

Socio-Economic Conditions and Reproductive Health Outcomes: Evidence from the Harijan (Dalit) Community in Assam

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ABSTRACT

Marginalised communities often experience socio-economic disadvantages that adversely affect their reproductive health and overall well-being. This study investigates the socio-economic conditions and reproductive health outcomes of the Harijan (Dalit) community in Assam using primary survey data collected from 667 ever-married women of reproductive age across eight districts of the state. The research employs descriptive statistics, cross-tabulation, and Chi-square tests to examine demographic characteristics, socio-economic status, maternal healthcare practices, and child survival indicators. The findings reveal that poverty, limited educational attainment, low household income, and restricted access to healthcare services continue to influence reproductive health outcomes. Although a considerable proportion of women utilise institutional delivery services and have access to basic amenities, disparities remain in housing conditions, healthcare accessibility, and maternal health practices. The analysis further establishes that educational status, family income, and access to healthcare services have significant associations with key reproductive health indicators, particularly place of delivery and breastfeeding duration. The study highlights the need for targeted policy interventions aimed at improving female education, strengthening healthcare infrastructure, and enhancing socio-economic opportunities to achieve better maternal and child health outcomes among the Harijan (Dalit) community in Assam

Keywords: Harijan (Dalit) Community, Socio-Economic Factors, Reproductive Health Outcomes, Healthcare Access, Maternal Healthcare

INTRODUCTION

Marginalised communities in India continue to experience persistent socio-economic disadvantages and poor health outcomes despite various policy interventions. Among these groups, the Harijan (Dalit) community remains particularly vulnerable due to historical exclusion, limited access to education, healthcare, and economic opportunities. Reproductive health outcomes, including maternal healthcare utilisation, birth practices, breastfeeding behaviour, and child survival, are closely linked to underlying socio-economic conditions.

Assam, with its diverse socio-cultural composition and uneven development, presents unique challenges in ensuring equitable health outcomes across social groups. While several studies have examined reproductive health indicators at the state and national levels, micro-level, community-specific statistical investigations remain limited, especially for socially marginalised populations such as the Harijan community.

The literal meaning of the word Harijans is children of God. In India, the people who belong to the bottom of Hindu Caste System are called Harijans. They were traditionally sweepers, washers of cloths, leather workers and those whose occupation was to kill animals. Originally called untouchables or pariahs, they were given the name Harijans by the Father of Nation Mahatma Gandhi who worked for many years to improve their lives. Many now refer themselves as Dalits to indicate their oppressed position outside the Hindu society, legally the Indian Government group them as “Scheduled Castes”. Officially and constitutionally, the term “Harijan” is not used to refer to any specific community in India. Instead, the constitutional and official term utilized to identify

this community is “Scheduled Caste”. As a result, the actual official data on the Harijan (Dalit) population is unavailable.

The Indian constitution came to its effect in 1949. Till then the Harijans who constitute about 15% to 20% of India’s population were subjected to discrimination and social restrictions as it was believed that their caste would pollute everyone who came into contact with them. Under the constitution, the Harijans were recognised as scheduled castes and tribes entitled to educational and vocational opportunities, as well as representation in parliament, however, widespread discrimination still exist.

In this context, the present study undertakes a statistical analysis of primary survey data to examine the socio-economic and demographic characteristics of the Harijan community in Assam and to assess how these factors influence reproductive health outcomes. By applying descriptive and inferential statistical techniques, the study aims to generate empirical evidence that can support data-driven policy formulation and targeted interventions.

REVIEW OF LITERATURE

Ahuja. Ram, (1999) in his book “*Society in India*” explain the institutionalized inequality in the caste system manifests its extreme form in the growth of completely segregated set of caste called “Untouchable Castes”. Gandhiji designated them as ‘Harijans’ or the children of God. P74-96

Arora. G, (1983) “*Socio Economic Determinants of Fertility*”, The journal of family welfare 1983 vol 29 (3) 39-52: The study examined that fertility is affected by both the caste and economic status of the family, with education affecting fertility directly by raising the age at marriage and indirectly through better knowledge of contraception and increased awareness of the costs of raising children.

Baghel. Indu, (2016) “*Dalit women’s movement in Modern India*” critically examined the social, economic and Political position of Dalit women and its overall impact on India’s Political system. PP-1-75.

Bangaarts, J. and Potter R.G., (1983) *Fertility, Biology and Behaviour: An analysis of the Proximate Determinants*. explained four determinants of fertility namely – marriage, contraception, postpartum infecundability and abortion. This book discusses the biological and behavioral dimensions of human fertility that are linked to intermediate fertility variables. It discusses as well the effects of deliberate marital fertility control through contraception and induced abortion.

Das D.P., (1985) “*The untouchable Story*”

Das as an enlightened individual was quite aware of the fact that it was due to caste politics that the Dalits, Adivasis and women had been suffering since ages. Das believed that as long as caste system continued there is no hope of ending the social discrimination. He also doubted the legislative provisions which were available on papers but hardly executed in their true spirits.

Deulkar, Sita, (2004) “*Dalits Past, Present & Future*” explains that people have developed politically, socially, culturally and economically, but an unfortunate section of our society is still forced to live under the same hostile circumstances. Dalits, the ‘have nots’ are supposed to be the most unfortunate section in our society, at the lowest strata. PP 149-222

Dutta K. B., (2005) “*Dynamics of Dalits Old issues and New Challenges*” states that to boost up the work for the upliftment of Harijans, Gandhi laid the foundation of the Harijan Sevak Sangh. Its main function was the removal of all disabilities which hampered the progress and development of Harijans. As it consisted of dedicated workers it did remarkable work. So far so Gandhi brought a Harijan family in the ashram and he adopted their daughter as his own. He also offered his blessings on the eve of marriages which were celebrated between Harijans and caste Hindus. Pp.73-74

Jejeebhoy, S. J., (1998), “Women education autonomy and reproductive behaviour; experience from developing countries”. In this book, it is clear that education is important for all kinds of demographic behaviour, affecting mortality, health, fertility, and contraception.

Jha A.K., (2004) ‘*Dalitisation of Dalits*’. Dalit is basically a Sanskrit word which means broken and downtrodden. There has been narrow definition based on the caste alone and a broader one to encompass all those considered to be either similarly placed or natural allies. Since the early 1970’s the word has come into increasingly wider usage in the press and in common parlance where it is normally used in the original narrower caste-based sense.

Jhansi S.C. (2010) “Women and Reproductive Health” studied on Reproductive Health of child and women.

Kumar Raj, (2012) book “*Essays on Dalits*” is a compilation where several authors have contributed on Dalit issues. PP-59-163.

Ramanathan, Mala (1998): *Reproductive Health Index: Measuring Reproduction or Reproductive Health?* Economic and Political weekly 33 (490 Dec, 5-11, 1998. pp.3104-3107: The newly- constructed reproductive health index is more appropriate for measuring the status of the family planning program than the reproductive health status of women.

Rao. G. Samba Siva and Rao A G Sankar (2015) “Status of Dalit Women” expresses that though India has all along been a male dominated society and women have never been given the equality status in socio-economic fields, the scheduled caste women have been tied the bottom of the hierarchy as sweepers and scavengers.

