CHAPTER 4

RESULTS

This chapter documents the findings of the research broadly in three different phases. The first phase identifies the level of wealth-based inequality and investigates its effect on healthcare provisions' spatial and social inequality among multi-dimensionally weaker sections. Phase one includes the respondents' demographic and household characteristics, followed by the availability and accessibility of healthcare services in the region. The second phase broadly engages with the factors that contribute to healthcare providers' role in advancing health equality in the community. This phase includes the healthcare providers' functioning and effectiveness for achieving healthcare well-being and spatial equality of healthcare provisions. The third phase focuses on news media's role in representing healthcare inequality and way forward for a structural model for communicating about health disparities.

Study – Phase 1

4.1 Objective – 1

To determine the level of inequality of the community across the population in the bordering districts of India-Bangladesh in Assam.

The normal distribution of data is the underlying assumption to conduct a parametric analysis of data, particularly inferential statistics. As already mentioned in the previous chapter, this study employed both descriptive and inferential statistics to interpret the phenomenon, and it is crucial to test the normalcy of the data.

Figure 9: Normal Distribution Curve of Women's age
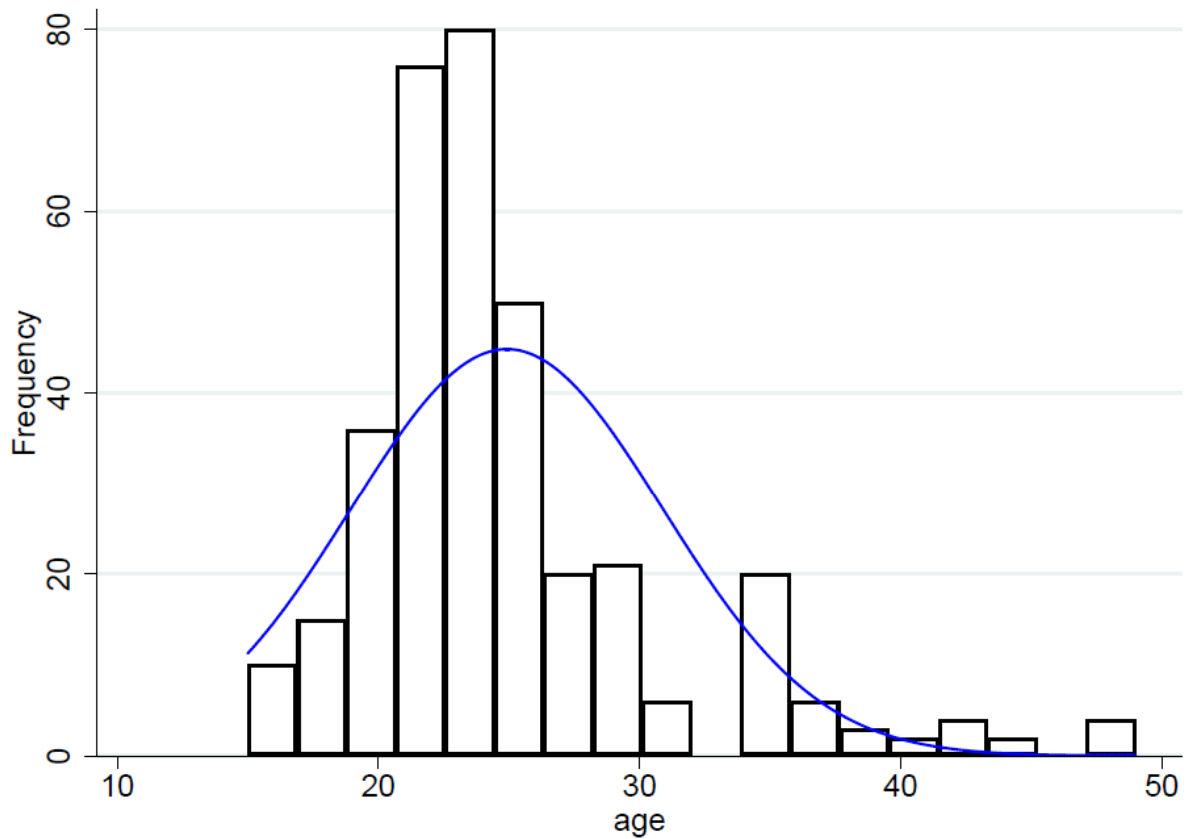
4.1.1 Normal Distribution of Women's Age

The graph below presents the distribution of women's age in the studied area. The number of samples (n) is 355, where the mean age of the studied population is 24.92 years and SD = 5.97.

Table 3 Skewness and Kurtosis

N	Skewness	Kurtosis
355	1.49	1.88

The skewness and kurtosis test of the studied sample is calculated to measure data normalcy effectively. Skewness is a measure of symmetry, while kurtosis is a measure of whether the data are heavy-tailed or light-tailed (Stockemer, 2019). Data sets with low kurtosis tend to have

fewer outliers, while high kurtosis tends to have outliers (*ibid*). The acceptable range for the normalcy of the data is between ± 2 (Bryman, 2012); therefore, the data confirms the normalcy to conduct a parametric test.

4.1.2 Sample Characteristics

As mentioned in the previous chapter, the present study used two types of questionnaires: household and individual response to interview 355 women from the age group of 15-49. The demographic and socioeconomic features of the examined sample are shown in the table below. The examined population's average household size is 5.98 people per family, which is 33.03 and 25.96 percent greater than the national average of 4.45 and 4.7 members per family, respectively (Census of India, 2011).

Table 4: Sample Characteristics of the Population

Background Characteristics	Categories	n	%
Age Group	15-25	232	65.35
	26-39	111	31.27
	40-49	12	3.38
Level of Education	No Education	81	22.82
	Primary	90	25.35
	Secondary	142	40
	Higher	42	11.83
Religion	Hindu	110	30.99
	Muslim	245	69.01
Wealth Index	Poor	140	40.58
	Mid	75	21.74

	Least Poor	130	37.68
Housing Quality	Unimproved	130	40
	Mid	65	20
	Improved	130	40

