difference						0.0171
Total explained						0.0048
Total change in the number of antenatal visits (%)						27.9718
Number of obs	5,099		Pr(Y!=0G=0)			0.5133
N of obs G=0	2441		Pr(Y!=0G=1)			0.4962
N of obs G=1	2658					

Note : Obs=Observations, N=Number, Pr=Probability



For Pregnancy Outcome

Table 3.3.11 : Factors Affecting Pregnancy Outcome in Women in India between 2015-2021

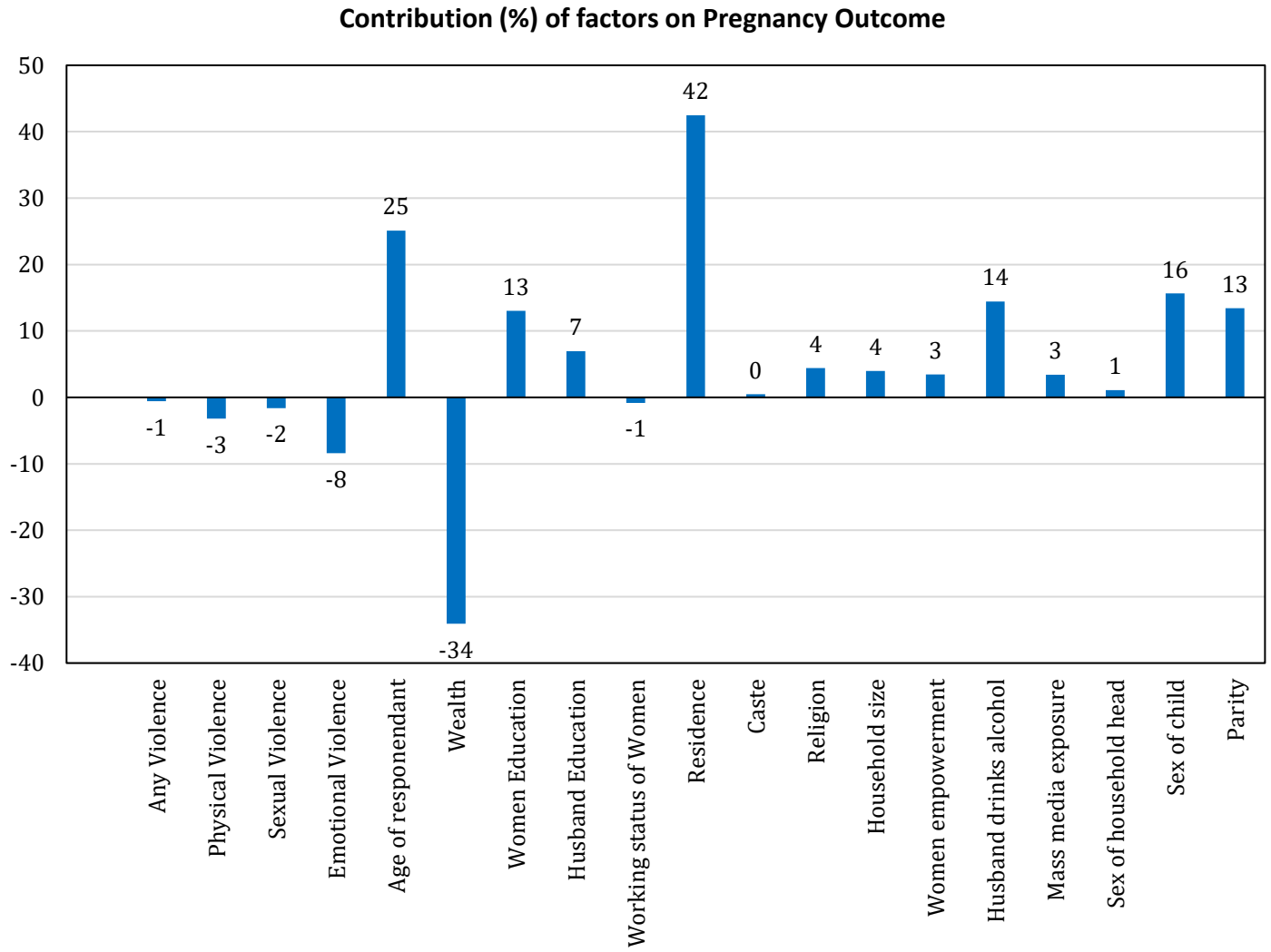
The table shows the results conducted to identify the factors that affect pregnancy outcome. The total change in pregnancy outcome explained by these factors is 0.0041, which is 34.5678 percent of the total change. The significant contributors to pregnancy outcome are sex of child (15.6%), age of respondent (25.1%) and residence being the highest contributor (42.5%). The table provides valuable insights into the factors that affect pregnancy outcome, and the results can be used to develop interventions to improve maternal and child health. Wealth (-34 percent, P-value=0.203) has a non-significant negative influence on pregnancy outcome.