Sharma R.N., (1990) *Society in India*. In this book the writer explained the backward classes and the Scheduled Castes. The author also mentioned the disabilities of Harijans. According to him Untouchables suffer from religious disabilities, social disabilities and economic disabilities. pp-35 to 44.

Research Gap

Although several studies have examined the socio-economic status of Dalit communities and reproductive health issues in India, very limited research has specifically explored the relationship between socio-economic conditions and reproductive health outcomes among the Harijan (Dalit) community in Assam. Most existing studies are either descriptive in nature or focus on broader state and national populations, overlooking community-specific disparities. Moreover, empirical evidence based on primary household-level data and statistical analysis of factors such as education, income, healthcare access, and maternal health practices remains scarce. The lack of micro-level studies on this marginalised community creates a significant knowledge gap. The present study addresses this gap by providing evidence from primary survey data and examining the socio-economic and healthcare-related determinants influencing reproductive health outcomes among the Harijan (Dalit) community in Assam

Objective: To address the research the following objectives have been formulated

- 1. To analyse the socio-economic and demographic characteristics of the Harijan (Dalit) community in Assam using primary survey data.**
- 2. To examine reproductive health outcomes, including maternal health practices and child survival indicators, among the Harijan community.**
- 3. To identify statistically significant socio-economic and healthcare-related factors influencing reproductive health outcomes.**

METHODOLOGY

Study Area

The study was conducted in selected areas of Assam inhabited predominantly by the Harijan (Dalit) community.

Data Source

The study is based on both **primary data** and Secondary data. Primary data collected through a structured household survey using a pre-tested questionnaire.

Sample Design and Sample Size

A total of **667 respondents/households** were selected using an appropriate sampling design. The respondents primarily comprised **ever-married women of reproductive age**. The study employed a **descriptive research approach** to examine the socio-economic conditions and reproductive health outcomes of the Harijan/Dalit community across **eight districts of Assam**, namely **Tinsukia, Dibrugarh, Charaideo, Sivasagar, Jorhat, Golaghat, Nagaon, and Kamrup (Metro)**.

Both **primary and secondary data** were utilised for the analysis. Primary data were collected using a **multistage sampling technique**. In the first stage, districts were selected randomly from Assam. In the second stage, areas predominantly inhabited by Harijan/Dalit women were identified within the selected districts. In the third stage, **Dalit women having at least one child** were selected purposively from the identified areas. The final sample size for the study was **667 respondents**.

Variables Used

Demographic Variables:

- Age
- Gender
- Marital status
- Family type
- Family size
- Number of children

Socio-Economic Variables:

- Educational status
- Occupation
- Monthly family income
- Type of housing
- Access to basic amenities
- Access to healthcare services

Reproductive Health Variables:

- Place of delivery
- Type of birth
- Breastfeeding duration

- Child survival status

Statistical Tools and Techniques

- Descriptive statistics (frequency, percentage, mean, standard deviation)
- Cross-tabulation
- Chi-square test of association

The analysis was carried out using **SPSS software**.

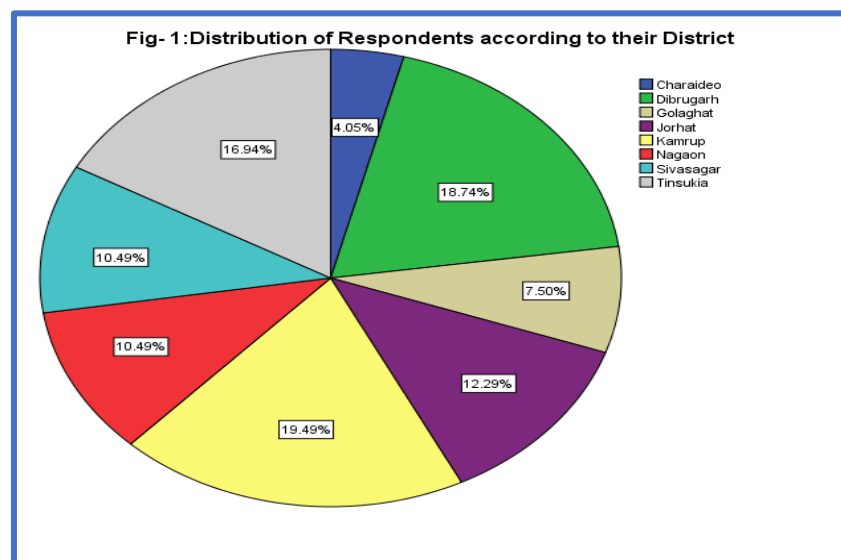
Analysis:

This section analyses the primary survey data using descriptive and inferential statistical methods. The analysis focuses on the socio-economic and demographic profile of the respondents and examines the relationship between socio-economic factors and reproductive health outcomes among the Harijan community in Assam.

The table below presents the distribution of respondents according to the districts in which they reside

Table-1.1: Distribution of Respondents according to their Districts

	Frequency	Percent	Cumulative Percent
Charaideo	27	4.05	4.05
Dibrugarh	125	18.74	22.74
Golaghat	50	7.50	30.29
Jorhat	82	12.29	42.58
Kamrup	130	19.49	62.07
Nagaon	70	10.49	72.56
Sivasagar	70	10.49	83.05
Tinsukia	113	16.94	100.00
Total	667	100.0	



The data presented in **Figure-1** and **Table-1** outlined the distribution of respondents across eight districts: Charaideo, Sivasagar, Dibrugarh, Tinsukia, Jorhat, Golaghat, Nagaon, and Kamrup (Metro). Kamrup(M) district has the highest proportion of respondents, accounting for 19.49%, followed closely by Dibrugarh district, which represents 18.74% of the total sample of 667 respondents. Charaideo district represents the smallest proportion, comprising only 4.05% of the respondents. In descending order, the distribution continues with Tinsukia at 16.94%, Jorhat at 12.29%, Nagaon at 10.49%, Sivasagar at 10.49%, and Golaghat at 7.5%.

OBJECTIVE-1: To analyse the socio-economic and demographic characteristics of the Harijan (Dalit) community in Assam using primary survey data.

The socio-economic condition of a community is affected by many related factors. Understanding these patterns is important for making effective policies and programs to improve reproductive health and socio-economic conditions. This study focuses on the Harijan/Dalit community, a socio-economically disadvantaged group in India, to understand how different factors affect reproductive health.

To achieve this objective, the study looks at factors such as family income, daily wage work, education, access to healthcare, housing conditions, and employment.

Economic Category:

A large proportion of Dalit/Harijan in Assam lives below the poverty line and in the study area 95.5% of the respondents were found to be below poverty line.

Table-1.1: Distribution of respondents according to economic category

	Frequency	Percentage	Cumulative Percentage
APL	30	4.5	4.5
BPL	637	95.5	100.0
Total	667	100.0	

Source: Primary data

To understand the socio-economic condition of Harijan women, it's important to examine their distribution across economic categories. This analysis helps identify any disparities in fertility rates based on economic status and highlights potential factors influencing reproductive behaviour within this population,

Table-1.2 above displays the distribution of respondents based on their economic categories. Based on the data presented in **Table-1.2**, it can be inferred that the majority of respondents belonged to the BPL category, accounting for 95.5%, while only 4.5% were classified under the APL category. Due to lower literacy rates and limited opportunities to acquire skills leading to better-paying employment, a significant portion of Harijans tend to belong to the Below Poverty Line (BPL) category.

