

COVID-2019 And Peoples' Awareness: A Case Study in Midnapore Town of West Bengal

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Abstract- COVID-2019 is a pandemic disease happening panic globally due to its serious effects on human race. Till date many people are affected in our state West Bengal is due to transmission of the virus from various aspects. Scientists thought that, direct transfer of this virus particle is due to transfer of droplets through coughing and sneezing from infected persons. Though indirect transmission of such disease is happening in varied atmosphere which is unpredicted but there is a science behind it for the infection. As the disease is infectious so WHO recommended many precautionary measures. One such important measure is to attain a healthy life style and be careful to protect mouth, nose, and eyes by using masks. Hands washing with detergents and sanitization by disinfectants are the two most recommended ways to protect us from virus contamination. In our developing country like India, all people are not aware about viruses, their mode of infection, life cycle, mode of transmission, time being genetic modification if any, precautions, control measures and overall their harmfulness for the human society. Research revealed that not only human are the transmitter of this serious novel corona virus disease (nCoV-2019) but several mammals are important transmitters of the disease. In this article we are trying to reveal the health consciousness and seriousness about the pandemic disease like COVID-2019 of our people in Midnapore town of West Bengal. Result revealed that highest % of male mask users was 65 and in case of female it was 17. Unmasked male and female % was recorded as 63 and 36 respectively. It is argued that except one day within 13 days study (3rd lockdown phase), female mask user's number was lesser than male mask users.

Keywords- COVID-2019, lockdown, peoples' awareness, masks

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)¹. 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)^{2,3}. 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 (Anonymous)⁴.

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)⁵.

The causal agent:

COVID-19 belong to the sub-genus Sarbecovirus of the genus Betacoronavirus of the family Coronaviridae (Zhu et al. 2020)⁶. 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-2019 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)⁷. 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. 2020⁸.

Virus types:

There are many families of viruses as per the nature of nucleid 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 categories⁹. 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)⁹.

Symptoms:

As per the report generated from various countries time to time the following are the symptoms related to COVID-19 infected person. These are Dry cough, fever, dyspnoea, myalgias, fatigue, decreased appetite, sore throat, rhinorrhoea, gastrointestinal symptoms¹⁰.

Incubation period:

In case of COVID -19 infection, 3-24 days (average - 14 days) are regarded as incubation period. In this condition (symptomatic) infected one are thought to be most contagious.

Precautions:

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^{10,11}. 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^{11,12,13}. These preventive measures will limit viral transmission if any need consultation with doctors at COVID-2019 hospital.

II. AREA UNDER STUDY

Study area fall under Midnapore municipality in West Bengal, India. It is a ward i.e. ward no. 2 at Barisal Pally, Near Sitala mandir of Paschim Medinipur. Nearest station is Sepoy Bazar Girja Goran while it is 2 km apart from Midnapore Railway station under Paschim medinipur district. A particular point is demarcated and study was taken during 3rd Lockdown period.

III. MATERIALS AND METHODS

A point at Barisal Pally was demarcated in Paschim Medinipur district in West Bengal. From a particular point of station, movement of people was recorded for 13 days i.e. 5th May, 2020 to 17th May, 2020. Recorded number was taken from field for 30 minutes study in each day. Masked (male and female) and non masked (male and female) peoples' data was collected day wise and after that ration of masked to non masked people was prepared. % of male and female from raw

data (masked and non masked) was calculated. Photographs from top of the building was taken to know the masked, non masked, male, female and status of mask worn was recorded. As we are bound to stay at home, so we studied from home during lock down period.

IV. RESULT AND DISCUSSION

In the present study, it is found that mask using male persons was highest (94) among 121 male passersby in number during the third phase of lockdown period (Table 1). Lowest mask using male persons was 05 among 23 male passersby in number during the third phase of lockdown. Highest number of mask using female passersby was 16 among 36 female passersby in number during the third phase of lockdown period. Similarly, lowest number of mask using female passersby was 02 among 9 female passersby in number during the third phase of lockdown period (Fig. 2 and Fig. 3). Masks used by people were various types including locally available kind, handkerchief, towel, piece of cloth, scarf (dopatta) and sari.

