

# The health condition of rural people of Assam: a case study of two villages of Sivasagar district

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## Abstract

In order to boost the public health expenditure and to strengthen the health infrastructure particularly in rural areas, National Rural Health Mission (re-termed as National Health Mission from year 2013) has been launched by Government of India in April, 2005. Under NHM special focus has been given on 18 states with poor health indicators including Assam. Under this mission various crucial initiatives have been undertaken to develop the health condition of rural masses. Among these, a few important initiatives have been introduction of 'Community health workers', 'awareness campaigns', 'Village Health Sanitation and Nutrition Committee' etc. in every village. Thus, this study aspires to study in spite of various initiatives taken by government, the health status of rural people is improved or not.

**Methodology:** The present study is conducted for two villages of Sivasagar district. The sample size is 342 which is determined by using the Yamane formula (1967):  $n=N/(1+Ne^2)$ . The Morbidity Prevalence Rate is computed for each sample household. The Multiple Linear regression model is used to find out the significant factors affecting morbidity.

**Results:** Type of house, provision of sanitary toilet facilities, participation in health awareness camps and full assistance of ASHAs are emerged as significant factors affecting morbidity of the respondents of the surveyed villages.

**Keywords:** *Morbidity prevalence rate, ASHA, NHM*

## Introduction

Good health is an important indicator of human development in real sense. The preamble of the charter of the World Health Organization (WHO) formed in 1948, defines health as a 'state of complete physical, mental and social well-being and not merely absence of disease or infirmity'. Physical component pertains to the body, mental to the mind and social to the entire socio-cultural environment. All these factors have a direct significant role in the health of (i) an individual, (ii) a family and (iii) the entire community. It has been widely acknowledged, most prominently by Amartya Sen, that health is important both as a means and an end (Dev, and Veeramoni, 2015). The health status of a population is usually measured by indicators of mortality, morbidity and nutritional health. In a developing country like India, where 65.97% people live in rural area (2018) for development of health status of this rural masses and for increasing the share of investment in public health sector, in year 2005, National Rural Health Mission (re-termed as National Health Mission from year 2013) has been launched by Government of India. Under NHM special focus has been given on 18 states with poor health indicators including Assam. Under this mission various crucial initiatives have been undertaken to develop the health condition rural health masses. Among these, a few important initiatives have been introduction of 'Community health workers', 'awareness campaigns', 'Village Health Sanitation and Nutrition Committee' etc. in every village.

Thus, this study aspires to study in spite of various initiatives taken by government, the health status of rural people is improved or not.

## Sample Design

The study is done for two villages of Sivasagar district, namely, Bharalua and Dewghariya. There are 291 households in both villages comprising a population of 1424. The sample size is determined by using the Yamane formula (1967):  $n=N/(1+Ne^2)$ . Here,  $n$  indicates corrected sample size,  $N$  refers to population size and  $e$  is Margin of error ( $e=0.05$ ). Thus the sample population becomes 342. For the study, each and every member of the household is considered since each of them has a risk of being ill.

In both villages, the available Government health facilities are one Mini Primary Health Centre which is located within 2 kilometres. The Block Primary Health Centre is located almost 10 kilometres away at Gaurisagar. Patients from the villages also visit civil hospital which is situated in Joysagar and almost 21 kilometres distance from the village. The Community Health Centre is located in Amguri town (22 Km). Various private practitioners are available in Gaurisagar. Besides this, a significant number of

private health clinics and nursing homes are concentrated in Sivasagar town (24km). The condition of road connecting to health facilities is not good. There is a Village Health Sanitation and Nutrition Committee (VHSNC) in the village which is constituted by ASHA, AWW, ANM, village head, ward member, teacher, expected mothers, mothers, village youths and members of *Swayang Sevi Groups*.

**Methodology**

Using information on reported morbidity, Morbidity Prevalence Rate (MPR) is computed for the sample population. It is morbidity which reflects the general level of illness in a population. Here MPR implies the rate of sick persons in a family to the total number of sample persons in the same. Both acute illness and chronic illness are reported for present study. As per NSSO (2015), acute morbidity refers to those illnesses which are in short duration i.e. lasting for a period of last 30 days and chronic illness is of long duration continuing for a period of more than 30 days. The present study utilizes both demand side (the information regarding age, gender, type of illness, household monthly income, house types, provision of safe drinking water and sanitary toilet facilities) and supply side predictors (organizing awareness camps on health issues, VHSNC meetings, visited by Community Health Workers) in order to account for differences in health status. For identifying statistically the possible socio-economic and other health predictors influencing morbidity of individuals, a binary logistic regression model has been used.