Family Type:

Both Joint and Nuclear families are found in the Harijan community. Nuclear families are more common than joint families. Economic pressure and migration have increased nuclear families.

Table-1.2: Distribution of respondents according to family type

	Frequency	Percentage	Cumulative Percentage
Joint Family	109	16.3	16.3

Nuclear Family	558	83.7	100.0
Total	667	100.0	

The socio-economic condition of Harijan women may be influenced to by various factors, including the distribution of respondents according to family type.

Table-1.2 above illustrate the family types of the respondents, indicating that 83.7 % were nuclear families, while 16.3% were joint families. Due to the prevalence of the Below Poverty Line (BPL) category among families, Harijan individuals often opt for nuclear families as they are easier to maintain with limited income, as indicated in the previous table.

Education:

Lack of education is a major reason for the poor socio-economic condition of the Harijan community. Due to low education, most people depend on low-paid and unskilled work. Unemployment and job insecurity are common because of limited education. Low literacy leads to low income and persistent poverty. Lack of education reduces awareness about health, and government schemes. As a result, the overall socio-economic development of the Harijan community remains slow.

Table-1.3: Distribution of respondents according to their Educational Status

	Frequency	Percent	Cumulative Percent
HSLC &above	45	6.75	6.75
High School	319	47.83	54.58
Primary	221	33.13	87.71
Illiterate	82	12.29	100.00
Total	667	100.0	

In the study concerning the educational status of Harijan woman, it is found that the majority, accounting for 47.83%, had studied till high school, while 33.13% had completed their primary education. It has been inferred from the Table-3.1 that 82 women were illiterate which is equivalent to 12.29%, 45 women were educated with HSLC and above which is 6.75% of the total number. Cultural norms and traditional practices within some Harijan people can act as barriers to education. In some cases, early marriage, child labour, or other socio-cultural factors may restrict access to formal education.

Occupation:

Most people in the Harijan community are engaged in low paid and unskilled occupations. Common occupation include sanitation, work, sweeping, daily wage labour, and other informal jobs. Due to low wages, many families live below the poverty line. Poor occupational status leads to poor housing and living conditions.

The nature of their occupation directly affects the socio-economic condition of the Harijan community.

Table-1.4: Distribution of respondents according to their Occupation

		Frequency	Percent	Cumulative Percent
Valid	Housewife	293	43.9	43.9

	Wage-earner	242	36.3	80.2
	Municipality Cleaner	116	17.4	97.6
	Govt. Job & Others	16	2.4	100.0
	Total	667	100.0	

The above table shows the distribution of respondents according to their occupation. The majority of respondents, comprising 43.9% are housewives, followed by 36.3% who were wage-earners. In **Table-1.4**, 116 respondents, accounting for 17.4%, were municipality cleaner, while 16 respondents, which is 2.4%, were involved in Govt. jobs and other occupations. Educational disparities and limited access to quality education have been significant barriers for Harijan women in pursuing government jobs.

Income:

Family income plays a key role in determining the socio-economic condition of the Harijan community. Family income of the Harijan community is generally low and irregular. Many families live below the poverty line due to low income.

Table-1.5: Distribution of respondents according to their Monthly Family Income

		Frequency	Percent	Cumulative Percent
Valid	3000 – 5000	75	11.2	11.2
	5000 – 10000	481	72.1	83.4
	10000 – 15000	54	8.1	91.5
	15000 – 20000	25	3.7	95.2
	20000- 25000 & above	32	4.8	100.0
	Total	667	100.0	

It has been inferred from the **Table-1.5** that the monthly income of 75 respondents, equivalent to 11.2% falls within the range of 3000-5000. Additionally, 54 respondents, representing 8.1%, earn between 10000-15000, while 25 respondents, accounting for 3.7% earn between 15000-20000. Furthermore, 32 respondents comprising 4.8%, earn between 20000-25000 & above. The highest numbers of respondents belong to the income level of 5000-10000, comprising 72.1% of the total.

From the earlier table, it is clear that educational disparities and limited access to quality education are significant barriers for Harijan community in pursuing government jobs.

Housing Conditions and Basic Amenities:

Table-1.6: Distribution of respondents according to their Type of House

	Frequency	Percent	Cumulative Percent
Kutcha	69	10.3	10.3
Pucca	39	5.8	16.2

Semi pucca	559	83.8	100.0
Total	667	100.0	

Table 1.6 presents the distribution of respondents according to the type of house. It is observed that the majority of the respondents (83.8%) live in **semi-pucca houses**, while 10.3% reside in **kutchha houses** and only 5.8% live in **pucca houses**. This indicates that most households fall in the middle category of housing conditions, reflecting moderate living standards, though a notable proportion still resides in kutchha houses, suggesting economic vulnerability among certain sections of the Harijan community

Table-1.7: Distribution of respondents according to their Type of Toilet

	Frequency	Percent	Cumulative Percent
Kutchha	9	1.3	1.3
Kutchha	89	13.3	14.7
Open Field	5	.7	15.4
Sanitary	27	4.0	19.5
Sanitary	537	80.5	100.0
Total	667	100.0	

Table 1.7 shows the distribution of respondents according to the type of toilet facility. A large proportion of respondents (80.5%) reported having access to **sanitary toilets**, whereas 13.3% used kutchha toilets and 0.7% practised open defecation. The presence of sanitary toilet facilities for the majority of households reflects some improvement in basic sanitation; however, the continued existence of kutchha toilets and open-field usage highlights the need for further sanitation awareness and infrastructure development

Table-1.8: Distribution of respondents according to Drinking Water Used

	Frequency	Percent	Cumulative Percent
Piped (running water)	244	36.6	36.6
Tube well	423	63.4	100.0
Total	667	100.0	

The Table-1.8 on drinking water sources reveals that 63.4% of respondents depend on **tube wells** for drinking water, while 36.6% have access to **piped (running) water**. This suggests that although safe water sources are available to most households, access to piped water remains limited for a significant proportion of the community.

Table-1.9: Distribution of respondents according to Type of Fuel used for Cooking

	Frequency	Percent	Cumulative Percent
Firewood	130	19.5	19.5
LPG	537	80.5	100.0
Total	667	100.0	

Table 1.9 depicts the distribution of respondents according to the type of fuel used for cooking. The findings indicate that a substantial majority (80.5%) use **LPG** as their primary cooking fuel, while 19.5% continue to rely on **firewood**. The high usage of LPG reflects improved access to cleaner energy sources; however, the continued dependence on firewood among nearly one-fifth of households may pose health and environmental risks and indicates uneven energy access within the community.