4.1.3 Measure of Inequality

This phase of the study aims to estimate the level of wealth-based inequality existing among the community residing near India's border areas that are vital for healthcare utilization and health outcome of the population. The wealth-based inequality level is computed through the *Gini Coefficient value*, and graphically laid down through the Lorenz curve. The Gini coefficient has a value between 0 and1, with 0 indicating perfect equality and 1 indicating complete inequality.
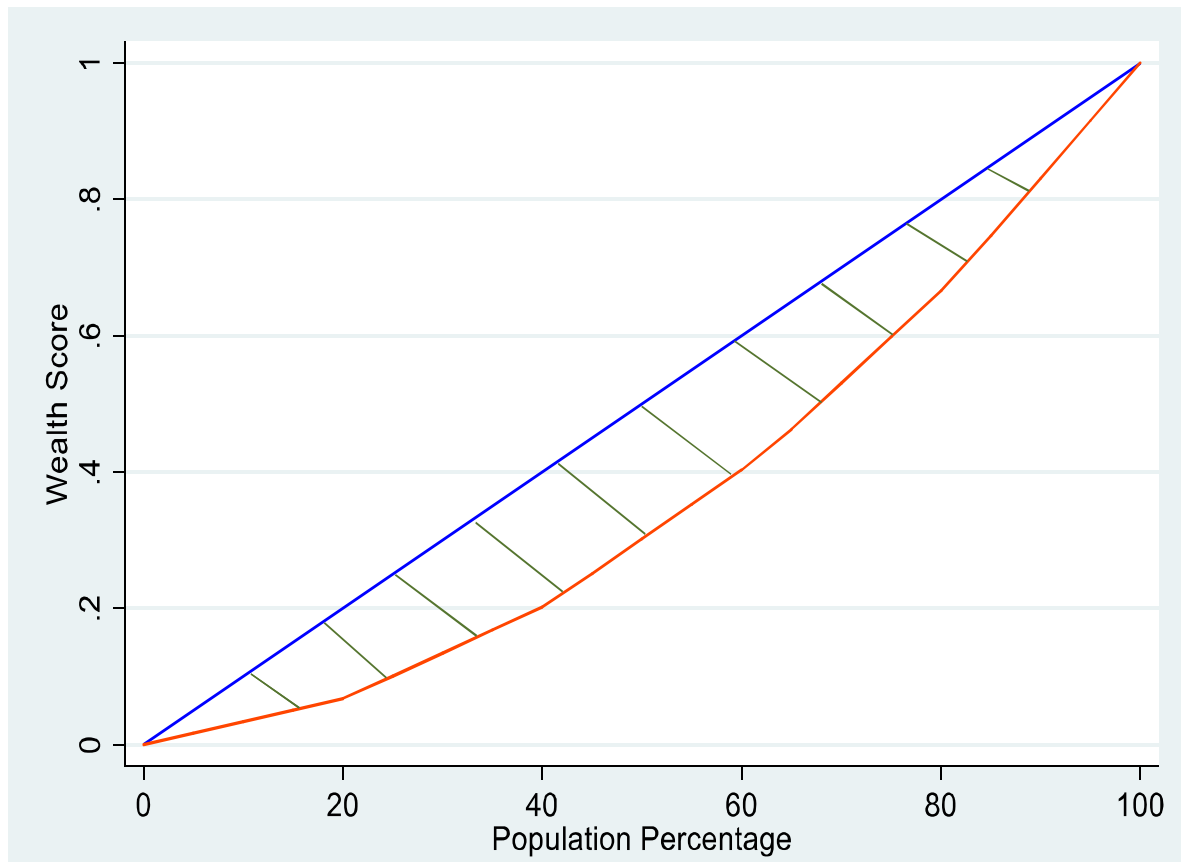
Figure 10 Lorenz Curve

Figure 10 presents the level of inequality among the studied population. The blue line represents perfect equality, while the red line presents equality at 0.267 level.

4.3 Objective   2

To analyse the healthcare provisions for the population in the rural regions bordering the international border with Bangladesh.

    a) To examine the equity in utilization of maternal and child healthcare services in the three districts of Assam

    b) To analyse the effect of socioeconomic condition on access to maternal and child healthcare services in Assam's three districts.

4.3.1 Measuring Equity in Utilization of Healthcare Services

Equity in health utilization measurement has been illustrated in many studies through the simple and complex measure. This study employs a composite measure of inequity that helps to gauge the amount of inequity existing across all sub-groups of a population. The composite measure has two types of measurement: The Slope Index of Inequality (SII), i.e., to assess the absolute inequality and Concentration Index (CI), i.e., to assess the relative inequality. The social and spatial inequality in healthcare utilization (Chaudhuri, 2012b; Mosquera et al., 2017; Owen O'Donnell, Eddy van Doorslaer, Adam Wagstaff, 2008) in the borderland region is computed by the measuring the relative inequality using concentration index and concentration curve. Concentration Index (CI) is directly related to the concentration curve. It helps quantify the degree of socioeconomic inequality in some health sector variables (Krieger et al., 2018). The CI is defined as twice the area between the concentration curve and the line of equality. In the case of no socioeconomic related inequality, the concentration index is zero. The index is bounded between -1 and 1. The index takes a negative value when the curve lies above equality, indicating a disproportionate concentration of the health variable among the poor, and a positive value when it lies below the line of equality. Given its advantages, in this study, the CI is used to compute inequity in healthcare services utilization.

Table 5: Healthcare Variables for Utilization of Maternal and Child healthcare services

Outcome Variable	Categories	n	%
Govt Facilities	Yes	283	79.72
	No	72	20.28
Place of Delivery	Institutional	212	71.38
	Non-Institutional	85	28.62
Attended by Skilled	Yes	222	26

	No	78	74
Vitamin-A for Women	Yes	219	84.23
	No	41	15.77
Iron Folic Tablet	Yes	321	90.42
	No	34	9.58
Govt Ambulance	Yes	22	10.48
	No	188	89.52
Financial Assistance	Yes	161	67.09
	No	79	32.92
Health Check-up at Health Centre	Yes	262	81.88
	No	58	18.13
Supplementary Nutrition	Yes	189	53.24
	No	166	46.76
Child-Iron Tablets	Yes	207	79.62
	No	53	20.38
Child- Worm Tablets	Yes	207	81.57
	No	48	18.43
Child-Polio Vaccine	Yes	223	85.77
	No	37	14.23
Child-BCG Vaccine	Yes	225	86.54
	No	35	13.46
DPT Injection	Yes	187	73.62
	No	67	26.38
Hepatitis-B Injection	Yes	198	76.15

	No	62	23.85
Measles Injection	Yes	190	73.08
	No	70	26.92
Antenatal Care	Yes	302	85.07
	No	53	14.93
Postnatal care	Yes	161	45.35
	No	194	54.65
Menstrual Hygiene	Yes	204	57.46
	No	151	42.54
Prevalence of Diarrhea	Yes	141	53.41
	No	123	46.59
Prevalence of Fever	Yes	163	62.21
	No	99	37.79
Seek treatment for diarrhea	Yes	60	41.67
	No	84	58.33
Seek Treatment for Fever	Yes	95	57.23
	No	71	42.77

As discussed in the previous section, the wealth index is computed from the household consumable items, which is used as an important predictor for the utilization of healthcare services. The outcome variables are presented above to compute the equity in the utilization of maternal and child healthcare services.