**Results and Findings**

**Morbidity Prevalence Rate among the respondents**

Table 1 shows the estimates of Morbidity Prevalence Rate among the respondents. The overall morbidity rate in both the village is 46. If we categorize morbidity prevalence based on various socio-economic characteristics, then it is seen that the share increases as age category increases. It is 34% among infants and 36% among children aged 6-14 years. The share is 48% in the working age population group 15-59 years and 65% among 60 years and above. Gender-wise share of males (46%) reporting morbidity is higher than females (45%).

**Table 1: People suffering from acute and chronic morbidity by age groups in surveyed villages**

Background Characteristics	Acute morbidity	Chronic morbidity	Sample population	Acutely morbid in total population (in %)	Chronic morbid in total population (in %)
<b>Age</b>					
0-5	10	1	32	31	3
6-14	22	5	75	29	7
15-59	51	46	201	25	23
60 and above	6	16	34	18	47
Total	89	68	342	26	20
<b>Gender</b>					
Male	45	41	185	24	22
Female	44	27	157	28	17
Total	89	68	342	26	20

**Source:** Primary Survey.

**Morbidity prevalence rate by acute and chronic categories in the surveyed villages**

Information on acute and chronic morbidity is important because they have an impact on overall living pattern of the household. Table 1 reveals that in both surveyed villages, 26% people reported acute morbidity and 20% people reported chronic morbidity. The share of acute morbidity among infants was 31%, among children 6-14 years it was 29%, among working age population 25% and senior citizens above age 60 years it was 18%. The share of acute morbidity among males was 45% and among females 44%, thus there is not much variation in reporting acute morbidity in terms of gender.

In terms of chronic morbidity lowest reporting is observed among 0-5 years age group (3%) and highest among the elders (47%). Again, gender wise chronic morbidity is higher for males (41%) than females (27%).

Thus, it is observed that the share of acute morbidity is highest among the minors of the age group 0-5 years whereas the older age group of 60 years and above are more exposed to chronic illness. Some common acute diseases identified during field survey among respondents of both villages were fever,

cold, cough, pneumonia, diarrheal diseases, skin diseases, appendicitis, allergy, eye infection etc. whereas a large number of respondents were suffered from various chronic diseases like diabetes, heart diseases, lung problems, liver problems, kidney problem, back pain, asthma, uric acid, joint pain, gastroenteritis, uric acid, thyroid problems etc.

**MORBIDITY PREVALENCE RATE WITH BACKGROUND CHARACTERISTICS OF THE RESPONDENTS IN SURVEYED VILLAGES**

As shown in table 2 in both villages the MPR is comparatively higher among the respondents with less education or no education. The morbidity is higher among the respondents who were belonging to BPL category than those of non-BPL contemporaries. Considering size of the family, the morbidity prevalence is higher among the respondents of large size families. Those who live in *kutchha* houses have more MPR in compared to those who live in *pucca/semi-pucca* houses. Again, the utilization of sanitary toilet facilities and safe drinking water has shown a better health status of people because those who have the provision of sanitary toilet facilities and safe drinking water facilities in households, the morbidity prevalence rates are comparatively lower among them.

In the surveyed villages, the government health facilities have organized various health awareness camps, sometimes with the collaboration of NGOs, from time to time on various health issues like general health check-up for older persons; adolescent health; Japanese Encephalitis, malaria, dengue, Leprosy; eye camp etc. Such camps have provided awareness and prevention among people; people are examined, treated and also referred for better treatment. Attending such health awareness camps improves the health status of such people and helps to reduce the prevalence of morbidity rate among rural people (Whisner et. al, 2002; Gajuryal et. al, 2019). In the surveyed villages, the morbidity prevalence rate among respondents is reported as lower who participated in such health awareness camps in compared to non-participants of such camps.

ASHA (Accredited Social Health Activist), a noble initiative under National Health Mission, plays a key role as a community Health Worker to provide basic preventive, promotive and sometimes provide curative measures (provide medicines in case of fever, cold, diarrhoea etc.) among the rural masses. Her basic role is to educate every community member on proper sanitation, hygiene and nutrition habits to ensure healthy life-style of each villager. From table 2, it is observed that the morbidity prevalence rate is lower among the respondents who were assisted and guided by ASHAs in compared to their contemporaries who were not assisted by ASHAs.