Table-1.9: Distribution of respondents according to Type of Lightning Facilities

	Frequency	Percent	Cumulative Percent
Electricity	547	82.0	82.0
Kerosene	120	18.0	100.0
Total	667	100.0	

Table 1.9 presents the distribution of respondents according to the type of lighting used in their houses. It is observed that a substantial majority of the respondents (82.0%) reported using **electricity** as their primary source of lighting, while 18.0% depended on **kerosene** for lighting purposes.

The high proportion of households with access to electricity indicates a considerable level of infrastructural development and connectivity in the study area. However, the continued reliance on kerosene by nearly one-fifth of the respondents reflects persistent gaps in access to reliable and modern energy sources. This dependence on kerosene may have implications for household health, safety, and overall quality of life.

The findings suggest that although most households have transitioned to electric lighting, efforts are still required to ensure universal access to safe and sustainable energy sources within the Harijan community.

The overall analysis of housing conditions and basic amenities among the Harijan community reveals a mixed pattern of development. While the majority of households live in semi-pucca houses and have access to electricity, sanitary toilets, LPG for cooking, and tube well or piped drinking water, a notable proportion still reside in kutcha houses and depend on kerosene and firewood for basic household needs.

These findings indicate moderate improvement in living standards; however, significant disparities persist in terms of housing quality and access to essential amenities. The continued presence of inadequate housing, limited access to piped water, and reliance on traditional energy sources highlight the need for focused policy interventions aimed at improving infrastructure, sanitation, and energy access for the Harijan community. Strengthening these basic amenities is essential for enhancing overall socio-economic well-being and health outcomes.

Objective-2

To examine reproductive health outcomes, including maternal health practices and child survival indicators, among the Harijan community.

The primary aim of the second objective is to find out the impact caused by the factors that influenced the reproductive health conditions of Harijan women.

The reproductive health of the Harijan community is closely related to different factors such as place of birth, birth type, child survival status, and breastfeeding duration etc. Institutional delivery helps reduce health risks and ensures safe childbirth. Birth type, whether normal or caesarean, reflects the health condition of the mother and availability of medical care. Child survival status indicates the overall reproductive and maternal health environment. Breastfeeding duration affects both maternal recovery and child nutrition and survival. Together, these factors help in understanding the reproductive health status of the Harijan community. Place of delivery-home gov hospital, private hospital, health centre.

Number Of Children Per Women:

In the study, out of 667 women surveyed, the distribution of the number of children they had is as follows: 162 females had 1 child, 292 females had 2 children, 140 females had 3 children, 53 females had 4 children, 12 females had 5 children, 7 females had 6 children, and 1 female had 7 children. **(Table:2.1)**

Table:2.1 Distribution of women according to their number of children

Number of children per women	Number of females	Percentage (%)	Cumulative Percentage (%)
1	162	24.2	24.2
2	292	43.8	68.0
3	140	20.9	88.9
4	53	7.9	96.8
5	12	1.8	98.6
6	7	1.0	99.6
7	1	0.1	100%
	Total-667		

In the study area, although most women have one or two children, a small number of women have more than two children. The presence of 12 women with five children and 7 women with six children indicates that large family size still exists among some households. This may be due to low level of education, early marriage, limited use of family planning methods, poverty, and cultural preferences for more children. It also reflects unequal access to reproductive health services and awareness. It is found that most women with smaller families are newly married and still have a long remaining reproductive period. Overall, high fertility negatively affects the health and socio-economic condition of this community.

Place of Birth:

Place of birth is closely related to reproductive health. When childbirth takes place in a hospital or other health institutions, mothers receive all types of medical support as well as skilled health care. Institutional births reduce the risk of maternal and infant deaths and ensure safe delivery. Therefore, access of Institutional delivery plays an important role in improving reproductive health outcomes.

As per NFHS-5(2019-20), institutional birth rate is 84.1% and home births that were conducted by skilled health personnel are 2.6%. In this study institutional birth rate is 76.16% (Number-508) and home births are 23.94% (number-159). It indicates that the institutional birth rate among the Harijan community is significantly lower compared to the institutional birth rate at the state level. **(Table: 2.2)**

Table-2.2 Place of Birth

	Total	Percentage	As per NFHS-5
Institutional birth	508	76.16	84.1%
Home birth	159	23.84	2.6%

To improve the reproductive health of the Harijan community, we need to address systemic inequalities and barriers to healthcare access. Efforts should focus on improving healthcare, promoting reproductive rights and

gender equality, raising awareness about family planning and maternal health, and addressing socio-economic factors to ensure fair reproductive health outcome for everyone in the Harijan community.

The survey highlights significant disparities in birth practices among Harijan women in Assam compared to the state averages. The institutional birth rate among the Harijan community is 76.16%, which is lower than the state level rate of 84.1% reported by NFHS-5(2019-20). Additionally, 23.84% of births in the harijan community occur at home, compared to 2.6% of home births conducted by skilled health personnel at the state level. This lower rate of institutional births and higher rate of home births indicate limited access to or utilisation of healthcare facilities during childbirth within the Harijan community. Emphasizing the importance of institutional births and skilled care during home births is crucial for improving maternal and neonatal health outcomes in this community.

To improve the reproductive health of the Harijan community, we need to address systemic inequalities and barriers to healthcare access. Efforts should focus on improving healthcare, promoting reproductive rights and gender equality, raising awareness about family planning and maternal health, and addressing socio economic factors to ensure fair reproductive health outcomes for everyone in the harijan community.

Birth Type: Normal/Caesarean:

Birth type is closely related to reproductive health. Normal delivery usually indicates good maternal health and fewer pregnancy complications. Frequent caesarean births may affect a woman's reproductive health and increase health risks. Proper maternal care, ANC check-ups and safe delivery are important for maintain good reproductive health. In the study area, two types of birth were found among the Harijan community: normal delivery and caesarean delivery. Among the 667 women surveyed, only 24 had caesarean births, while the remaining women had normal deliveries. This shows that normal delivery is the most common birth type in the Harijan community in the study area. Birth type is closely related to the age of the mother at birth. Women who give birth at the appropriate reproductive age are more likely to have normal deliveries.

Child Survival Status:

Reproductive health plays a crucial role in child survival status. Good reproductive health of mothers ensures safe pregnancy, proper childbirth, and healthy newborns. Access to Antenatal care, institutional delivery, adequate nutrition, and family planning reduces the risk of infant and child mortality. Poor reproductive health, early marriage, frequent pregnancies, and lack of healthcare services negatively affect child survival. Therefore, improving reproductive health is essential for enhancing child survival and overall well-being. In the study area, out of 667 women, 25 babies did not survive. Among these deaths, 22 babies died due to fever, 2 due to tuberculosis (TB), and 1 due to cough and fever. In the Harijan community, some baby deaths occurred because of ignorance and lack of awareness about health conditions, mainly due to illiteracy. This shows the need for better health education and awareness in the community.