Table 5 presents the rate of opting for government services for any kind of illness or disease that is higher (79.72%) among the studied population. The available public healthcare services include District Civil Hospital, Urban Health Centres (UHC), Community Health Centres

(CHC), Primary Health Centres (PHC), and Sub-Centres (SC). Similarly, 71.38 percent of the studied sample had institutional delivery; subsequently, 74 percent of them are attended by skilled health workers. The data reported that 84.23 percent of the studied population received vitamin-A medicine for developing the baby with a strong immune system. Moreover, 90.4 percent of women receive iron folic tablets crucial for iron deficiency during the delivery. It is observed that only 10.48 percent of the studied population during their pregnancy had access to government ambulance. 67.09 percent of the women received financial services like Janani Suraksha Yojana (JSY) from the government dedicated to promoting institutional delivery. However, only 53.24 percent of the women received supplementary nutrition during the time of pregnancy. 81.88 percent of the women in the studied region visited at least visited a health camp organized for pregnant women. The rate of receiving vaccination and immunization is significantly higher in the studied population. It is noteworthy that 85.07 percent of women visited for more than four ANC visits. However, only 45.35 women received postnatal care in the studied population. Only 57 percent of women in the studied area have safe menstrual hygiene. The data also showed the prevalence of diseases such as fever and diarrhea in the last three months. The prevalence of diarrhea and fever among the children in the studied population is 53.41 and 62.21 percent. However, the percentage of seeking treatment is less (41.67%) than fever (57.23%).

4.3.2 Concentration Index

The table below shows the proportion of health variables concerning wealth as a predictor. The positive or negative index value reflects the proportionate or disproportionate health variable concentration among the population with wealth-wise ranking. The table shows the nature of inequity in the utilization of maternal and child health services among the least poor to the poorest quintile at a 95% confidence interval and a 5% margin of error.

Table 6: Concentration Index on Utilization of Maternal and Child healthcare services

Outcome Variable	n	Index Value	SE	*p*
Government Facilities	355	0.358	0.057	0.001***
Place of Delivery	287	0.058	0.007	0.001***
Attended by a skilled worker	290	0.11	0.017	0.001***
Vitamin-A for Women	250	0.08	0.014	0.001***
Iron Folic Tablet	345	0.077	0.008	0.001***
Government Ambulance during pregnancy	210	-0.32	0.114	0.04**
Financial Assistance during Pregnancy	235	0.067	0.025	0.04**
Health Check-up	310	0.0107	0.014	0.472
Supplementary Nutrition	345	0.32	0.027	0.001***
Child Iron Tablets	250	0.111	0.016	0.001***
Child Worm Tablets	245	0.094	0.015	0.001***
Child-Polio Vaccine	250	0.081	0.013	0.001***
Child BCG injection	250	0.074	0.012	0.001***
Child DPT Injection	244	0.04	0.021	0.06
Child Hepatitis-B	250	0.038	0.019	0.05**
Measles Injection	250	0.054	0.021	0.01*
Antenatal Care	345	0.247	0.031	0.001***
Postnatal Care	345	0.164	0.032	0.001***
Menstrual Hygiene	355	0.242	0.022	0.001***
Prevalence of Diarrhea	264	-0.178	0.315	0.001***

Prevalence of Fever	262	-0.08	0.269	0.03**
Seeking treatment for Diarrhea	144	0.25	0.053	0.001***
Seeking treatment for Fever	166	0.338	0.027	0.001***

Level of Significance *p < 0.01; **p < 0.05; ***p < 0.001 (based on bootstrapped standard errors)

All the healthcare utilization variables, except government ambulance usage during the pregnancy, are concentrated towards the poorer section and are significant at 0.001 level. The data revealed that government ambulance service utilization is concentrated towards the least poor section (-0.32) significant at 0.004 level. The inequity persistent is high; however, it is noteworthy that most of the utilization is concentrated towards the poorer section. The table also revealed maximum antenatal care visits from the poorer section compared to the least poor section at 0.247. The vaccination and immunization for the mother and child are proportionately distributed across the population ($0.3 - 0.8$ CI). The concentration of prevalence of diseases such as fever and diarrhea in the studied area is computed using the housing and dwelling index as a rank variable. The concentration of diarrhea (-0.178) and fever (-0.08) is high among the household with the unimproved housing condition, and significant at the level of 0.001.

4.3.3 Effect of Socioeconomic Conditions on the Accessibility of Healthcare Services

This section presents the effect of socioeconomic determinants: age, level of education, and wealth of household on maternal and child healthcare services. The prevalence of disease: fever and diarrhea are measured using the housing quality index, computed from the housing and dwelling characteristics responsible for individuals' health outcomes.

Estimates for healthcare facilities and resources.

The socioeconomic effect on the access to healthcare facilities and resources in the present study is measured using four parameters: government facilities, place of delivery, attended

pregnancy by skilled personnel, and access to government ambulance The logistic regression analysis on access to resources and healthcare facilities is presented in the table below. Age, education level of women, and household money all have a major impact on treatment selection at the government healthcare institution.

Table 7: Logistic Regression Analysis of access to healthcare facilities and resources among women

Predictor Variable		Outcome Variable							
		Government Facilities		Place of Delivery		Skilled Personnel		Government Ambulance	
		OR	[95%CI]	OR	[95%CI]	OR	[95%CI]	OR	[95%CI]
Age Group	15-25	ref	ref	ref	ref	ref	ref	-	-
	26-39	2.841***	1.49-5.38	0.35***	0.18-0.71	0.72	0.36-1.43	-	-
	40-49	11.58***	2.86-46.85	0.14***	0.034-0.59	0.15*	0.37-0.65	-	-
Education Level	No Education	ref	ref	ref	ref	ref	ref	-	-
	Primary	0.716	0.24-2.1	1.2	0.52-2.77	1.51	0.67-3.42	-	-
	Secondary	1.34	0.46-3.87	0.93	0.42-2.06	1.65	0.74-3.71	-	-
	Higher	6.28***	1.84-21.43	0.45	0.11-1.81	0.71	0.17-2.81	-	-
Wealth Index	Poor	ref	ref	ref	ref	ref	ref	ref	ref
	Mid	1.15	0.42-3.14	1.21	0.57-2.53	0.83	0.39-1.76	1.64	0.51-5.36
	Least Poor	2.93*	1.25-6.88	17.95*	5.77-55.81	9.62***	3.09-29.09	0.72	0.43-1.18

| **Pseudo R²** | 0.191 | 0.209 | 0.174 | 0.217 |

Level of Significance *p < 0.01; **p < 0.05; ***p < 0.001 || ref = Reference category

Table 7 shows that the odds of women aged 26-39 years old, visiting government health facilities is 2.8 times more than the women from the age group 15-25. Women aged 40-49 are 11.6 times more likely than women aged 15-25 to frequent government healthcare institutions. It is 6.28 times more likely than women with higher education would visit the government health centre than women with no education. The wealth of families is substantial at the 0.01 level, where women from the least impoverished quintile are 2.9 times more likely than women from the worst quintile to utilise the government healthcare centre. Therefore, older women with higher education qualifications from the wealthier household are more likely to visit public healthcare centres than women with low education from the lowest quintile households.