Pregnancy Outcome	Coefficient (β)	P-Value	95% CI		Contribution (%)	Sign (+/-)
Any Violence	0.000	0.961	-0.0010	0.0009	-0.6	-
Physical Violence	0.000	0.824	-0.0013	0.0010	-3.2	-
Sexual Violence	0.000	0.559	-0.0003	0.0002	-1.6	-
Emotional Violence	0.000	0.384	-0.0011	0.0004	-8.4	-
Age of respondent	0.001	0.036	0.0001	0.0020	25.1	(+)
Wealth	-0.001	0.203	-0.0036	0.0008	-34.1	-
Women Education	0.001	0.301	-0.0005	0.0016	13.0	(+)
Husband Education	0.000	0.368	-0.0003	0.0009	7.0	(+)
Working status of Women	0.000	0.856	-0.0004	0.0003	-0.8	-
Residence	0.002	0.032	0.0001	0.0034	42.5	(+)
Caste	0.000	0.933	-0.0004	0.0005	0.5	(+)
Religion	0.000	0.463	-0.0003	0.0007	4.4	(+)
Household size	0.000	0.154	-0.0001	0.0004	4.0	(+)

Women empowerment	0.000	0.684	-0.0005	0.0008	3.5	(+)
Husband drinks alcohol	0.001	0.117	-0.0002	0.0013	14.4	(+)
Mass media exposure	0.000	0.792	-0.0009	0.0012	3.4	(+)
Sex of household head	0.000	0.791	-0.0003	0.0004	1.1	(+)
Sex of child	0.001	0.009	0.0002	0.0011	15.6	(+)
Parity	0.001	0.057	0.0000	0.0011	13.4	(+)
Difference						0.0119
Total explained						0.0041
Total change in pregnancy outcome (%)						34.5678

Number of obs	15,747	Pr(Y!=0G=0)	0.0629
N of obs G=0	7012	Pr(Y!=0G=1)	0.0509
N of obs G=1	8735		