Breastfeeding Duration:

Breastfeeding duration has a strong link with reproductive health. Longer breastfeeding helps improve the health of both mother and child. It provides proper nutrition and immunity to the child and helps the mother recover after childbirth. Extended breastfeeding delays the return of menstruation and ovulation, which helps in birth spacing and reduces the risk of frequent pregnancies. Short breastfeeding duration may lead to closely spaced births and can negatively affect maternal and child health. Therefore, adequate breastfeeding duration is important for better reproductive health. Breastfeeding duration among Harijan women is generally short. In the study area, out of 667 women, 514 breastfed their children for about 12 months. Only 12 women continued breastfeeding for about 14 months, 42 women for about 16 months, and 68 women for about 18 months. Another 31 women were still breastfeeding their children who were below one year of age. This shown that most women stopped breastfeeding around one year.

Age Of Mother At Marriage:

Age of mother at marriage is an important factor of reproductive Health.

Marriage at a very young age often leads to early pregnancy, which increases the risk of maternal complications, anaemia, low birth weight, and infant mortality. Young mothers may also have limited access to healthcare and less awareness about nutrition and family planning. On the other hand, marriage at a mature age generally allows better physical development, education, and health awareness, leading to improved maternal and child health outcomes.

The data collected from the study area show that most women were married between the ages of 17-21 years, and this group has the highest number of children. Specifically, 208 children were born to mothers married at 17-19 years and 216 children to those married at 19-21 years. Early marriages at 15-17 years also accounts for a considerable number (69 children), indicating early onset of childbearing. In contrast, the number of children declines steady as the age at marriage increases, with the lowest number (21 children) among women married at 25-27 years and above. This suggests that earlier age at marriage is associated with higher fertility, which has important implications for reproductive health.

Age Of Mother at First Birth:

Age of mother at first birth is an important factor of reproductive health. A very young age at first birth increases health risks for both the mother and the child, such as pregnancy complications, anaemia, low birth weight, and higher infant and maternal mortality. Young mothers may also have limited knowledge and access to healthcare services. In contrast, first birth at a biologically and socially mature age is generally associated with better maternal nutrition, safer deliveries, and improved child survival. Therefore, age at first birth plays a significant role in determining reproductive health outcomes.

The collected data show a clear relationship between age of mother at first birth and total number of children. women who had their first birth at a younger age (16-18 years) show relatively higher fertility, with 3 out of 51 women having five or more children. In the 18-20 and 20-22 age groups, the proportion of women with five and above children is higher (7 women each out of 168 and 196 respectively), indicating that early initiation of childbearing extends the reproductive span and increases total fertility. In the 22-24 age group, only 3 out of 161 women had five or more children. Among women whose first birth occurred at 24-26 years, only 2 out of 67 women had four or more children. Similarly, in the 26-28 years and above group, 3 out of 24 women had four or more children. From the study, it is clear that earlier age at first birth is associated with a higher number of children, while delayed first birth contributes to lower fertility and smaller family size, reflecting better reproductive health outcomes.

Overall, the analysis demonstrates that reproductive health outcomes among the Harijan community show mixed progress. While institutional deliveries and breastfeeding practices suggest increasing engagement with healthcare services, the persistence of home deliveries and instances of child mortality reflect socio-economic barriers and unequal access to quality healthcare. These findings underline the importance of strengthening maternal and child health programmes, particularly in marginalised communities

Objective-3

To identify statistically significant socio-economic and healthcare-related factors influencing reproductive health outcomes.

This section examines the association between selected socio-economic and healthcare-related factors and key reproductive health outcomes among the Harijan community. Cross-tabulation and chi-square tests of association were employed to identify statistically significant relationships between independent variables (education, income, family type, and access to healthcare) and dependent variables such as place of delivery, type of birth, breastfeeding duration, and child survival status.

Educational Status and Reproductive Health Outcomes

Table-3.1.1- Place of Delivery * Education label of Respondents Cross tabulation

		Education label of Respondents				Total
		HSLC & above	High School	Primary	illiterate	
Place of Birth1	Nursing Home	1	8	15	4	28
	Govt Hospital	39	260	150	31	480
	Home	5	51	56	47	159
Total		45	319	221	82	667

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	75.475 ^a	6	.000
Likelihood Ratio	68.798	6	.000
Linear-by-Linear Association	31.031	1	.000
N of Valid Cases	667		

a. 2 cells (16.7%) have expected count less than 5. The minimum expected count is 1.89.

The cross-tabulation between educational status and place of delivery shows a clear pattern. Institutional deliveries (government hospitals and nursing homes) are more common among women with higher levels of education, whereas home deliveries are relatively higher among illiterate and primary-educated respondents. The Chi-square test indicates a statistically significant association between educational status and place of delivery ($\chi^2 = 75.475$, $p < 0.001$). This suggests that education plays an important role in influencing maternal healthcare utilisation.

Table-3.1.2: Duration of Breast Feeding (BF) * Education label of Respondents Cross taabulation

		Education label of Respondents				Total
		HSLC & above	High School	Primary	illiterate	
Duration of BF Birth1	6-10 Months	0	4	4	6	14
	10-12 Months	13	247	165	76	501
	12-20 Months	32	68	52	0	152
Total		45	319	221	82	667

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	14.485 ^a	6	.015

Likelihood Ratio	18.035	6	.006
Linear-by-Linear Association	5.106	1	.024
N of Valid Cases	667		
a. 4 cells (13.3%) have expected count less than 5. The minimum expected count is 1.54.			

The association between educational status and duration of breastfeeding is also found to be statistically significant ($\chi^2 = 14.485$, $p = 0.015$). Women with higher educational attainment tend to breastfeed for longer durations (10–12 months and above), whereas shorter durations are more common among illiterate and less-educated mothers. This indicates that maternal education positively influences infant feeding practices.

Table-3.1.3: Survival Status of Children * Education label of Respondents Count

		Education label of Respondents				Total
		HSLC & above	High School	Primary	illiterate	
Survival Status of Children	Survived	45	304	216	78	658
	Died	0	11	5	9	25
Total		45	315	221	87	667

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.203 ^a	3	.531
Likelihood Ratio	3.877	3	.275
Linear-by-Linear Association	.062	1	.804
N of Valid Cases	667		

a. 1 cells (15.0%) have expected count less than 5. The minimum expected count is .61.

However, the relationship between educational status and child survival status is not statistically significant ($\chi^2 = 2.203$, $p = 0.531$). This implies that although education affects healthcare practices and breastfeeding behaviour, it does not show a direct statistically significant association with child survival in the present dataset.

Family Income and Reproductive Health Outcomes

Table- 3.2.1: Place of Birth * Income of the Family Cross Tabulation

		Income					Total
		3000-5000	5000-10000	10000-15000	15000-20000	20000-25000 & Above	
	Nursing Home	2	15	11	0	0	28

Place of Birth	Govt Hospital	53	360	28	19	20	480
	Home	20	107	14	6	12	159
Total		75	482	53	25	32	667

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	45.889 ^a	8	.000
Likelihood Ratio	31.391	8	.000
Linear-by-Linear Association	.626	1	.429
N of Valid Cases	667		
a. 4 cells (19.0%) have expected count less than 5. The minimum expected count is 1.05.			

The association between family income and place of delivery is statistically significant ($\chi^2 = 45.889$, $p < 0.001$). Respondents belonging to higher income groups show a greater preference for institutional deliveries compared to those in lower income categories, where home deliveries are relatively more common. This highlights the importance of economic resources in accessing healthcare services.

