



AWARENESS ON COVID 19 AMONGST RURAL POPULATION IN SELECTED DISTRICTS OF ASSAM- A CROSS SECTIONAL STUDY

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ABSTRACT

INTRODUCTION: The rapid and extensive spread of Covid-19 pandemic has become a major concern for all in Urban and Rural population. Assam along with the rest of India braces for Covid-19 pandemic.

While infrastructure built up, training of front liners, strict vigil was on the roll one of the basic means of containment of this pandemic was general awareness on Covid-19 amongst the masses and practically applying these in their day to day life.

OBJECTIVES: To study the awareness on Covid-19 amongst rural population and to assess the infection control practices related to Covid-19 in the study population. **METHODOLOGY:** One village each from five districts of Assam was selected randomly. From each village 200 households were taken by systematic random sampling. **RESULTS:** 89 percent of study population knew it is transmitted from person to person, 61% said its airborne, 61% were aware of the signs and symptoms, 60% had knowledge on 2mt distance to be maintained. 89% knew it was very important to wear a mask and 64% did not attend any social gathering since the declaration of pandemic. **CONCLUSION:** Awareness on preventive measures for spread of Covid-19 and complying with recommended protocols can ultimately influence the clinical outcome. Our result shows moderate awareness and practice of preventive measures and the degree of adherence to personal protective measures.

KEYWORDS : Pandemic, front liners, Containment, Infection control protocols

INTRODUCTION:

Corona virus disease 2019 (Covid-19) is a global public health threat and on the 11th March 2020, World Health Organization (WHO) declared it as a pandemic. The rapid and extensive spread of Covid-19 pandemic has become a major cause of concern for all in urban and rural population. Assam along with rest of the country braces for Covid-19 pandemic. While infrastructure to tackle and curtail cases, training of health professionals and strict vigil by authorities are on the roll, one of the basic means of containment of this pandemic is general awareness amongst the masses and application of their knowledge in their day to day life. Our knowledge on the awareness on Covid-19 especially in the rural population is limited. Keeping this in mind the following study on awareness on Covid-19 amongst rural population in selected districts of Assam was taken.

OBJECTIVES:

- To study the awareness on Covid-19 amongst rural population.
- To assess the infection control practices related to Covid-19 in the study population.

METHODOLOGY:

Study design: Community based Cross sectional study

Study area: Five Districts of Assam namely, Kamrup (Metro), Kamrup, Morigaon, Nalbari, Darrang

Study period: One month from 15th June to 15th July, 2020

Study population: Adult population above 18 years.

Inclusion criteria: Adult giving consent to participate in the study. Adults residing in the study area for the past 6 months.

Sample size: 1000 population, with 200 individuals from each district.

Sampling technique: Out of 33 districts of Assam, five districts have been selected randomly. From each district one village

has been taken randomly for the study. From each village 200 households will be taken by systematic random sampling.

Study variables:

- Socio demographic variable: age, sex, religion, caste, occupation, education
- Basic awareness on Covid 19
- Basic hygiene practices during Covid 19 pandemic.

Study tools: Predesigned and Pre tested interview schedule

Ethics clearance: It has been obtained from institutional ethics committee (IEC) of Guwahati Medical College, Guwahati. Informed consent has been taken from the Study subject.

Data has been entered in Microsoft excel and analysis done by appropriate statistical software.

RESULTS:

Out of the total 1000 respondents, the majority (63%) were in the age group of ≤ 50 years while 27% were of the age group ≥ 50 years. Among the participants, majority (78.5%) of them were found to be male, 87.6% belonged to Hindu religion, 62.6% were found to be of General category and 69.3% had nuclear family. Regarding education, majority (70.5%) had education of high school or above and only 9.6% were illiterates. Majority (79.2%) were either employed or self employed while only 3.2% were unemployed and more than half (54.30%) of the study population had per capita income of 5000 INR. (Table 1).