Note : Obs=Observations, N=Number, Pr=Probability



For Birth Weight of Child

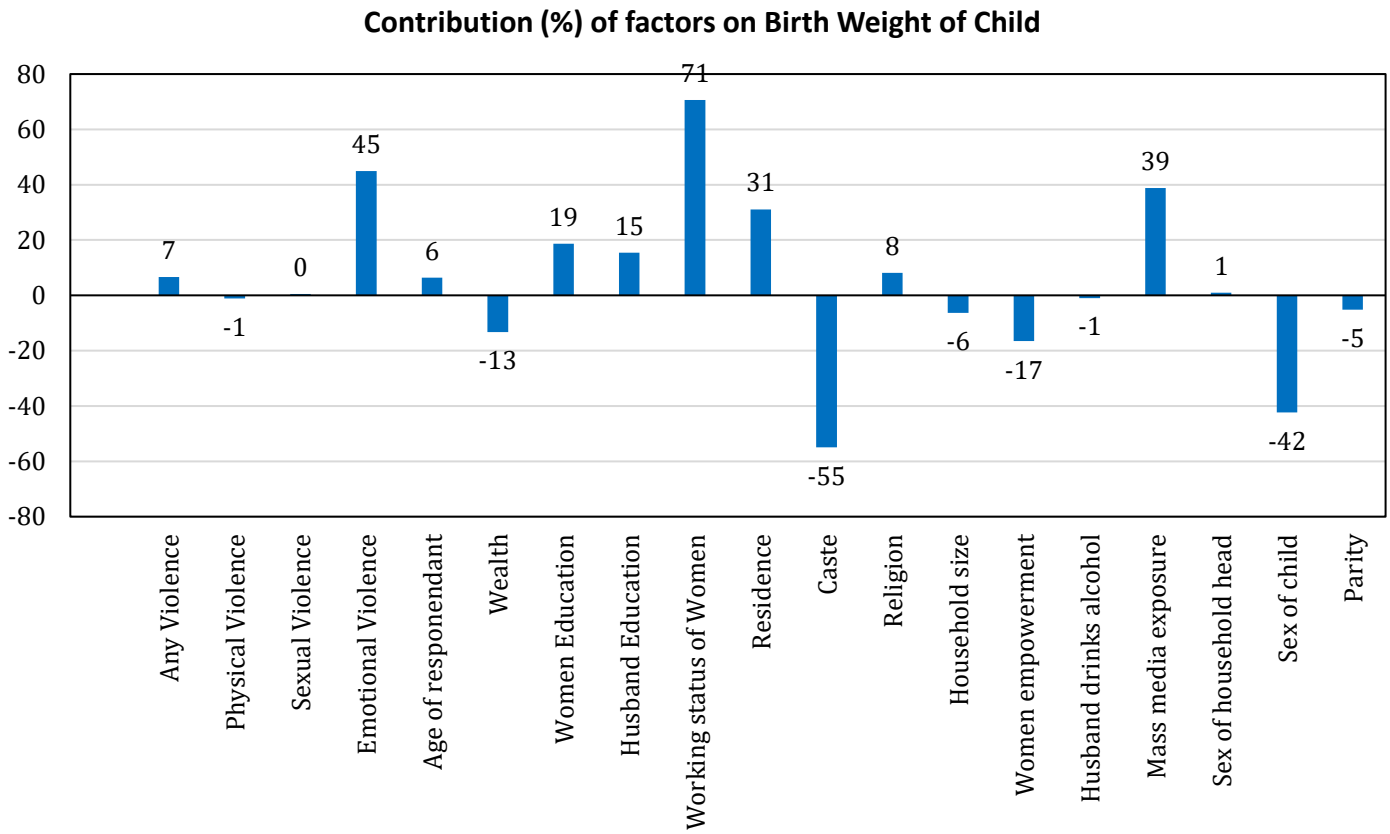
Table 3.3.12: Factors Influencing Birth Weight of Children in India between 2015-2021

The table presents the coefficients, p-values, 95 percent confidence intervals, contribution percentages, and signs of various factors affecting the birth weight of children. The results suggest that working status of women has a significantly positive influence on birth weight of child (70.6%) making it the highest contributor. Emotional violence (44.9%) and mass media exposure (38.8%) have a non-significant positive

impact on birth weight Overall, the factors included in the analysis explain only a small proportion of the total change in birth weight of the child. Sex of last born child has a negative contribution on birth weight of child.