Table-3.2.2: Survival Status of Child * Income of the Family Cross tabulation

		Income					Total
		3000-5000	5000-10000	10000-15000	15000-20000	20000-25000 & Above	
Survival Status of children	Survived	66	472	48	24	32	642
	Died	9	10	5	1	0	25
Total		75	482	53	25	32	667

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.269 ^a	4	.686
Likelihood Ratio	4.014	4	.404
Linear-by-Linear Association	.069	1	.793
N of Valid Cases	667		
a. 4 cells (20.0%) have expected count less than 5. The minimum expected count is .34.			

In contrast, the association between family income and child survival status is not statistically significant ($\chi^2 = 2.269$, $p = 0.686$). This suggests that although income influences the choice of place of delivery, it does not independently determine child survival outcomes in the study population.

Family Type and Reproductive Health Outcomes

Duration of BF Birth1 * Type of Family Crosstabulation Count				
		Type of Family		Total
		Joint Family	Nucleus Family	
Duration of BF Birth1	6-10 Months	6	8	14
	10-12 Months	87	427	514
	12-20 Months	18	121	139
Total		111	556	667

Chi-Square Tests			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.542 ^a	2	.170
Likelihood Ratio	4.938	2	.085
N of Valid Cases	667		
a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 1.33.			

The relationship between family type (joint or nuclear) and breastfeeding duration is found to be statistically insignificant ($\chi^2 = 3.542$, $p = 0.170$). This indicates that family structure does not have a strong influence on breastfeeding duration among the respondents, and similar feeding practices are observed across both family types.

Access to Healthcare Services and Reproductive Health Outcomes

Table-3.4: Place of Delivery * Access to Health care Service Cross Tabulation				
		Access to Health care Service		Total
		No	Yes	
Place of Birth	Nursing Home	14	14	28
	Govt Hospital	0	480	480
	Home	159	0	159
Total		173	494	667

Chi-Square Tests			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	630.560 ^a	2	.000
Likelihood Ratio	724.762	2	.000
N of Valid Cases	667		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 7.26.			

A highly significant association is observed between access to healthcare services and place of delivery ($\chi^2 = 630.560$, $p < 0.001$). All respondents who reported access to healthcare services delivered their babies in government hospitals or nursing homes, while those without access largely opted for home deliveries. This finding strongly demonstrates that access to healthcare facilities is a critical determinant of safe and institutional delivery practices.

The analysis reveals that **educational status, family income, and access to healthcare services** are the most significant socio-economic and healthcare-related factors influencing reproductive health outcomes among the Harijan community. Education and income significantly affect the choice of place of delivery and breastfeeding practices, while access to healthcare services emerges as the strongest determinant of institutional delivery.

On the other hand, **family type does not show a significant association** with breastfeeding duration, and neither educational status nor family income shows a statistically significant relationship with child survival status in the present study. This indicates that while socio-economic factors influence maternal health practices, child survival may be affected by a complex interplay of additional factors such as nutrition, postnatal care, and environmental conditions.

Overall, the findings underline the importance of improving **female education, economic conditions, and healthcare accessibility** to enhance reproductive health outcomes among marginalised communities. Targeted policy interventions focusing on these areas are essential for achieving better maternal and child health and reducing socio-economic disparities.

Logistic Regression Analysis:

To further examine the independent influence of socio-economic factors on reproductive health outcomes among the Harijan (Dalit) community in Assam, Binary Logistic Regression analysis was employed. While Chi-square analysis helps identify significant associations between socio-economic characteristics and reproductive health variables, it does not explain the independent contribution of each predictor variable when multiple factors are considered simultaneously. Therefore, Binary Logistic Regression was used to estimate the likelihood of specific reproductive health outcomes based on selected socio-economic determinants.

In this study, three important reproductive health indicators were considered as dependent variables: **Place of Delivery, Child Survival Status** and **Breastfeeding Duration**. Separate logistic regression models were estimated for each dependent variable to assess the effect of socio-economic variables on these outcomes.

For Model 1, the dependent variable was **Place of Delivery**, coded as 1 for Institutional Delivery and 0 for Home Delivery. For Model 2, the dependent variable was **Breastfeeding Duration**, coded as 1 for Adequate Breastfeeding (> 12Months) Duration and 0 for Inadequate (<12 Months) Breastfeeding Duration.

The independent variables included five socio-economic factors: **Educational Status, Family Income, Occupation, Family Type, Age at Marriage, Family Type and Age at First Birth**. These variables were selected based on their theoretical relevance and observed associations in earlier analyses. The logistic regression

model estimates the probability of occurrence of a specific reproductive health outcome by examining the effect of these predictor variables.

The results of logistic regression were interpreted using regression coefficients (B), Wald statistics, significance values (p-value), and odds ratios [Exp(B)]. A p-value less than 0.05 was considered statistically significant.

However, **Model 2 and Model 3**, where the dependent variables were **Child Survival Status and Breastfeeding Duration** respectively, were found to be statistically non-significant and did not produce reliable estimates. Therefore, these models were not considered for final interpretation, and the analysis for these variables was primarily based on Chi-square tests.

Model-1: Place of Delivery

Table-3.5: Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
Step 1	Step	155.069	12	.000
	Block	155.069	12	.000
	Model	155.069	12	.000
Step 2 ^a	Step	-.183	1	.669
	Block	154.886	11	.000
	Model	154.886	10	.000
Step 3 ^a	Step	-3.576	2	.167
	Block	151.310	9	.000
	Model	151.310	9	.000
a. A negative Chi-squares value indicates that the Chi-squares value has decreased from the previous step.				

The Omnibus Test is statistically significant ($\chi^2 = 155.069$, $p < 0.001$), indicating that the binary logistic regression model significantly improves prediction of place of delivery compared to the null model.

This means the socio-economic variables collectively have a significant effect on place of delivery.

Table-3.6: Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	425.713 ^a	.207	.357
2	425.896 ^a	.207	.356
3	429.472 ^a	.203	.349
a. Estimation terminated at iteration number 7 because parameter estimates changed by less than .001.			

The logistic regression model explains between **20.3% and 34.9%** of the variation in place of delivery.

This suggests a moderate explanatory power of the model.

Table-3.7: Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	5.081	8	.749
2	2.367	7	.937
3	7.251	7	.403

The Hosmer-Lemeshow goodness-of-fit test is non-significant ($p = 0.403 > 0.05$), indicating that the model fits the data well.

Thus, the final logistic regression model is a good fit.

Table-3.8: Classification Table^a

	Observed		Predicted		
			Place of Delivery		Percentage Correct
			Home	Institutional (Govt Hospital or Nursing Home)	
Step 1	Place of Delivery	Home	42	63	40.0
		Institutional (Govt Hospital or Nursing Home)	23	539	95.9
	Overall Percentage				87.1
Step 2	Place of Delivery	Home	42	63	40.0
		Institutional (Govt Hospital or Nursing Home)	22	540	96.1
	Overall Percentage				87.3
Step 3	Place of Delivery	Home	37	68	35.2
		Institutional (Govt Hospital or Nursing Home)	21	541	96.3
	Overall Percentage				86.7

a. The cut value is .500

The model correctly classified **86.7%** of cases. This indicates strong predictive accuracy of the model for predicting institutional delivery. However:

- Home delivery prediction = weaker (**35.2%**)

- Institutional delivery prediction = very strong (96.3%)

This means the model predicts institutional delivery much better than home delivery.