Table 1. Data on mask using and non-masked people at Barisal Palley, Midnapore, W.B.

Date of study	Masked		Unmasked		Total
	Male	Female	Male	Female	
05.05.2020	94	07	27	16	144
06.05.2020	81	16	49	20	166
07.05.2020	47	09	30	15	101
08.05.2020	34	03	25	11	73
09.05.2020	28	13	30	07	78
10.05.2020	13	02	14	07	36
11.05.2020	05	05	18	07	35
12.05.2020	48	06	79	28	161
13.05.2020	10	03	09	05	27
14.05.2020	09	03	22	01	35
15.05.2020	32	02	42	42	118
16.05.2020	37	06	62	32	137
17.05.2020	11	06	25	14	56

Note: Data collected during lockdown 3rd phase in connection with COVID-2019

Percentage (%) of mask user and mask non user male and female was recorded (Table 2, Fig. 1). Highest % of mask users was male (65%) followed by female (62%). Day wise data revealed that female mask user's % was lesser than male persons in every day's observation except one day i.e. 11.05.2020. Data represents that male mask user's % became decreasing day by day but in case of female users such type of conclusion cannot be concluded (Fig. 4).

Table 2 Movement of masked male (MM), masked female (MF), unmasked male (UNMM) and unmasked female (UNMF) at Midnapore during lockdown (% calculation)

Date of study	Masked		Unmasked	
	Male MM%	Female MF%	Male UNMM%	Female UNMF%
5.05.2020	65	5	19	11
6.05.2020	49	9	30	12
7.05.2020	47	9	29	15
8.05.2020	47	4	34	15
9.05.2020	36	17	33	9
10.05.2020	36	6	39	19
11.05.2020	14	14	52	20
12.05.2020	30	4	49	17
13.05.2020	37	11	33	19
14.05.2020	26	9	62	3
15.05.2020	27	2	35	36
16.05.2020	27	5	45	23
17.05.2020	20	11	44	25

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 never attain 70% during third phase of lockdown though Govt. continuously proving message about COVID-2019 through electronic media, direct advertisement through loud speakers in several wards of the Midnapore municipality. So, need proper education and awareness among people. As per record, number of mortality and infection by COVID-2019 increasing day by day and the graph gradually increasing and there is no sign of linear graph through available data.

Till date no medicines and vaccines comes to our hand, so need follow up social distancing , use of masks and sanitization are the only recommended practice by WHO to cope up with COVID-2019.

Table 3. Ratio of mask users versus mask non-users during 3rd lockdown phase of COVID-2019

Date	Masked	Unmasked	Ratio: (Masked : Unmasked)	Ratio
5.05.2020	101	43	2.3:1	23:10
6.05.2020	97	69	1.4:1	14:10
7.05.2020	56	45	1.24:1	12.4:10
8.05.2020	37	36	1.02: 1	10.2:10
9.05.2020	41	37	1.10 : 1	11:10
10.05.2020	15	21	0.71:1	7.1:10
11.05.2020	10	25	0.4:1	4:10
12.05.2020	54	107	0.50:1	5:10
13.05.2020	13	14	0.92:1	9.2:10
14.05.2020	12	23	0.52:1	5.2:10
15.05.2020	34	84	0.40:1	4:10
16.05.2020	43	94	1:2.18	4.5:10
17.05.2020	17	39	0.43:1	4.3:10

FIGURES (Fig.1-4).

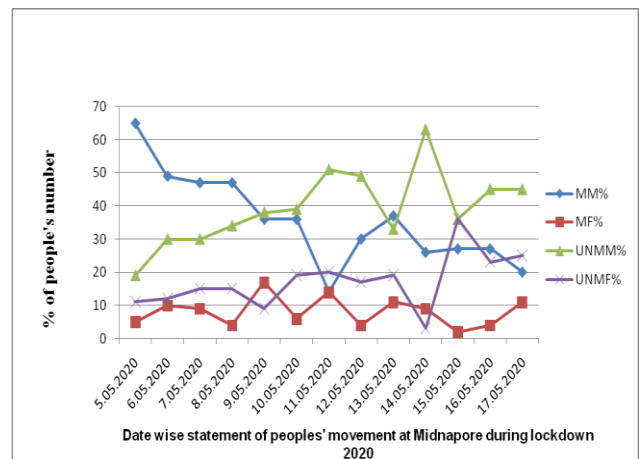


Fig. 1 Peoples' movement during 30 minutes study in each day at Midnapore during 3rd phase Lockdown, CODID-2019.