Table 1: Sociodemographic profile of responders

1. Education:	Illiterate	96	9.60%
	Primary-5	199	19.90%
	High School -10	341	34.10%
	Under Graduate	214	21.40%
	Graduate & Above	150	15.00%
2. Sex	Male	785	78.50%
	Female	215	21.50%

3. Age Group	Below 30	111	11.10%
	30 to 40	241	24.10%
	40 to 50	278	27.80%
	50 to 60	190	19.00%
	Above 60	180	18.00%
4. Religion	Hindu	876	87.60%
	Muslim	123	12.30%
	Christian	1	0.10%
5. Caste	General	626	62.60%
	OBC	219	21.90%
	MOBC	10	1.00%
	SC	97	9.70%
	ST	48	4.80%
6. Occupation	Unskilled Labour	359	35.9%
	Skilled Labour	86	8.60%
	Small Business	189	18.90%
	Service Holders	158	15.80%
	Retired Person	54	5.40%
	Housewives	122	12.20%
	Unemployed	32	3.20%
7. Family Structure	Joint Family	307	30.70%
	Nuclear Family	693	69.30%
8. Per Capita Income	Up to 1000	101	10.10%
	1000 to 5000	356	35.60%
	5000 to 10000	223	22.30%
	More than 10000	320	32.00%

Majority (99.3%) of the respondents have heard about COVID-19 and the most common source of information for them was social media (46.90%) followed by healthcare workers (32.60%). Out of the total study population 89.4% knew it is transmitted from person to person and 61.7% of them were aware about airborne transmission. For almost two third (61.1%) of the responders, lower respiratory tract symptoms like cough and shortness of breath were common symptoms of Covid-19 while only 10.70% were aware that elderly, pregnant women and immuno-compromised people were at higher risk of developing complications from covid-19. (Table 2)

Table 2: Basic awareness of respondents on Covid-19

1. Have you heard about Covid-19?	Yes	993	99.30%
	No	7	0.70%
2.* Where have you heard about Covid-19?	Social Media	469	46.90%
	Health Workers	326	32.60%
	Newspaper	346	34.60%
	Neighbours	213	21.30%
	All	7	0.70%
3. Can Covid-19 be transmitted from person to person?	Yes	894	89.40%
	No	67	6.70%
	No Idea	39	3.90%
4.* How does it spreads?	Air	617	61.70%
	Droplets generated during coughing and sneezing	423	42.30%
	Contact with covid infected person	215	21.50%
	Mosquitoes	64	6.40%
	All of the above	1	0.10%
	No idea	86	8.60%
	5.* What are the common symptoms of Covid-19?	Fever, cough and shortness of breath	611
Headache, runny nose, sore throat		170	17.00%
Diarrhoea		156	15.60%
All of the above		304	30.40%
No idea		10	1%
6. Do you know about the incubation period (becoming infected) of Covid-19?	Yes	714	71.40%
	No	286	28.60%

7. If yes, what is the incubation period of Covid-19?	2-14 Days	380	53.22%
	Below 14 days	188	26.33%
	Upto 21 days	78	10.92%
	Above 21 days	68	9.53%
8.* Who are at greater risk for developing complications from Covid-19?	Elderly	773	77.30%
	Pregnant	357	35.70%
	Immuno-compromised	264	26.40%
	All	107	10.70%
	No idea	47	4.70%

Multiple responses

Regarding different modes of prevention of Covid-19 only 19.3% were aware of all the methods like staying at home, wearing mask and washing hands. Though 84.6% of the respondents had heard about the term social distancing, 60.8% of them knew about the minimum distance to be maintained between two people whereas 12.1% thought it to be more than two meters and 15.90% had no idea about social distancing. Among the respondents, 89.2% knew it was very important to wear a mask.

Nearly two-third (60.2%) of the study participants knew that mask should be worn when moving out of the house while 7% of them knew that wearing mask was required only when meeting sick people. Furthermore, 27.9% of the respondents did not have the knowledge that the mask has to cover nose, mouth and chin. Half of the respondents (51.5%) have heard about the term home quarantine while only 14% knew about Covid-19 vaccines. (Table 3).