Table 7 revealed that women's ages and household wealth are statistically significant at the 0.001 and 0.05 levels, respectively. Women between the ages of 26 and 39 are 65 percent less likely than women between the ages of 15 and 25 to give birth in a hospital. Similarly, women between the ages of 40 and 49 are 86% less likely than women between the ages of 15 and 25 to choose institutional delivery as a delivery location. Women from the least destitute families, on the other hand, are 18 times more likely than women from the most deprived sector to choose institutional delivery. Thereby, wealthier women of younger age are more likely to seek institutional delivery of their pregnancy than the older-aged women from the lowest quintile. Women's educational attainment has little bearing on their decision to give birth, which is more influenced by the income of their household.

The results revealed that the age of women and the income of the family influence their decision to seek treatment from professional healthcare providers. The odds of women aged 40-49 seeking treatment from skilled healthcare workers is likely to decrease by 85% than the younger women aged 15-25. Simultaneously, women's educational qualifications do not always influence their decision to seek care from qualified health experts.

Table 7 also showed that the population's socioeconomic characteristics have no significant association with access to government ambulance services.

Estimates for access to maternal services.

Antenatal care, postnatal care, and frequent health check-ups throughout pregnancy are the three factors used to assess women's use of maternal healthcare services. The table below depicts the impact of women's age and education, as well as individual household wealth, on access to services.

Table 8: Logistic Regression Analysis of access to maternal services among women

Predictor Variable		Outcome Variable					
		Antenatal Care		Health Check-ups		Postnatal Care	
		OR	[95%CI]	OR	[95%CI]	OR	[95%CI]
Age	15-25	ref	ref	ref	ref	ref	ref
Group	26-39	2.21***	1.31-3.74	3.32***	1.41-7.84	1.01	0.68-1.68
	40-49	0.68	0.13-3.42	0.54	0.074-3.98	0.38	0.78-1.88
Education	No Education	ref	ref	ref	ref	ref	ref
Level	Primary	1.74	0.83-3.67	30.23***	3.66-249.33	1.15	0.57-2.35
	Secondary	0.88	0.41-1.88	1.65	0.67-4.07	1.01	0.51-2.07
	Higher	2.16	0.79-5.89	0.87	0.26-2.91	1.23	0.49-3.11
Wealth	Poor	ref	ref	ref	ref	ref	ref
Index	Mid	2.52***	1.29-4.91	1.52	0.58-3.96	2.11*	1.13-3.93

Least Poor	3.78***	2.01-7.11	0.81	0.32-2.03	2.46***	1.37-4.43
Pseudo R^2		0.118		0.138		0.174

Level of Significance *p < 0.01; **p < 0.05; ***p < 0.001 || ref = Reference category || e = error

Antenatal care (ANC) is critical for reducing mother mortality. ANC usage was shown to be closely related to characteristics like as women's education, family circumstances, caste, and religion in studies (Singh *et al*., 2019). Several research have found that socioeconomic variables have a significant impact on maternal health services. The Indian government established recommendations for a minimum of four ANC visits, with the first one occurring as soon as the period is missed and during the first three months after missing the period. Regular ANC checkups safeguard and ensure the health of both the mother and the child. The checkup includes blood pressure, urine, weight, and abdominal tests, as well as Iron Folic Acid (IFA) tablets and two doses of Tetanus Toxoid (TT) injection urine and haemoglobin testing. This test allows for the evaluation of foetal development and health (MHD, NRHM, 2018). However, for this study, one ANC visit is also considered for analysis.

Table 8 shows that the wealth of households and women's age is statistically significant at the 0.001 level. The odds ratio represents how much the odds of outcome variable change for each unit change in the predictor variable. Here, the women from the age group of 26-39 are 2.21 times more likely to seek antenatal care than the age group of 15-25. Similarly, the odds of women from the median household are 2.5 times more likely to visit antenatal care than the poorest section of the population. Simultaneously, women from the least poor section are 3.8 times more likely than the poorest section to receive antenatal care.

Table 8 shows that women's age and education qualifications affect the choice to avail health check-ups during pregnancy. Women between the ages of 26 and 39 are 3.3 times more likely than women between the ages of 15 and 25 to seek routine health care. Moreover, the odds of

women with primary education qualification are 30.2 times more likely to seek health check-ups provided by the government than the women from the age group 15-25.

Labor, delivery, and the early postnatal period are critical for baby and maternal survival; yet, in low- and middle-income countries, most women and newborns do not receive optimal care (WHO, 2015). Postnatal care appointments should be planned as soon as possible following the birth, according to government recommendations. The postnatal complication occurs within the first 48 hours of birth and should be thoroughly monitored for both the mother and the child. In this study, any number of postnatal services provided by the health professional, whether at home or in the clinic, will be accounted for in the analysis. Despite the government's requirements for PNC within 42 days of birth, surveys in various areas of India have found that just two out of every ten women obtain the treatment (NRHM, 2018). As a result, it is necessary to grasp the economic driver in order to comprehend the underutilization of PNC in rural India.

Table 8 shows that access to postnatal care services is affected by household wealth, which is significant at the 0.01 and 0.001 levels. Women seeking postnatal care from middle-income households are 2.11 times more likely to do so than women from low-income households. Similarly, women's probabilities of receiving postnatal care increase 2.46 times greater in the least poor part than in the poorest sector.

Estimates for Child Care Treatment

Table 9 revealed that the age of mother and wealth of households plays a vital role in seeking care for children during diarrhea and fever. The age of mother and wealth shows a significant relationship with the people seeking treatment for their child in diarrhea and fever. The education qualification of the mother does not affect the decision for treatment.

Table 9: Logistic Regression Analysis of treatment of child

Predictor Variable		Outcome Variable			
		Diarrhea		Fever	
		OR	[95%CI]	OR	[95%CI]
Age Group	15-25	ref	ref	ref	ref
	26-39	2.97*	1.05-8.35	4.91***	1.52-15.82
	40-49	3.08	0.59-15.84	1.61	0.151-16.98
Education	No Education	ref	ref	ref	ref
Level	Primary	0.53	0.14-1.99	2.26	0.56-9.16
	Secondary	1.46	0.52-4.11	2.24	0.66-7.54
	Higher	e	e	e	e
Wealth Index	Poor	ref	ref	ref	ref
	Mid	0.75	0.21-2.68	7.99***	2.38-26.84
	Least Poor	e	e	e	e
Pseudo R^2		0.042		0.228	

Level of Significance *p < 0.01; **p < 0.05; ***p < 0.001 || ref = Reference category || e = error

Mother aged 26-39 are 2.9 times more likely than mothers aged 15-25 to seek treatment for their child's diarrhoea. In the event of diarrhoea, wealth and education have little bearing on the treatment option for the child. Meanwhile, a woman aged 26-39 is 4.9 times more likely than a mother aged 15-26 to seek treatment for her child's fever. Similarly, the affluence of the home influences the mother's selection regarding fever therapy for her child. Women from median families are eight times more likely than mothers from lower quintile households to seek treatment for their child's fever.

