

# Survey on People's Awareness During Unlock-II Phase of Covid-19 At Paschim Medinipur District of West Bengal

Dr. Debabrata Das<sup>1</sup>, Dr. Pampi Ghosh<sup>2</sup>

<sup>1</sup>Associate Professor

<sup>2</sup>Assistant Professor

<sup>1</sup>Govt. General Degree College, Lalgah, Jhargram, West Bengal, 721516

<sup>2</sup>Seva Bharati Mahavidyalaya, Kapgari, Jhargram, West Bengal, 721507

**Abstract-** Novel corona virus disease (Covid-19) is a serious pandemic disease that occurs predominantly during the month of February, 2020 in India. It is so infectious that it can spread rapidly and infect healthy persons as it transmitted through human beings. To prevent the pathogens or causative agents, WHO recommended some precautionary measures as there is no medicine to cure the disease caused by novel corona virus. Some medicines are used by physicians to treat various associated diseases in connection with Covid-19. It is urged that to stay safe, many measures may be adopted even self quarantine is utmost recommended. Though the best way to mitigate the problem is 'stay at home' but during urgent based movement at outside, people may be affected by the pathogens which is now a fear to all. WHO recommended many precautionary measures for the disease causing pathogen n Corona virus. One can use masks when he or she is outside the home during emergency. Mask can protect one from various kinds of pathogenic transmissions caused through fomites and droplets released by infected persons time to time. So, to protect one from transmission of Covid-19, use of masks is essential along with other recommended suggestions. Most of the people are unaware about the use of masks. Present study reflects mask users and non-mask user's attitude which have been documented in 31 days case study in Midnapore town during unlock-II phase in July, 2020. Present study revealed that mask user males are higher in number than male non-mask users in 31 days study under 2nd phase of Unlock period in connation with Covid-19. This is more or less similar to the result found in 3rd phase to 4th phase lock down period's observations followed by unlock-I in the same area. In this article, we are trying to reveal the health consciousness and seriousness about the pandemic disease Covid-19. It was found that male mask user's number varied from 46.57% to 67.12% and in case of female it was 11.30 to 13.69%. This means that females are less conscious than males though government is trying to develop common strategy for all to make a safe situation in such serious pandemic situation.

**Keywords-** Covid-19, Unlock-II, mask users, public awareness.

## I. INTRODUCTION

In February 2020, WHO designated as COVID-19, which stands for corona virus disease 2019. The 2019 novel corona virus infection (COVID-19) is an ongoing public health emergency of International significance (Wasim et al. 2020)<sup>1</sup>. There are significant knowledge gaps in the epidemiology, transmission dynamics, investigation tools and management. Evidence indicated that Covid-19 virus is transmitted during close contact through respiratory droplets (such as coughing) and by fomites (Liu et al. 2020; Ong et al. 2020)<sup>2,3</sup>. The virus can spread directly from person to person when a Covid-19 case coughs or exhales producing droplets that reach the nose, mouth or eyes of another person (Anonymous1)<sup>4</sup>. According to current evidence transmission through small droplets nuclei (airborne transmission) that propagate through air at distances longer than 1m is limited to aerosol generating procedures during clinical care of Covid-19 patient. Study revealed that age related group assessment showed that have been affected till April, 2020 in Indian scenario regarding recovery rate and decreased rate in various regions within the limited days (Talasila and Papaptla)<sup>5</sup>. The causative agent is a virus. It belongs to the sub-genus Sarbecovirus of the genus Betacoronavirus of the family Coronaviridae (Zhu et al. 2020)<sup>6</sup>. It possesses a single – stranded positive sense RNA genome with molecular weight ranged between 26 to 32 kb lengths. Phylogenetic analyses revealed that the genome sequence of Covid-19 was closely related to (88%) bat-derived SARS like corona viruses and more distant from SARS-CoV (79%) and MERS-CoV (50%) agent (Lu et al. 2020)<sup>7</sup>. Structural analysis revealed that 2019-n CoV might be able to bind to the angiotensin-converting genome 2 receptors in humans similar to SARS-CoV which was confirmed by Zhou et al. 2020<sup>8</sup>. In literature there are many families of viruses as per the nature of nucleic acids and envelope, their size, shape and orientation. By and large many