Birthweight of Child	Coefficient (β)	P-Value	95% CI		Contribution (%)	Sign (+/-)
Any Violence	0.000	0.886	-0.0031	0.0027	6.6	(+)
Physical Violence	0.000	0.975	-0.0022	0.0023	-1.1	-
Sexual Violence	0.000	0.962	-0.0007	0.0006	0.5	(+)
Emotional Violence	-0.001	0.128	-0.0033	0.0004	44.9	(+)
Age of respondent	0.000	0.683	-0.0012	0.0008	6.4	(+)
Wealth	0.000	0.332	-0.0004	0.0013	-13.2	-
Women Education	-0.001	0.585	-0.0027	0.0015	18.7	(+)
Husband Education	0.000	0.294	-0.0014	0.0004	15.4	(+)
Working status of Women	-0.002	0.013	-0.0040	-0.0005	70.6	(+)
Residence	-0.001	0.273	-0.0028	0.0008	31.1	(+)
Caste	0.002	0.228	-0.0011	0.0046	-54.9	-
Religion	0.000	0.613	-0.0013	0.0007	8.1	(+)
Household size	0.000	0.473	-0.0004	0.0008	-6.3	-
Women empowerment	0.001	0.592	-0.0014	0.0025	-16.6	-
Husband drinks alcohol	0.000	0.969	-0.0015	0.0016	-1.0	-
Mass media exposure	-0.001	0.362	-0.0039	0.0014	38.8	(+)
Sex of household head	0.000	0.960	-0.0013	0.0012	1.0	(+)
Sex of child	0.001	0.027	0.0002	0.0026	-42.4	-
Parity	0.000	0.696	-0.0007	0.0010	-5.2	-
Difference						0.0112
Total explained						-0.0032
Total change in the birth weight of last born child (%)						-28.6394
Number of obs	4,641		Pr(Y!=0G=0)			0.1431
N of obs G=0	2110		Pr(Y!=0G=1)			0.1320
N of obs G=1	2531					

Note : Obs=Observations, N=Number, Pr=Probability


Contribution (%) of factors on Birth Weight of Child
80
60
40
20
0
-20
-40
-60
-80
7
-1
0
45
6
-13
19
15
71
31
-55
8
-6
-17
-1
39
1
-42
-5
Any Violence
Physical Violence
Sexual Violence
Emotional Violence
Age of responendant
Wealth
Women Education
Husband Education
Working status of Women
Residence
Caste
Religion
Household size
Women empowerment
Husband drinks alcohol
Mass media exposure
Sex of household head
Sex of child
Parity

CHAPTER IV

SUMMARY, CONCLUSIONS & RECOMMENDATIONS

Summary

This study aimed to examine the correlation between domestic violence against women and their socio-economic background in India, using data from the National Family Health Survey (NFHS) conducted between NFHS-4 (2015-2016) and NFHS-5 (2019-2021). The study utilized four methodologies, including chi-square, binary logistic regression, principal component analysis, and fairlie decomposition to identify the factors affecting domestic violence and maternal and child health in India. The findings indicate that women from lower socio-economic backgrounds, those with lower levels of education, and those whose husbands drink alcohol are at a higher risk of experiencing violence. Moreover, the analysis show that domestic violence has a significant impact on maternal and child health outcomes, with women who experienced domestic violence being less likely to utilize maternal health services. The prevalence of domestic violence has decreased slightly over time, but there is a need for further research to identify other factors that may impact health outcomes in India.

The issue of domestic violence against women in India has been widely studied, and various statistical analysis have been employed to explore its prevalence and associated factors. One such analysis is the chi-square test, which has revealed that physical violence is the most common form of domestic violence against women. Additionally, women from lower socio-economic backgrounds, those with lower levels of education, and those whose husbands drink alcohol are at a higher risk of experiencing violence.

Another statistical analysis that has been employed to investigate domestic violence against women in India is logistic regression. This technique has shown that wealth, education of women and their husbands, caste, religion, household size, women's empowerment, husband's alcohol use, and exposure to media have a significant impact on domestic violence. Moreover, women who experienced domestic violence were less likely to have institutional delivery, receive antenatal care, and have positive pregnancy outcomes.

The prevalence of domestic violence against women in India has also been studied in relation to various socio-economic and demographic factors. For example, older women, those living in rural areas, and those belonging to Scheduled Castes or Scheduled Tribes are more likely to experience violence. However, the prevalence of domestic violence has decreased slightly over time.