Study – Phase II

4.4 Objective – 3

To examine the functioning of healthcare providers towards addressing inequality in healthcare in the borderline areas of Assam

 a) *To identify the factors contributing to advancing equitable healthcare by the healthcare providers*

 b) *To assess the effect of sociodemographic factors on the functioning of healthcare providers*

4.4.1 Normal Distribution of Healthcare Professionals' Employed in the Borderland area.

The graph below presents the normal distribution of the n = 109 healthcare professionals based on healthcare professionals' education qualification and gender. To carry out a parametric test, normally distributed data is a necessary condition to be fulfilled.

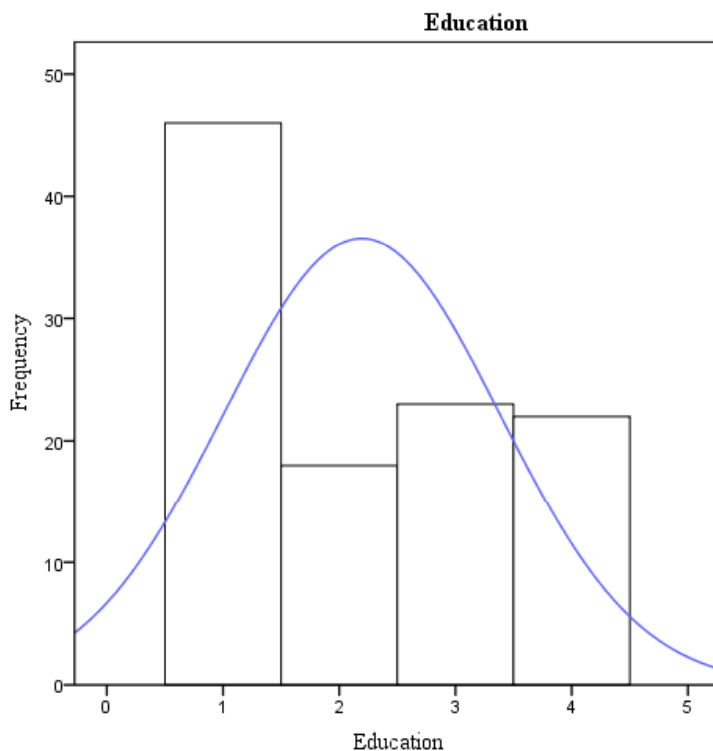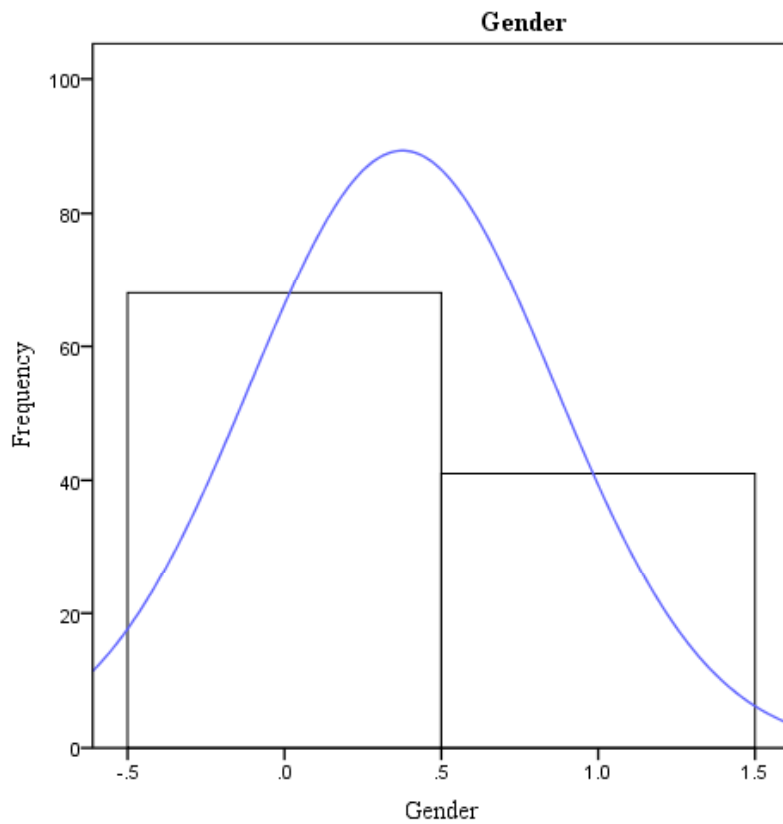*Figure 11 Normal Distribution Curve - Education*

Figure 12 Normal Distribution Curve - Gender

4.4.2 Skewness and Kurtosis

The acceptable range of skewness and kurtosis is ±2 (Bryman, 2012), and the values of the present study fall under the acceptable range confirming normalcy.

Table 10: Skewness and Kurtosis

Variable	No. of Observation	Skewness	Kurtosis
Education	109	0.357	-1.44
Gender	109	0.519	-1.76

4.4.3 Factor Analysis

This phase of the study focuses on identifying factors that contribute to advancing equitable healthcare. The data were collected using the Five-point Likert Scale from 109 respondents employed in PHCs and SCs in the borderland region. The study uses a factor analysis method of data reduction. Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity was conducted. KMO measure varies between 0 to 1, and values closer to 1 are better. Meanwhile, Bartlett's test of sphericity tests the null hypothesis that the correlation matrix is an identity matrix.

Table 11: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.545
Bartlett's Test of Sphericity	Approx. Chi-Square	3918.883
	df	406
	Sig.	.001

After the essential criteria of factor analysis are fulfilled, factor analysis is run to compute the eigenvalues for factor retention and factor extraction. Eigenvalue-two criteria were used to extract the factors (Hayton et al., 2004b). The VARIMAX rotation helped identify the underlying factors not related to each other. The study identified three factors that cause a variance of 54.21%. The table below presents the eigenvalue and percent of variance caused.

Table 12: Eigenvalues and Factor Variance

	Factor 1	Factor 2	Factor 3
Eigen Values	10.342	2.853	2.528

Percentage of variance	35.661	9.837	8.718

4.4.3 Scree Plot

A scree plot displays the eigenvalues on the y-axis and the number of factors on the x-axis, with the point where the slope of the curve levels out indicating the number of factors created by the analysis.