strains are recognised which are described by the scientists till date. Covid-19 causing strains are divided into 7 broad categories<sup>9</sup>. Alpha corona virus (229E), Alpha corona virus (NL 63), Beta corona virus (HKU1), Beta corona virus (OC43), Beta corona virus causes Middle East Respiratory Syndrome (MERS CoV), Beta corona virus causes severe acute respiratory syndrome or SARS (SARS-CoV) and novel corona virus causes corona disease in 2019 or Covid-19 (SARS-CoV-2)<sup>9</sup>. Symptoms of novel coronavirus disease are versatile. It is evident that the report in many cases generated from various countries time to time which includes dry cough, fever, dyspnoea, myalgias, fatigue, decreased appetite, sore throat, rhinorrhoea, gastrointestinal symptoms<sup>10</sup>. Incubation period of virus particle vary from place to place even from site to site. In case of Covid-19 infection, it ranged between 3-24 days while average 14 days are regarded as incubation period. In this condition (symptomatic) infected people are thought to be most contagious. WHO recommends airborne and contact precautions of Covid-2019. The use of medical masks, eye protection, gloves and gown are required for direct patient care. Respirator masks are specially required for aerosol generating procedures<sup>10,11</sup>. WHO also recommended that everyone performs hand hygiene frequently, follows respiratory etiquette recommendations and regular cleans and disinfect surface. It is also recommended that importance must be made to maintain physical distance and avoiding people with fever or respiratory symptoms<sup>11,12,13</sup>. These preventive measures will limit viral transmission if any need consultation with doctors at Covid-19 hospital.

## II. AREA UNDER STUDY

Study area confined under Midnapore municipality in West Bengal. It is situated in ward number-II, at Barisal Pally, near Sitala Mandir of Paschim Medinipur district. Nearest station or point is Sepoy Bazar Girja Goran while it is 2 km apart from Midnapore Railway station under South Eastern Railway tract in Paschim Medinipur district of West Bengal. It is 132 km away from capital of West Bengal. A particular point is demarcated and study was taken during Unlock-II phase period covering early 15 days. Here, during this phase of Unlock-II period, room temperature was 27.3<sup>0</sup>C to 30.9<sup>0</sup>C and from 29.1<sup>0</sup>C to 31.8<sup>0</sup>C during day time and evening respectively. Humidity % varied from 79-86% in the month of July, while number of rainy days was 15 in the same year 2020 (Table 1).

## III. MATERIALS AND METHODS

A point at Barisal Pally was demarcated in Paschim Medinipur district in West Bengal. At a particular point of station, movement of people was recorded for 31 days i.e. 1<sup>st</sup>

July, 2020 to 31<sup>st</sup> July, 2020 during Unlock-II phase. In this phase 3 days were declared as complete lockdown by the Govt. of West Bengal. These days were 23<sup>rd</sup>, 25<sup>th</sup> and 29<sup>th</sup> day of July, 2020 (Table 3). Recorded number was collected after study in field for 30 minutes study in each day. Gender wise masked (male and female) and non masked (male and female) peoples' data was collected day wise and after that mask wearing and non masked peoples' data was prepared. Percentage of masked and un-masked male and female persons data from raw data (masked and non masked) was calculated as per the method of Das and Ghosh<sup>15</sup>. Photographs from top of the own building were taken to know the masked, non-masked (gender wise) and status of mask users was recorded. As we bound to stay at home, so we studied from home during Unlock-II period at Midnapore town at a single point.

## IV. RESULT AND DISCUSSION

In the present study, it is found that mask using male persons was highest i.e. 123 out of 196 total people and 21 female out of 196 total passers through the point (Table 2). Lowest mask using male and female persons was 17 and 06 respectively out of 48 people in a 30 minutes study during the unlock-II period (Table 3). Highest % of mask users male was 67.12% and lowest it was 46.57% during Unlock-II period at Midnapore in July, 2020. Similarly, highest % of mask using female passers was recorded as 13.69% and lowest it was 11.30% during unlock-II phase (Table 3). Highest male non-mask user's % was 23.28% and lowest it was 09.58 during unlock-II phase period (Table 3). Highest female non-mask user's % was 17.80% and lowest it was 9.58% during unlock-II phase (Table 3, Fig. 1) though 3 days were recorded as complete lockdown mentioned in the materials and methods.