Fairlie decomposition techniques have also been employed to investigate the factors that impact various aspects of maternal and child health in India. The findings suggest that factors such as wealth, women empowerment, husband's alcohol consumption, religion, women education, parity, and mass media exposure have significant effects on certain health outcomes. However, the analysis only explains a small proportion of the total change in health outcomes, indicating that there may be other factors that are yet to be identified.

Overall, these statistical analysis provide valuable insights into the factors affecting domestic violence and maternal and child health in India. They highlight the need for targeted interventions to address domestic violence and improve health outcomes by promoting education, empowering women, and creating awareness about gender equality and respect for women. The results also suggest that there is a need for further research to identify other factors that may impact health outcomes in India.

Furthermore, domestic violence was found to be a significant determinant of maternal and child health outcomes in India. Women who experienced any form of domestic violence were less likely to utilize maternal health services, such as institutional delivery and antenatal care visit. The prevalence of domestic violence varied across different socio-economic and demographic characteristics, with women from poor households, those with lower levels of education, and those living in rural areas being more likely to experience domestic violence.

Conclusions

- There is hardly any change in the pattern and prevalence of domestic violence from 2015-21.
- Factors such as age, wealth, education of women and husband, women empowerment, working status of women and exposure to media are strongly associated with prevalence of violence.
- Domestic violence is significantly associated with pregnancy outcome and maternal health care services utilization. Physical violence has resulted in reduction of institutional delivery and has resulted in a smaller number of antenatal care visits among women in both NFHS-4 and NFHS-5. Women who experienced sexual violence were less likely to have institutional delivery and had a smaller number of antenatal care visits during 2015-21. Women who experienced physical or sexual violence were more likely to have negative birth outcomes(non-live birth).

Recommendations

1.There is a need for targeted interventions to address domestic violence and improve health outcomes in India. Promoting education, especially for women, and creating awareness about gender equality and respect for women can help to reduce the prevalence of domestic violence.

2.Women's empowerment is a critical factor in reducing domestic violence. Providing women with access to resources and opportunities such as education, financial assistance, and employment can help to reduce their vulnerability to domestic violence.

3.The findings suggest that alcohol consumption by husbands is a significant risk factor for domestic violence. Addressing alcohol consumption through awareness programs and interventions can help to reduce the prevalence of domestic violence.

4.Women who experience domestic violence are less likely to utilize maternal health services. Improving access to maternal health services, such as institutional delivery and antenatal care, can help to improve maternal and child health outcomes.

5.Women from lower socio-economic backgrounds and those with lower levels of education are more likely to experience domestic violence. Addressing socio-economic inequalities through targeted interventions can help to reduce the prevalence of domestic violence.

6.The analysis only explain a small proportion of the total change in health outcomes, indicating that there may be other factors that are yet to be identified. Conducting further research can help to identify other factors that may impact health outcomes in India.

In conclusion, the prevalence of domestic violence against women in India is a serious issue that requires urgent attention. The statistical analysis reviewed in this study provide valuable insights into the factors that affect domestic violence and maternal and child health in India. The recommendations discussed, such as promoting education and women's empowerment, creating awareness about gender equality and respect for women, and enhancing the accessibility and quality of healthcare services, should be prioritized by policymakers and stakeholders to improve the health and well-being of women and children in India. It is essential to take comprehensive and multidisciplinary approaches that involve all relevant sectors and communities to address the complex and intertwined issues of domestic violence and maternal and child health in India. Only through concerted efforts and a sustained commitment to ending domestic violence and improving health outcomes can we hope to create a safer and more equitable future for women and children in India.

Implementing policies alone is not enough to address domestic violence against women. It is crucial to raise awareness about these policies among the general public, especially vulnerable women. The government can achieve this by conducting public campaigns, organizing outreach programs, and partnering with NGOs and civil society organizations. The policies must also be implemented effectively, and women should have easy access to the necessary support and services. Therefore, a comprehensive approach involving both policy implementation and awareness-raising efforts is necessary to combat domestic violence against women.

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