N.B.: Data collected on 30minutes basis in each day study at a particular point.

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)¹⁴. So, people must avoid these activities and be aware of

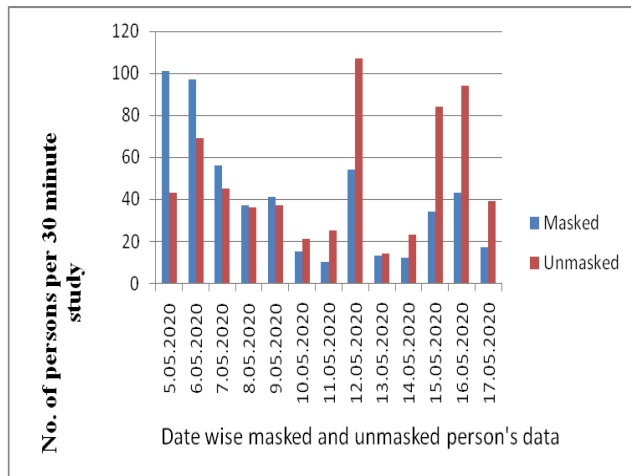


Fig. 2 Peoples' tendency towards mask users at 3rd phase lockdown in COVID-2019



Masked, unmasked and unscientific use of masks by people during Lockdown, 2020

Fig. 3 Different faces of men and women during movement at the 3rd phase of Lockdown in connection with COVID-2019.

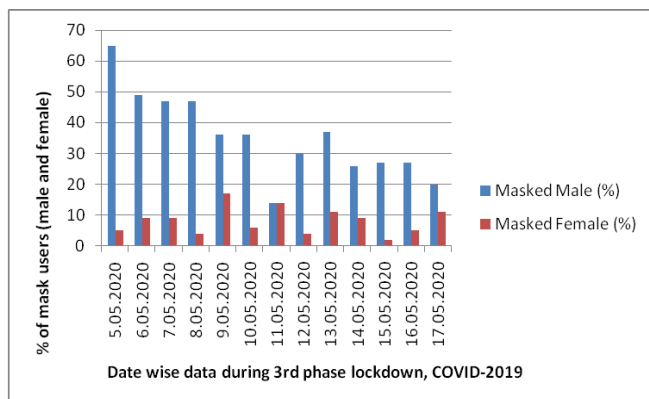


Fig. 4 Mask users data (male and female)

Authors' recommendations:

- [1] Social distancing or in a same way physical distancing must be maintained at least for consecutive 2 years as per the earlier pandemic diseases occurred globally since B.C.

- [2] Masks like N95, FFP2 or FFP3 may be used if not then 3-layers protective masks may be made and mouth must be protected during social works outside home and in offices or during journey in various places.
- [3] Sanitization of hands, legs and important instruments must be made regularly. Hand wash practise by soap and or detergent must be practised in home and office premises regularly.
- [4] Clothes and utensils must be cleaned regularly during use outside the home.
- [5] In animate objects like table, chairs, desks, laptops, mobile phones must be protected and disinfect with the use of spirit using cotton or tissue papers. Floor of a room must be disinfecting with the regular use of Lysol, dettol or similar cleaning agent time to time available in market. Fumigation of office room, laboratory, and class room by UV-light may be applicable if fitted but need special protection of use of these items. It is recommended that during UV-light treatment living items of laboratory and users must be free from the room.
- [6] Market based hand sanitizers, cotton, tissue paper; handkerchief must be used during movement and during sneezing and in coughing protect your droplets by clothes or tissue papers. Contaminated/ used tissue papers and clothes must be kept in a closed dust bin or keep it for burning.
- [7] Regular developmental activities and published report may be consulted to get better benefit time to time. Use the guideline of WHO and AIMS recommended time to time for better result.

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CONFLICTS OF INTEREST

Conflicts of interest are none here by the authors.

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