Masks used by people were various types including locally available kind, handkerchief, towel, piece of cloth, scarf (dopatta) and sari. Percentage (%) of mask user and mask non user male and female was recorded heterogeneously because of poor knowledge on Covid-19 and its outbreak even community infection (Table 2 and Table 3).

Highest % of mask users was male (67.12%) followed by female (13.69%). Day wise data revealed that, female mask user's % was lesser than male persons in every day's observation. Data represents that male mask user's % was increased towards the end of the unlock-II phase except 3 complete lockdown days but in case of female users such type of conclusion cannot be concluded (Table 2, 3). Result also showed that percentage of mask users was recorded from 46.57 to 67.12 % (Table 2) for male and for female it was ranged between 11.30% and 13.69%. Unmasked male and

female % was recorded in 31 days study varied from 9.58% to 23.28% and from 9.58% to 17.80% respectively. It is argued that within 31 days study, highest mask users were observed in case of male in compare to female passers. It is evident that males are more aware than female to use masks during their movement at Midnapore town (Fig. 2, 3, 4, 5, 6 and 7). At the end of the Unlock-II, mask users are gradually increasing in case of men though there is no parity in case of women.

## Discussion

Corona virus can spread through droplets generated by the activities like sneezing, coughing, kissing, hand shaking and smooching. Corona virus may transmit through pet animals such as dog, cat, pig, cow, turkeys (Kumar et al. 2020)<sup>14</sup>. So, people must avoid these activities and be aware of pets to check the spreading of corona virus and even to lead a smooth life without corona virus attack. Our result revealed that people at Midnapore, West Bengal, are not so serious and conscious about the spread and mode of transmission of such severe and pandemic disease causing virus. So, mask using persons are less than non-masked during unlock1 phase in Covid-19 outbreak though Govt. continuously providing messages about Covid-19 through electronic media and direct advertisements in several wards of the Midnapore municipality. Proper education and awareness among people is the basic need to combat with the Covid-19 associated viruses. Corona viruses are not new. During 1960's the report of some common corona viruses were come to notice like 229E, NL63, OC43, HKU1 etc. without casualty. Then come SARS and MERS CoV strain with respiratory tract infection and casualty during 2002 to 2013. This disease is transmitted through air, droplets and direct contact with infected persons. So, social distancing, proper mask wearing and cleanliness are the major and primary preventive method to remain safe. As per record, mortality rate and number of infection is increasing day by day. The graph is gradually increasing and there is no sign of linear graph through available data. Till date no medicines and vaccines comes to our hand. Recommended practice by WHO to cope up with Covid-19 must be continued. So, we must follow the rules and regulations prescribed by Government time to time to make a complete community free from Covid-19 like disease. People should prepare mask by clothes and use these regularly and keep it clean and dry without any infection caused by fungi and others. The only way to protect him or her is the best practice to keep body free from such pandemic type of pathogen. Therefore, education and policy management is the best practice to combat the serious disease in near future.

## V. ACKNOWLEDGEMENTS

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## Conflicts of interest

Conflicts of interest are none here by the authors.