Table3: Awareness on prevention of spread of Covid-19

1.* How can we prevent ourselves from getting infected?	Staying at home	463	46.30%
	Washing hands	935	93.50%
	Wearing masks	661	66.10%
	All of the above	192	19.20%
2.* How can we make our hands safe?	Washing with plain water	63	6.30%
	Washing with soap and water	370	37.00%
	Using Sanitizer	311	31.10%
	All of the above	391	39.10%
3. Have you heard of the term social distancing?	Yes	846	84.60%
	No	154	15.40%
4. What is the minimum distance to be maintained between two people?	Less than 1 metre	96	9.60%
	2 metre	608	60.80%
	More than 2 metre	121	12.10%
	Not needed	16	1.60%
5. How important is it to wear a mask during these days?	No idea	159	15.90%
	Very important	892	89.20%
	Not important	76	7.60%
6.* When should you wear a mask?	No idea	32	3.20%
	All day long	126	12.60%
	When we go out of house	624	62.40%
	In people gathering	360	36.00%
7. How do we wear a mask?	Only when we meet sick people	70	7.00%
	Cover nose	79	7.90%
	Cover nose and mouth	175	17.50%
	Cover nose, mouth and chin	721	72.10%
8. Have you heard about the term 'home quarantine'?	No idea	25	2.50%
	Yes	515	51.50%
	No	485	48.50%

9.	If yes, what is it?	Staying at home for 14 days after your last contact with a person who has Covid-19	462	89.71%
		Staying at home for 7 days after your last contact with a person who has Covid-19	16	3.11%
		Staying at home for 21 days after your last contact with a person who has Covid-19	37	7.18%
10.*	When should you go for Covid-19 screening?	Anytime as precaution	460	46.00%
		When signs and symptoms arise	445	44.50%
		If travelled from outside	84	8.40%
		If there is a positive contact	214	21.40%
11.	Is there a vaccine available?	Yes	140	14.00%
		No	726	72.60%
		No Idea	134	13.40%

multiple responses

Of all the 1000 respondents, 34.8% of the participants wash the cloth mask after each use, 8.1% do not wash them and 51.7% reuse the surgical mask. Majority (64.20%) of the participants did not attend public gatherings for the last few days and according to 46.9% of the study participants, mass gatherings should be avoided during this pandemic. Of the total study subjects, 44.6% of the respondents will go to nearby facility for screening of COVID-19. (Table 4).

Table 4: Practice of responders to prevent the spread of Covid 19.

1.	How frequently do you wash your cloth mask?	After each use	348	34.80%
		Once a week	282	28.20%
		Alternate days	271	27.10%
		Do not wash	81	8.10%
		Do not use cloth mask	18	1.80%
2.	Do you reuse the mask once wore?	Yes	517	51.70%
		No	425	42.50%
		No Response	58	5.80%
3.	How frequently do you go for shopping these days?	Never	218	21.80%
		Once a week	295	29.50%
		As per need	443	44.30%
		Everyday	44	4.40%
4.	Did you attend any public gathering in last few days?	Yes	358	35.80%
		No	642	64.20%
5.	Is there anything that I should not do during this pandemic?	Mass gathering	469	46.90%
		Alcohol and smoking	291	29.10%
		Personal hygiene	120	12.00%
		All of the above	229	22.90%
6.	Where will you go for Covid 19 screening?	Nearby Facility	446	44.60%
		Medical College	323	32.30%
		District hospital	204	20.40%
		Home collection	41	4.10%
7.	What will you do if someone near your place has been detected positive?	Inform authorities	460	46.00%
		Social distancing	445	44.50%
		Support them mentally and emotionally	84	8.40%
		All of the above	228	22.80%

DISCUSSION:

Prevention remains the most important measure to fight against the novel corona virus disease and evidence shows that public awareness is one of the key elements in tackling these kinds of pandemics. Socio-demographic data of our study reveals that majority (78.5%) were male and 63% of the

participants belonged to age group ≤ 50 years which is similar to the study findings of **Gupta P et.al.**¹ It was found that most (99.3%) of our study participants have heard about Covid-19 similar to the study done by **Bhowmick S et.al.**² This awareness may be due to familiarity with the disease since this pandemic has been in existence for quite some time and above that more than two third (70.5%) of the study participants had education upto high school and 79.2% were either employed or self employed. Studies have proven that educated and employed individuals have more exposure to different kinds of social networks hence they are much more aware about the disease. Moreover, most common source of information in our study population was social media (46.90%) similar to the studies done by **Pandey et al.**³ (48.1%) and **Yousaf MA et al.**⁴ (93.5%). In India 61% of the internet users in 2019 belonged to the age group of 20-50 years and our study findings reveal that majority (63%) belonged to the age group of ≤ 50 years.⁵ All these findings corroborates with the study done by **Erfani et al.**⁶ which showed that participants whose source of information was social media, scientific articles, and journals had higher awareness about the disease as compared to users of other sources of information.