Figure 13: Scree Plot
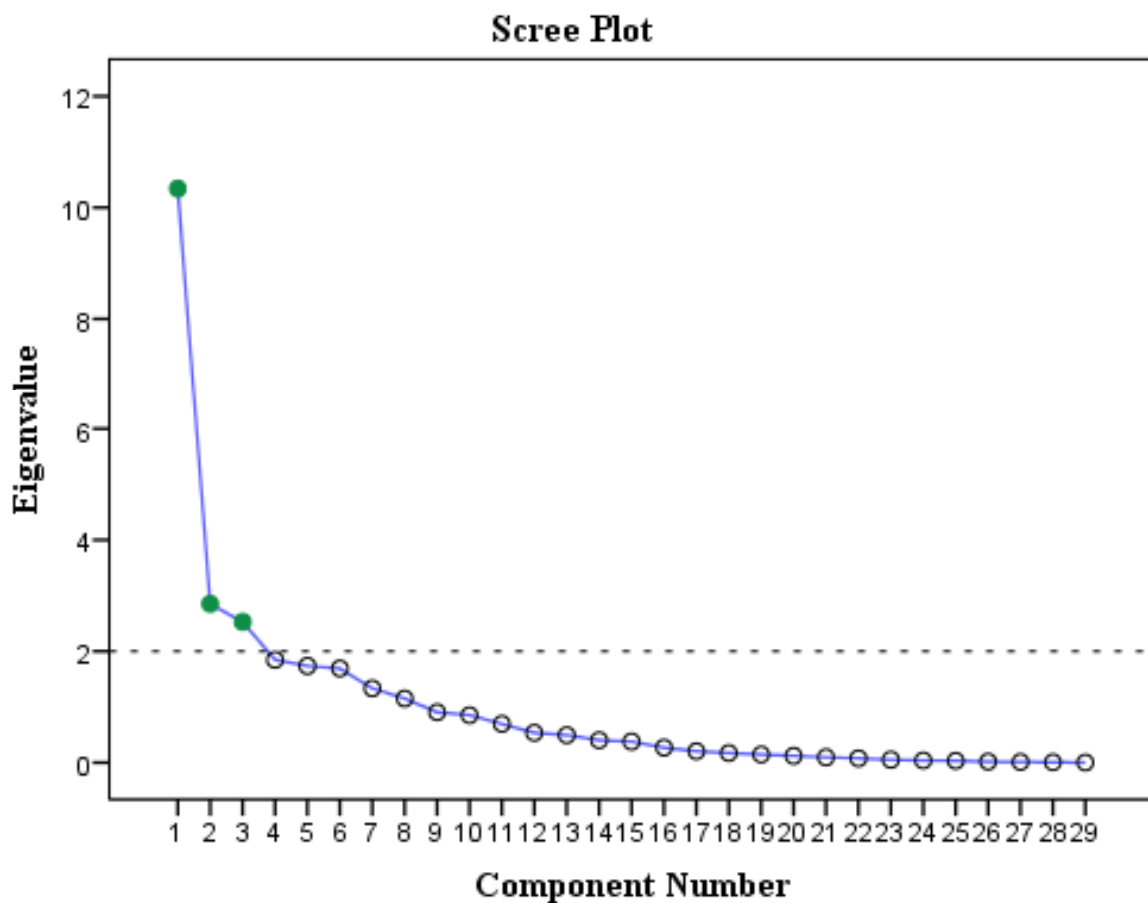
The tail immediately declines after the third factor, the factors above the eigenvalue ≥ two is retained, as shown in the figure above. The table below presents the commonality values for the extracted items that must load more than 0.3.

109

Table 13: Communalities

	Initial	Extraction
Item_05	1.000	.733
Item_06	1.000	.774
Item_07	1.000	.824
Item_08	1.000	.844
Item_09	1.000	.796
Item_10	1.000	.849
item_11	1.000	.792
Item_12	1.000	.888
Item_13	1.000	.649
Item_14	1.000	.872
Item_15	1.000	.807
Item_16	1.000	.802
Item_17	1.000	.778
Item_18	1.000	.685
Item_19	1.000	.868
Item_20	1.000	.912
Item_21	1.000	.769
Item_22	1.000	.844
Item_23	1.000	.862
Item_24	1.000	.786
Item_25	1.000	.853

Item_26	1.000	.871
Item_27	1.000	.789
item_28	1.000	.811
Item_29	1.000	.831
Item_30	1.000	.854
Item_31	1.000	.843
Item_32	1.000	.699
Item_33	1.000	.803

The factor-wise loading for each item is presented in the rotated component matrix table. The rotated component matrix contains estimates of the correlations between each of the variables and the estimated components. Correlation below 0.3 are regarded as trivial and can be discarded. The retention of items for analysis can be estimated through the factor loadings.

Table 14: Rotated Component Matrix

	Component		
	Community Service and Engagement	Competency and skills	Working for Advocacy
Item_24	.799		
Item_19	.794		
Item_25	.792		
Item_30	.769		
Item_32	.740		
Item_31	.704		
Item_33	.691		

Item_21	.655		
Item_15	.590		
Item_17	.590		
Item_06	.524		
Item_23	.511		
Item_20	.468		
item_11		.831	
Item_22		.813	
Item_12		.800	
Item_07		.794	
Item_27		.790	
item_28		.533	
Item_14			.753
Item_29			.705
Item_16			.606
Item_26			.602
Item_05			.581
Item_18			.526
Item_13			.467

Out of 29 items, 26 items were retained after the factor analysis for item reduction. The reliability test of the retained items is presented in the table below.

Table 15: Reliability Test – Factor-wise

	No. of items	Cronbach's Alpha
Community Service and Engagement	13	0.926
Competency and skills	6	0.69
Working for Advocacy	7	0.767
Overall	26	0.912

4.4.4 Identification of Factors

Based on the results of factor analysis and dimensions from the literature review, the extracted factors were renamed as follows:

Factor 1: Community Service and Engagement

The community service and engagement are necessary components to advance health justice (Pratt & de Vries, 2018), and potentially useful strategy to reduce health inequalities (O'Mara-Eves et al., 2013, 2015). The extracted factor has loaded 13 items from a range of 0.799 to 0.468, with a reliability test score of 0.926 (Cronbach's alpha).

Factor 2: Competency and Skills

Beyond practical clinical and medical skills, the imbibing non-clinical competencies and skills for healthcare professionals would advance healthcare equity among the marginalized population (Thomas, 2016). Competency and skills have loaded six items from a range from 0.831 to 0.533 at 0.69 reliability.

Factor 3: Working for Advocacy

Healthcare providers' advocacy activities can advance the access of healthcare resources for the community by informing public debate and encouraging policies that address healthcare

improvement (Luft, 2017). Simultaneously, healthcare professionals, through participation in media, help decipher complex scientific information to the general mass and advance health equity across varied populations (K. Viswanath & Matthew W, 2007; Purnell et al., 2016; Stryker et al., 2009). The extracted factor has loaded seven items from a range of 0.753 to 0.467, with a reliability test score of 0.767 (Cronbach's alpha).

4.4.5 Effects of Sociodemographic Factors on the Functioning of Healthcare Professionals.

Multiple Regression Analysis

The three sociodemographic factors identified for assessing the effect on healthcare workers' functioning are gender, educational qualification, and previous experience of rural service. The data in the study is analysed using multiple regression, which allows the researcher to predict a variable based on the values of two or more other variables. Multiple regression allows us to assess the model's overall fit as well as the relative contribution of each predictor to the total variance explained.

Assumptions

The multiple regression analysis needs to meet four major assumptions: independence of observations (Durbin-Watson Statistics), homoscedasticity, no multicollinearity, and no significant outliers (Wooldridge, 2012).