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**Table 1 Temperature, relative humidity and rainy days in July, 2020 at Paschim Medinipur.**

Date	Temperature °C		Humidity %		Rainy Day/Non-rainy day	
	Day	Evening	Day	Evening	Rainy	Non-rainy day
01.07.2020	30.0	31.5	83	80	Yes	-
02.07.2020	30.2	31.5	82	83	-	Yes
03.07.2020	30.8	31.2	82	80	-	Yes
04.07.2020	30.9	31.8	81	79	-	Yes
05.07.2020	30.7	30.3	80	81	Yes	-
06.07.2020	29.3	29.8	82	82	Yes	-
07.07.2020	29.3	29.6	83	83	-	Yes
08.07.2020	29.2	29.6	83	84	Yes	-
09.07.2020	29.6	29.8	84	82	Yes	-
10.07.2020	29.9	29.8	83	83	Yes	-
11.07.2020	29.1	29.6	83	84	Yes	-
12.07.2020	28.9	29.5	84	84	Yes	-
13.07.2020	28.9	29.1	84	83	-	Yes
14.07.2020	28.5	29.6	83	84	Yes	-
15.07.2020	29.1	29.1	84	84	Yes	-
16.07.2020	28.4	29.5	84	83	-	Yes
17.07.2020	29.1	30.3	84	83	-	Yes
18.07.2020	29.7	30.2	84	84	Yes	-
19.07.2020	29.1	29.4	84	84	Yes	-
20.07.2020	28.5	29.2	84	84	Yes	-
21.07.2020	28.6	28.9	84	84	Yes	-
22.07.2020	27.9	28.7	84	84	Yes	-
23.07.2020	27.9	28.1	85	85	Yes	-
24.07.2020	27.3	28.1	85	85	-	Yes
25.07.2020	27.8	29.2	85	85	-	Yes
26.07.2020	28.9	30.6	86	84	-	Yes
27.07.2020	30.5	31.2	86	81	-	Yes
28.07.2020	30.4	30.3	82	80	-	Yes
29.07.2020	30.0	30.7	81	81	-	Yes
30.07.2020	29.7	31.0	81	80	-	Yes
31.07.2020	30.2	31.3	81	80	-	Yes
Total:					16 Days	15

N.B.: Temperature varies from 27.3 to 30.9 and from 29.1 to 31.8 during day and evening respectively. Humidity % varies from 79-86% and no of rainy days was 15 days in the month July, 2020.

**Table 2. People movement in 30 minutes study at Midnapore town during Unlock-II phase**

Date	Male		Female		Total	% of mask wearing people in 30 days basis		% of people without mask in 30 days basis	
	Masked	Un-masked	Masked	Un-masked		Male	Female	Male	Female
01.07.2020	12	28	07	15	62	19.35	11.29	45.16	24.19
02.07.2020	18	21	06	20	65	27.69	9.23	32.30	30.76
03.07.2020	17	20	06	17	60	28.33	10	33.33	28.33
04.07.2020	106	48	22	17	193	54.92	11.39	24.87	8.80
05.07.2020	64	60	08	19	151	42.38	5.29	39.73	12.58
06.07.2020	58	49	10	30	147	39.45	6.80	33.33	20.40
07.07.2020	30	34	08	23	95	31.57	8.42	35.78	24.21
08.07.2020	37	61	07	18	123	30.08	5.69	49.59	14.63
09.07.2020	18	24	06	17	65	27.69	9.23	36.92	26.15
10.07.2020	17	17	06	08	48	35.41	12.5	35.41	16.66
11.07.2020	20	18	11	13	62	32.25	17.74	29.03	20.96
12.07.2020	17	23	05	12	57	29.82	8.77	40.35	21.05
13.07.2020	62	35	24	18	139	44.60	17.26	25.17	12.94
14.07.2020	38	17	11	13	79	48.10	13.92	21.51	16.45
15.07.2020	68	24	19	12	123	55.28	15.44	19.51	9.75
16.07.2020	58	26	07	21	112	51.78	6.25	23.21	18.75
17.07.2020	60	20	25	18	123	48.78	20.32	16.26	14.63
18.07.2020	40	35	14	12	101	39.60	13.86	34.65	11.88
19.07.2020	41	30	16	20	107	38.31	14.95	28.03	18.69
20.07.2020	20	18	15	13	66	30.30	22.72	27.27	19.69
21.07.2020	83	20	22	16	141	58.86	15.60	14.18	11.34
22.07.2020	33	21	07	10	71	46.47	9.85	29.57	14.08
23.07.2020	73	14	13	15	115	63.47	11.30	12.17	13.04
24.07.2020	81	34	22	14	151	53.64	14.56	22.51	9.27
25.07.2020	49	07	10	07	73	67.12	13.69	9.58	9.58
26.07.2020	123	36	21	16	196	62.75	10.71	18.36	8.16
27.07.2020	68	44	26	26	164	41.46	15.85	26.82	15.85
28.07.2020	94	27	11	18	150	62.66	7.33	18.00	12
29.07.2020	34	17	09	13	73	46.57	12.32	23.28	17.80
30.07.2020	88	19	18	20	145	60.68	12.41	13.10	13.79
31.07.2020	87	38	21	29	175	49.71	12.00	21.71	16.57
Total	1614	885	413	520	3432	47.02	12.03	25.78	15.15