Variables in the Equation									
		B	S.E.	Wald	df	Sig.	Exp(B)	95% C. I. for EXP(B)	
								Lower	Upper
Step 1 ^a	Revised Education label			82.809	3	.000			
	Revised Education label (1)	4.385	1.094	16.072	1	.000	80.200	9.403	684.067
	Revised Education label (2)	2.991	.345	74.986	1	.000	19.911	10.117	39.187
	Revised Education label (3)	1.902	.319	35.478	1	.000	6.696	3.582	12.519
	Occupation			4.232	2	.121			
	Occupation (1)	.719	.753	.911	1	.340	2.052	.469	8.985
	Occupation (2)	.198	.747	.070	1	.791	1.219	.282	5.276
	Income of the family			24.633	2	.000			
	Income of the family (1)	1.688	.376	20.198	1	.000	5.407	2.590	11.288
	Income of the family (2)	.579	.491	1.388	1	.239	1.784	.681	4.675
	Type Family (1)	.147	.342	.185	1	.667	1.158	.593	2.263
	Age Mother Marriage			3.541	2	.170			
	Age Mother Marriage (1)	-1.477	1.020	2.094	1	.148	.228	.031	1.687
	Age Mother Marriage (2)	-.868	.952	.833	1	.362	.420	.065	2.710
	Age Mother First Birth			6.958	2	.031			
	Age Mother First Birth (1)	.269	.684	.155	1	.694	1.309	.342	5.006
	Age Mother First Birth (2)	.979	.605	2.620	1	.106	2.662	.813	8.714
	Constant	-1.587	1.159	1.873	1	.171	.205		
Step 2 ^a	Revised Education label			82.939	3	.000			
	Revised Education label (1)	4.371	1.093	16.007	1	.000	79.152	9.299	673.720
	Revised Education label (2)	2.989	.345	75.023	1	.000	19.870	10.103	39.081
	Revised Education label (3)	1.911	.318	36.003	1	.000	6.759	3.621	12.618
	Occupation			4.205	2	.122			

	Occupation (1)	.690	.750	.846	1	.358	1.993	.459	8.662
	Occupation (2)	.168	.744	.051	1	.821	1.183	.275	5.083
	Income of the family			25.643	2	.000			
	Income of the family (1)	1.706	.373	20.917	1	.000	5.507	2.651	11.441
	Income of the family (2)	.583	.491	1.410	1	.235	1.792	.684	4.694
	Age Mother Marriage			3.552	2	.169			
	Age Mother Marriage (1)	-1.463	1.019	2.061	1	.151	.232	.031	1.706
	Age Mother Marriage (2)	-.850	.950	.801	1	.371	.427	.066	2.750
	Age Mother First Birth			6.821	2	.033			
	Age Mother First Birth (1)	.265	.686	.149	1	.699	1.303	.340	4.998
	Age Mother First Birth (2)	.966	.606	2.544	1	.111	2.629	.802	8.620
	Constant	-1.460	1.119	1.702	1	.192	.232		
Step 3 ^a	Revised Education label			82.564	3	.000			
	Revised Education label (1)	4.347	1.093	15.832	1	.000	77.254	9.077	657.481
	Revised Education label (2)	2.960	.342	74.716	1	.000	19.289	9.860	37.734
	Revised Education label (3)	1.883	.316	35.552	1	.000	6.571	3.539	12.200
	Occupation			4.605	2	.100			
	Occupation (1)	.768	.737	1.085	1	.298	2.156	.508	9.147
	Occupation (2)	.229	.731	.098	1	.754	1.258	.300	5.273
	Income of the family			24.953	2	.000			
	Income of the family (1)	1.676	.370	20.522	1	.000	5.346	2.588	11.041
	Income of the family (2)	.595	.488	1.487	1	.223	1.813	.697	4.715
	Age Mother First Birth			16.838	2	.000			
	Age Mother First Birth (1)	-.662	.486	1.857	1	.173	.516	.199	1.337
	Age Mother First Birth (2)	.408	.489	.696	1	.404	1.504	.577	3.921
	Constant	-2.005	.914	4.810	1	.028	.135		
a. Variable (s) entered on step 1: Revised Education label, Occupation, Income of the family, Type Family, Age Mother Marriage, Age Mother First Birth.									

Variables retained in final model:

- Education
- Occupation
- Income
- Age at First Birth

Variables removed:

- Family Type
- Age at Marriage

This means Family Type and Age at Marriage were not significant predictors.

Significant Predictors:

A. Education (Highly Significant)

Variable	Sig	Exp(B)
Education Overall	0.000	-

All education categories are highly significant. Educational status is a highly significant predictor of place of delivery ($p < 0.001$).

Compared to the reference group (Illiterate), women with higher education are significantly more likely to opt for institutional delivery.

This indicates that higher educational attainment substantially increases the likelihood of institutional delivery.

B. Income (Significant)

Variable	Sig	Exp(B)
Income Overall	0.000	-

Family income significantly influences place of delivery ($p < 0.001$). Women from higher-income households are more likely to choose institutional delivery compared to lower-income households.

Income category (Income 20,000 & Above) is significant: OR = **5.346**

This means respondents in this income category are about **5.3 times more likely** to choose institutional delivery compared to the reference group.

Non Significant Predictors are Occupation and Age at First Birth.

Occupation ($p=0.100$) does not significantly influence place of delivery in the final model.

Age at first birth showed partial influence on place of delivery in the overall model

Binary logistic regression analysis was conducted to examine the influence of socio-economic factors on place of delivery among respondents. The omnibus test indicated that the model was statistically significant ($\chi^2 =$

155.069, $p < 0.001$), suggesting that the predictors significantly contributed to the model. The Nagelkerke R^2 value of 0.349 indicated that the model explained 34.9% of the variation in place of delivery. The Hosmer-Lemeshow test was non-significant ($p = 0.403$), confirming good model fit. The model correctly classified 86.7% of cases.

Among the predictors, educational status and family income emerged as significant determinants of place of delivery. Higher educational attainment significantly increased the likelihood of institutional delivery. Similarly, respondents from better income groups were more likely to choose institutional delivery. Occupation and age at first birth showed limited influence in the final model, while family type and age at marriage were excluded due to lack of statistical significance.

The findings of **Objective 1** revealed that the socio-economic condition of the respondents reflects moderate to low socio-economic status. A large proportion of respondents had low educational attainment, limited family income, and were engaged in low-income occupations or informal work. Early marriage and early motherhood were also prevalent among many respondents, indicating socio-economic vulnerability within the community.

The findings of **Objective 2** showed mixed reproductive health outcomes among the respondents. While a large majority of women reported institutional delivery and prolonged breastfeeding duration, challenges such as child mortality, early age at marriage, and early age at first birth remain significant concerns. These findings suggest that despite improvements in access to maternal healthcare services, several reproductive health challenges still persist within the community.