The Durbin Watson test (D) for the independence of observations reports a test statistic value of 2.01, significant at a level of 0.05, i.e., no autocorrelation. Value $0 < 2$ is positive autocorrelation, meanwhile value >2 to 4 is negative correlation (Wooldridge, 2012).

Homoscedasticity refers to equal distribution of residuals and is determined through Predicted Probability Plot (P-P Plot) and scatterplot. Below presents the P-P Plot and the Scatterplot:

Figure 14: Normal P-P Plot of Regression Standardized Residual
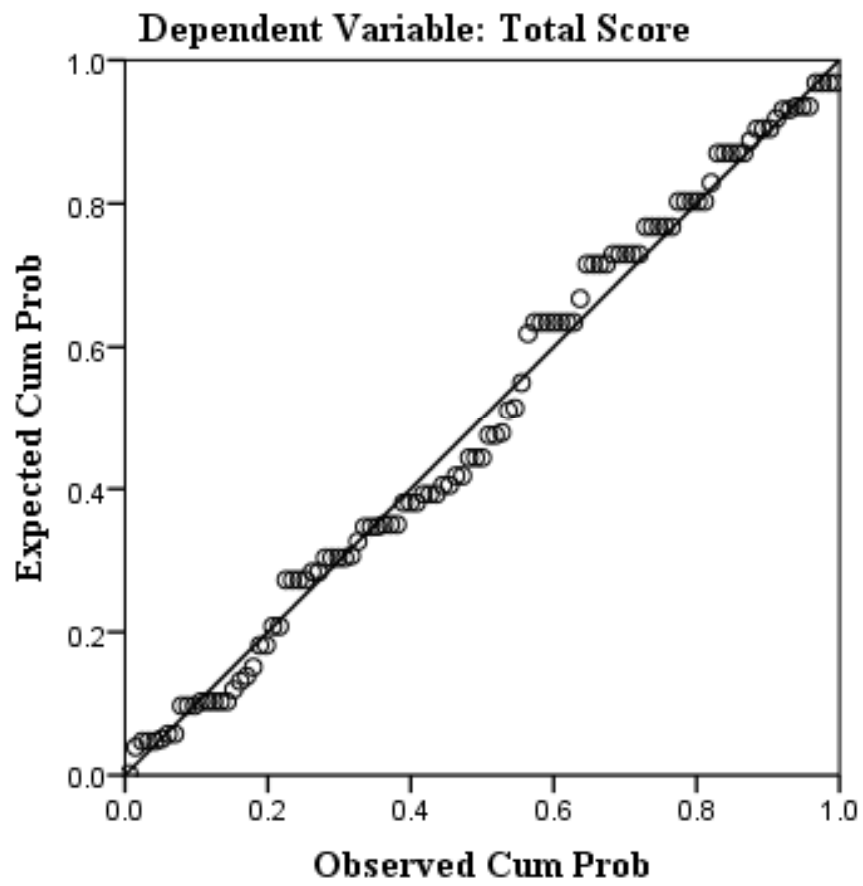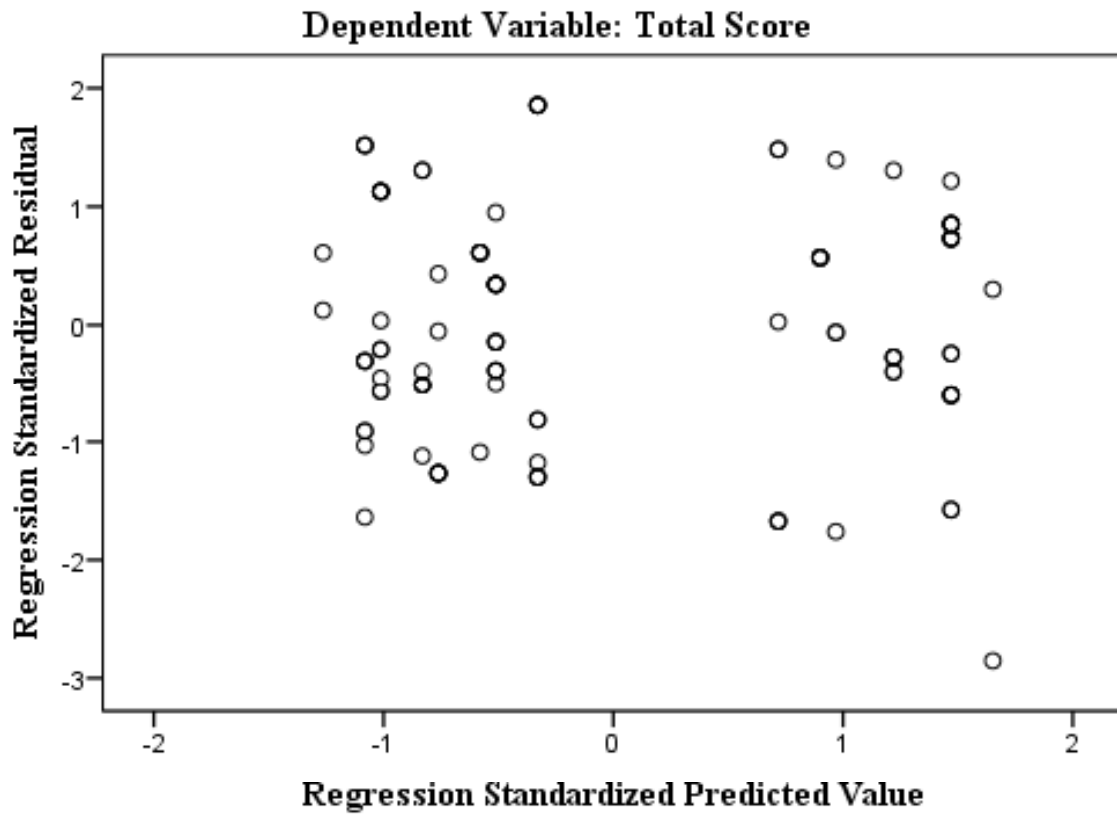

Dependent Variable: Total Score

Figure 15: Scatterplot

The P-P Plot shows that the data is normal, and scatterplot shows equal distribution above and below zero (Wooldridge, 2012).

Multicollinearity is measured to determine the similarity between independent variables in a model. A good regression model should not correlate with the independent variables. The Variance Inflation Factor (VIF) value that lied between 1-10 has no multicollinearity. The VIF value are Gender = 1.13, Education = 1.07, and Rural Service = 1.21.

To identify the influential outliers in the predictor variables, Cook's distance D_i is used. Any D_i value of more than 0.5 indicates substantial value. The present study Cook's distance maximum value is 0.682, which fits the assumption. After the assumptions were met, the data is set to run multiple regression analysis.

The independent variables of education, gender, and rural experience are coded as below:

Education Qualification is coded as "MBBS = 1, MD/MS = 2, MSW = 3, and B.Sc. Nursing = 4", while Gender is coded as "Male = 1, Female = 0" and Rural Experience as "Yes = 1, No = 0".