According to our study findings, majority (89.4%) knew that Covid-19 is a communicable disease. However none of the studied population knew that the disease can be transmitted to a person if he/she comes in contact with surfaces or objects touched by an infected person. Moreover, 8.6% of the study population had no idea about different modes of transmission. This was in contrast to a study done by **Abdelhafiz et. al.**⁷ This is a matter of concern as people might not follow covid appropriate behaviour properly at all the time due to lack of information on this aspect.

Though majority (61.10%) of the participants knew that fever, cough and shortness of breath were the common presenting symptoms of the disease, only (15.60%) knew it could be associated with diarrhea also. Less than half (44.5%) of the participants were aware that they should go for Covid-19 screening if signs and symptoms appear while only 21.4% knew that testing is required if one comes in contact with a positive case. Regarding awareness on high risk groups, 77.30% knew that elderly people were at higher risk of developing complication but none of the responders considered people with underlying conditions like diabetes, lung and heart diseases to be high risk groups. This was in contrast to the finding of **Ferdous MZ et.al.**⁸ where 74.6% of the participants knew that individuals with underlying conditions are one of the high risk groups of covid-19. All these findings should raise concern as it may delay health seeking at appropriate time which can be detrimental to the high risk individuals.

Only 19.3% were aware of all the preventive methods like staying at home, wearing mask and washing hands. Regarding hand hygiene, only 37% of our study participants knew that washing hands with soap and water can make hands safe which is much less as compared to the study findings conducted by **Natnael T et.al.**⁹ Majority (84.60%) of our study participants were aware of the term social distancing which is similar to the study conducted by **Bhowmick S et.al.** and around two third (60.8%) of the total participants were able to define the term correctly. However none of the responders mentioned it as one of the modes of prevention of Covid-19 and only 44.5% told that they will practice social distancing when someone nearby is detected positive.

Regarding usage of mask, half of the study population (51.70%) reuse the surgical mask once wore which is similar to the study of **Sayare B et.al.**¹⁰ and only 34.80% washed their cloth mask after every use while 1.8% do not use their cloth

mask. In our study one third (35.80%) of the participants attended public gatherings in the last few days. This proportion is quite high as compared to 4.99% responders who admitted of attending a social event recently in the study conducted by **Al-Hanawi MK et.al.**¹¹

This KAP study is one of the first to be conducted among rural population of Assam assessing people's awareness and practices toward COVID-19, thus providing a useful baseline for future research and help public health professionals to conduct more awareness initiatives focussed in the rural areas of the state. Though the study population had heard about Covid-19 but substantial gaps were identified in awareness regarding signs and symptoms, high risk groups, modes of transmission and prevention options for COVID-19. Good practice is inadequate which poses a major threat in the spread of the disease. There is an urgent need to address these gaps for better disease control measures. The messages regarding various aspects of Covid-19 need to be comprehensively designed and disseminated throughout the population using appropriate channels of communication.

Limitation(s): The participants might have given socially desirable responses and the second limitation is that we could have framed the questionnaire more elaborately to have in depth understanding about the desired objectives.

CONCLUSION:

Our study provides a valuable and early insight into the areas that need attention and issues that need to be prioritised and improved for correctly sharing information and preventing the spread of misinformation about an outbreak, which dilutes the effectiveness of health policies. Good practice indicates the translation of knowledge and attitudes into practices (behavioural change) which is a crucial determinant to control the disease so more studies are warranted to determine the level of awareness and attitude towards Covid-19 in rural areas.¹²

Conflict of Interest: None declared.

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