N.B.: Data taken from a point during 30 minutes study at Midnapore Town. Calculation was done based on total number on each kind for 31 days in July, 2020 study in a separate manner in connection with individual day (% basis). Complete lock down at West Bengal on 23<sup>rd</sup>, 25<sup>th</sup> and 29<sup>th</sup> July in Unlock-II phase at West Bengal.

**Table 3. Gender wise movement of people (%) during 3 days complete lock down in Unlock-II at Midnapore town in the month of July, 2020.**

Date	Male masked	Female masked	Male unmasked	Female unmasked
23.07.2020	63.47%	11.30%	12.17%	13.04%
25.07.2020	67.12%	13.69%	9.58%	9.58%
29.07.2020	46.57%	12.32%	23.28%	17.80%
On the basis of total 3432 people studied, % of male mask users and female mask users in complete July, 2020 (01.07.2020 to 31.07.2020)				
Total	47.02%	12.03%	25.78%	15.15%

Note: 3 days complete lock down in West Bengal under Unlock-II during Covid-19 period in July, 2020

Figures (1-7): Covid-19 and Gender based sociological study

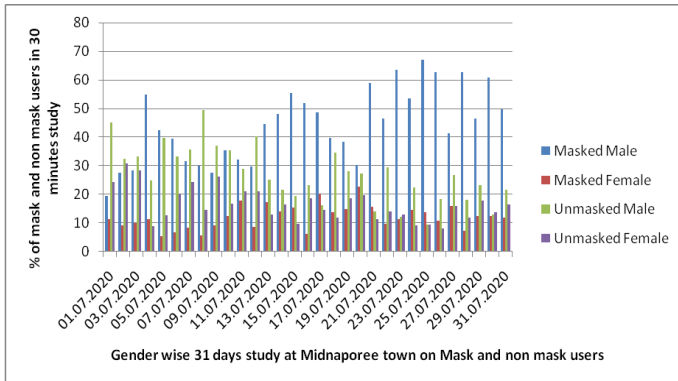


Fig. 1 Mask users and non mask users in Unlock-II phase during Covid-19 in July, 2020).



Fig. 2 (A-D) : MM-Masked male



Fig. 3 (E-F): UMM-Unmasked male though wear mask

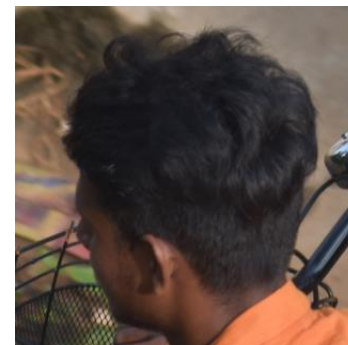






Fig. 4 (G-H): UNM –unmasked male

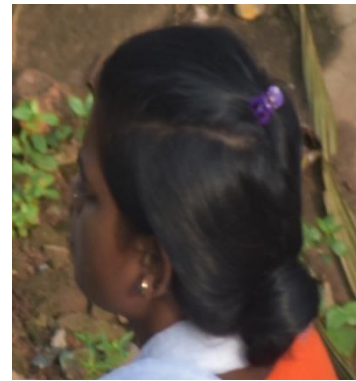


Fig. 5 (I-J) : MF-Masked female (Adult left and aged at right)



Fig. 7 (L-M) : UMF-Unmasked female



Fig. 6 (K): MF-Masked female (Adult)