Table 16: Multiple Regression Analysis

Predictor	Outcome		
	Community Engagement and Service	Competencies and Skills	Working for Advocacy
Gender	1.96** (0.846)	1.79** (0.815)	2.051**(0.585)
Education Qualification	-0.171 (0.337)	-0.609 (0.325)	0.045 (0.233)
Rural Experience	0.416 (0.884)	-0.124 (0.852)	-0.825 (0.612)
R-Square	0.07	0.083	0.106

*Level of Significance *p < 0.01; **p < 0.05; ***p < 0.001*

The multiple regression table reveals that education qualification and previous rural experience are not statistically significant for any healthcare professionals' functioning. However, the gender of the healthcare professional plays a statistically significant role in the functioning of addressing health equity. The male engages 1.96 times higher with the community than the female healthcare professionals. Likewise, the male's competencies and skills are 1.79 times higher than the female in functioning for equity. Similarly, it is found that male works for advocacy of health than the female by 2.05 times.

4.5 Objective – 4

To examine the role of news media in shaping public perception support and action towards reducing the gap in health outcomes.

This part of the study presents the data collected from in-depth structured interviews of the media professionals engaged in the studied area. The participants were from the local news channels operating in Assam, particularly in the studied districts. Correspondents and reporters from the border region were interviewed to understand the reporting phenomenon, later interviews were conducted with the editors and managing editors of the news agencies situated in the state capital.

The interviews were transcribed and thematized according to the objective. Crystallization and immersion techniques have been used to identify the themes. Five broad themes related to health inequality among the marginalized have emerged from the interviews conducted with the local reporters, journalists, and editors. The three themes were:

   a) *The perspective of the news coverage*

   b) *Factors considered during selection of stories,*

   c) *Challenges in covering health-related news,*

The identified themes provide a broad overview of health-related reporting in the studied area. Although the in-depth interview's primary focus is to explore the functioning of the media professionals, the recorded insights present a comprehensive scenario of media reporting on health-related issues. Most media professionals view health as an auxiliary responsibility, as the news media discourse revolves around political news.

One of the respondents from television news media states:

> *"We usually focus more into topical news. So topical can be of any type,*
>
> *political development, economics, or for that matter health. There has to*

have events that directly relevant to health administration, and not the

health outcome of the region ..."

The media professional perceives that health news only gains coverage in the case of medical emergencies, such as death due to negligence, death due to failure of any healthcare facilities and system, or health in the times of diseases prevalent during the flood and seasonal flu. The space provided to the health-related news is limited and generally focuses on the stories related to the state's centre, i.e., Guwahati.

"We try to attach the health news with the political news and try to look

for people or legislators to be held responsible for the system fall out.

Moreover, only small space is given to news without any significance."

The television media participants stated that the news stories related to health from the borderland regions gain a maximum of 20 seconds of airtime. Meanwhile, the print media provides space for health-related information in the "health section" that provides information on fitness, nutrition, and mostly lifestyle diseases. The participants view that print media has a minimum effect on policy implementation and policymaking.

"... We look for location of the event only from the lens of demographic

fabrics of the region. Minorities areas like Hojai, Morigaon, Dhubri,

Karimganj, Hailakandi gains mileage only during the election times.

Exceptional cases are only selected for the airtime."

The factors reported by the participants for the selection of stories is driven by the newsworthiness and location of the event. Reporters from the borderline areas stated that most of their stories are not featured in the print and television news media. The reporters also stated that social determinants of health are not considered worthy until they affect the large population group. The editor states that worthiness is decided on the timeline of the event. Health-related information is never considered topical news, rather developmental news, which

has a lesser audience than topical news. The worthiness is also decided on the effect of the problem on the population. It is considered worthy if the events have a more substantial impact on the social setting, primarily affecting the state's larger mainstream population.

> *"... Every news should worthy for a journalist and editors ideally, but we need to look who it is affecting the most. If the scale of impact is lesser on the audience, we hardly focus on that news."*

Editors also highlighted that most of the correspondents and reporters reporting events from the remote region lack the intricacies of healthcare and scientific information. Most of the time, the technicalities and terminologies involved in preparing stories claim to have created misinformation or partially assumed information. Therefore, limiting the scope for airtime or space in the newspaper.

A television reporter engaged in bordering region states:

> *"... We are not Doctor or nurse to understand the complication of any event reported. We move with our camera and boom, takes the bytes of the person available at the place of event and cover the news. We collect the prima facie information of the situation. This is what is expected from the editorial desk... We are at least visiting the place of event, but if you look at the print journalist, they get second-hand information from police or any closely associated person."*

The challenges highlighted by the editors of the news agencies in covering health-related news is the requirement of comprehensive research and knowledge in the field of health. Most correspondents and reporters are claimed to be less informed when it comes to health, mainly health-related scientific information. The reporters and corresponding directly involved in news story creation lack skilled in understanding the healthcare system. The participants view

that disseminating complex information is a significant challenge that media professionals face to broadcast.

> *"... It is not our job to google the meaning of any scientific information and draft a report for the desk. We just have to call the desk and ask send them the recording or notes we make while interviewing the doctors."*

Journalists and media professionals at the grassroots level stated that it is pertinent to understand the community's problems. A better understanding of the community's challenges will shape the course of reporting, which will result in more empathetic reporting. Empathetic reporting brings forward the reality of human health in the remotest region. The editors and managing editors believe that emotional stories are somehow getting more space in the airtime, which usually has a positive response from the government. One of the participants believes that the stories with extensive ground reporting tend to influence more policymakers than a plain news story.

> *"... As a television reporter, I believe I have much more freedom in telling a story with the audio-visual medium than a print journalist. I try to make my stories more emotional through presenting the overall picture of the environment. For example, recently, I have come across a young boy carrying his ailing sister in a handcart, crossing paddy fields and small river streams. I recorded the whole event. It was very emotional. His brother-in law stays in some other districts, and due to flood could not come to see his wife, so this young boy had to carry his sister all along with few of his friends to one of the health centres nearby. I have made the story primarily focusing on lack of ambulance service, road, and no health workers at the closest Sub-Centres (SCs). I got much appreciation from*

our editor and enquiry has been set up by the Joint-Director of Health

Services on absence of health workers at SCs."

Unanimously all the participants view that it the sole responsibility of the media to highlight the social and economic issues that affect the healthcare of individuals in the borderline. They also accepted that media plays a significant role in empowering and uplifting the communities by focusing and providing adequate time on the remote region's stories. Few editors stated that every television news media should significantly dedicate a series of rural news, where education and health should be prioritized.

4.6 Chapter Summary

The chapter broadly highlighted the objective-wise analysis of the data. The data analysis included descriptive and inferential statistics catering to the first three objectives, while through thematic analysis, five broad themes were extracted from the in-depth interviews. The first section started with the inequality measurement among the studied population, followed by inequity in healthcare services. This section also presents the data collected from healthcare professionals. On the other hand, the second section of the study presents the qualitative results, with themes derived from the media professionals' interviews.