Thus, the multi-variate analysis suggests that the Mortality Prevalence Rate of the respondents is associated with some socio-economic and health service delivery factors as observed from primary data.

**Table 2: Morbidity Prevalence Rate with background characteristics of respondents of surveyed villages**

Characteristics	MPR
<b>Education level</b>	
Above secondary	55
Below secondary	49
Primary	60
Illiterate	69
<b>Below Poverty Line category</b>	
Yes	62
No	52
<b>Family Size</b>	
Equal to or less than 4 members	58
5 to 6 members	54
7 or more members	59
<b>House type</b>	
Pucca/semi-pucca	44
Kutchha	73
<b>Availability of Sanitary toilet facilities</b>	
Yes	45
No	75
<b>Use of safe drinking water</b>	

Yes	54
No	63
<b>Participating Health Awareness Camps</b>	
Yes	44
No	69
<b>Guidance or Assistance of ASHAs</b>	
Fully assistive	44
Lower assistive	60
Not assistive	65

Source: Calculation is based on primary data

**Factors affecting Morbidity in study area: Multiple Linear Regression Model**

To identify statistically the probable demand side and supply side predictors affecting household morbidity prevalence rate, a multiple linear regression analysis has been used. Table 3 depicts the result of regression model for identifying significant factors affecting morbidity prevalence of the households in both villages.

**Table 3: Results of Multiple Linear Regression Model for identifying significant factors affecting morbidity in surveyed villages.**

Explanatory variables	B	t	Sig.	Collinearity statistics (VIF)
Education (refer. Illiterate)				1.155
Secondary and above	.167	2.238	.581	
Below secondary	-.125	-2.147	.610	
Primary	-.204	-2.355	.432	
Family Size (ref. 7 and above)				1.011
Equal to or less than 4	.111	.632	.522	
5 to 6	.123	.712	.454	
Log of monthly income	-.041	-.416	.514	1.454
House type (ref. Kutchha)	-.153*	-1.657	.052	1.320
Availability of sanitary toilet facilities (ref. no sanitary toilet facility)	-.234***	-2.634	.007	1.123
Use of safe drinking water (ref. not use)	-.017	-.191	.257	1.121
Health Awareness camps (ref. not participating)	-.226**	-2.278	.024	1.412

Assistance of ASHA (refer. Not assistive)				1.643
Fully Assistive	-.753***	-4.079	.000	
Lower assistive	-.465	-3.657	.115	
Constant	.624	1.107	.056	-
R <sup>2</sup> = .615; F=19.943***				

Source: Author’s calculation. (\*, \*\*, \*\*\* indicate significant p value at 10%, 5% and 1% level respectively)

From table 3, it is seen that the explanatory variables which have significant influence on morbidity prevalence are house type, availability of sanitary toilet facilities, attending health awareness camps and assistance of ASHAs. House type or structure is emerged as a significant and negative factor influencing morbidity implying that those who live in *pucca* houses are less likely to have disease than those who live in *kutch*a or *semi pucca* houses.

Availability of sanitary toilet facilities exhibited a significant association with morbidity. The morbidity prevalence is higher among the households with lack of sanitary toilet facilities. Among the supply side predictors, attending health awareness camps and full assistance of ASHAs have significant impact on morbidity. The individuals who have attended the health awareness camps and who are fully assisted and guided by ASHAs are found to have lower odds of being morbid.

**Conclusion**

The present study has revealed that the morbidity prevalence rate is high in study areas. People are suffered from both acute and chronic illnesses although the prevalence of acute morbidity is higher among them. Among various factors affecting morbidity prevalence rate of households, the factors like house type, availability of sanitary toilet facilities, attending health awareness camps and assistance of ASHAs have emerged as significant factors. Along with curative measures, emphasis should be given on preventive care by the individuals. Measures should be taken by the Government to reduce the socio-economic gap among the people through various means. The *Gram Panchayat* can play an active role in sort-listing the households without basic amenities for a good and healthy life and can gradually take further steps to redress these problems. Awareness programmes on various health issues should be promoted more among the villagers. *ASHA* can play a vital role to encourage more and more participation of villagers in such camps. Regular incentives, timely remuneration and special rewards to ASHAs should be ensured for effective result.

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