The findings of **Objective 3** indicated that socio-economic factors significantly influence reproductive health outcomes. Chi-square analysis revealed significant associations between socio-economic variables and several reproductive health indicators. Binary logistic regression analysis further confirmed that educational status and family income are the most important determinants of place of delivery. Women with higher educational attainment and better family income were significantly more likely to opt for institutional delivery compared to women with lower education and poor economic background. These findings highlight the critical role of socio-economic empowerment in improving reproductive health outcomes. However, logistic regression models for child survival status and breastfeeding duration were not statistically significant and did not yield reliable estimates.

Overall, the study concludes that socio-economic inequality remains a major determinant of reproductive health outcomes among the Harijan (Dalit) community in Assam. Improvements in education, income generation, awareness, and healthcare accessibility are essential for enhancing reproductive health outcomes and reducing health disparities within this marginalized community. Focused policy interventions and community-based awareness programs are necessary to ensure inclusive and equitable reproductive healthcare services.

DISCUSSION AND CONCLUSION

The present study provides a comprehensive statistical examination of the socio-economic conditions and reproductive health outcomes of the Harijan (Dalit) community in selected districts of Assam. The findings reveal that although some progress has been made in access to basic amenities and healthcare services, substantial socio-economic disparities and health-related vulnerabilities persist.

The analysis of socio-economic and demographic characteristics indicates that most respondents belong to lower income groups and are engaged in informal or low-paying occupations. Housing conditions and access to basic amenities such as electricity, sanitary toilets, drinking water, and LPG for cooking show moderate improvement; however, the continued presence of kutcha houses, reliance on kerosene and firewood, and limited access to piped water reflect uneven development and infrastructural gaps. These conditions are consistent with earlier studies highlighting persistent deprivation among marginalised communities.

Reproductive health outcomes show mixed patterns. A considerable proportion of women reported institutional deliveries, particularly in government hospitals, which reflects increased awareness and utilisation of maternal healthcare services. Nevertheless, home deliveries continue to exist, indicating barriers related to accessibility,

affordability, and cultural practices. Breastfeeding practices demonstrate variation, with most women breastfeeding for recommended durations, while some reported shorter periods, possibly due to work responsibilities, lack of awareness, or health-related constraints. Although child survival rates are generally high, the presence of child mortality cases highlights continuing challenges related to maternal nutrition, postnatal care, and healthcare access.

The inferential analysis further identifies key socio-economic and healthcare-related determinants influencing reproductive health outcomes. Educational status and family income show statistically significant associations with place of delivery and breastfeeding duration, confirming that better socio-economic position enhances healthcare utilisation and healthy practices. Access to healthcare services emerges as the strongest determinant of institutional delivery, underscoring the critical role of healthcare infrastructure in shaping maternal health behaviour.

However, some factors such as family type do not exhibit significant associations with breastfeeding duration, and neither education nor income shows a statistically significant relationship with child survival status in this study. This suggests that child survival is influenced by a broader combination of factors, including environmental conditions, nutrition, and quality of postnatal care, beyond socio-economic status alone.

Overall, the findings reinforce the argument that reproductive health outcomes among marginalised communities are deeply rooted in socio-economic inequalities and unequal access to healthcare services. Statistical evidence from this study highlights the need for community-specific, data-driven interventions rather than uniform policy approaches.

The study concludes that the Harijan (Dalit) community in the selected districts of Assam continues to experience moderate socio-economic development alongside persistent inequalities in living conditions and health outcomes. While improvements are evident in access to sanitation, electricity, and institutional delivery services, significant gaps remain in housing quality, clean energy use, and comprehensive healthcare access.

The analysis establishes that **education, family income, and access to healthcare services** are the most significant factors influencing reproductive health outcomes, particularly place of delivery and breastfeeding practices. Access to healthcare facilities plays a decisive role in promoting institutional deliveries, while higher educational attainment and better economic status are associated with healthier maternal practices. In contrast, child survival does not show a direct statistically significant association with some socio-economic factors, indicating the influence of multiple interacting determinants.

The findings highlight the importance of strengthening female education, improving household economic conditions, and ensuring universal access to healthcare services in order to enhance reproductive health outcomes among marginalised populations. Policy initiatives must focus on targeted maternal and child health programmes, community awareness campaigns, and infrastructure development in Harijan-dominated areas.

In conclusion, this study demonstrates the relevance of statistical analysis in understanding community-specific socio-economic and health challenges and provides empirical evidence to support informed policy formulation and targeted interventions aimed at achieving inclusive public health and social development in:

REFERENCES

1. Ahuja, Ram. (1999) Society in India, Rawat Publications, Jaipur, India.pp-74-96
2. Arora, G. (1983), "Socio-economic determinants of fertility", the journal of family welfare.
3. Baghel, Indu. (2016), "Dalit women's movement in modern India", New Delhi. PP. 1-75.
4. Bongaarts, J. and Potter, R.G. (1983), "Fertility, Biology and behavior: An analysis of the Proximate Determinants". Academic press, New York, London.
5. Das, D.P. (1985) The Untouchable Story, Publisher: South Asia Books. Shodhganga.inflibnet.ac.in. pp179-184
6. Deulkar, Sita (2004), "Dalits Past Present and Future" Dominant Publication, New Delhi, PP.149- 222.

7. Dutta, K.B., (2005), "Dynamics of Dalits, Old issues and new challenges", Akansha Publishing House, New Delhi. Pp 73-74
8. Goswami, Nayanjyoti and Sarma Chandana (2020) "Caste, Gender and Education among the Harijan of Guwahati City", -PJAE, 17 (7) (2020)
9. Jejeebhoy, S.J. (1998), "Women education autonomy and reproductive behaviour; experience from developing countries", Clarendon Press. DOI: 10.25133/JPSSV 28n4.024.
10. Jha, A.K. (2004) Dalilisation of Dalits, Adhyayan Publishers & Distributors <https://www.abebooks.com>
11. Jhansi, S.C. (2019), "Women and Reproductive Health" Shipra Publication, New Delhi, PP.17-82.
12. Kumar, Raj (2012), "Essays on Dalits", Discovery Publication House, New Delhi.
13. Ramanathan, Mala, (1998), "Reproductive Health Index: measuring Reproduction or Reproductive Health? Economic and Political Weekly.33(49). Dec 5-11, P. 3104-3107
14. Rao, G. Samba Siva & Rao, Allu Gowri Sakar (2015), Status of Dalit Women, Discovery Publishing House New Delhi. P10-21
15. Samantha, M. P. Lowe and Moore Speneer (2014), "Social network and female reproductive choice in the developing world" <https://isudyrugyp.cf>
16. Sharma, R.N. (1990), "Society in India", Surajit Publication, PP.35-44.
17. Sultana, Parbin (2020), "The impact of socio-economic and demographic factors on first birth intervals: a Hazard Model analysis".
18. (Government Record) Directorate of Economics and statistics: Statistical Handbook, Assam, 2001
19. (Government Record) National Family Health Survey (NFHS)-5, ASSAM, India