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## RESEARCH ARTICLE

### MASK WEARING BY PUBLIC IN CITY OF PATNA – A STUDY

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#### ARTICLE INFO

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#### ABSTRACT

**Introduction:** A novel coronavirus was identified in December 2019, as the pathogen to cause pneumonia in Wuhan, China, which was temporarily named as 2019-nCoV by the World Health Organization. Use of Face mask is a protective measure taken by individuals to protect them from contracting COVID 19. A Study is being conducted to see the Public awareness regarding use of mask during peak duration of COVID 19 in Patna Region, capital of Bihar state, India. **Material and Method:** The study conducted during peak of COVID-19, July- September 2020. A sample of 10000 (ten thousands) individuals from different parts of the city taken together about proper and improper wearing of mask. **Results:** A total of Ten thousand individuals randomly chosen, out of which 6814 (68.14 %) were male. Out of total only 3647 (36.47 %) persons wore the mask. About 63% persons do not wore the mask. Overall among ten thousand individuals only 14.03 % wore the mask properly. Various types of mask were used by individuals, of which cloth made mask was most common 70.24 %. **Discussion:** The available evidence suggests that near-universal adoption of non-medical masks when out in public, in combination with complementary public health measures could successfully reduce community spread if such measures are sustained. In this study it was found that only about 14 % peoples wore the mask properly, that can prevent virus transmission. **Conclusion:** Community spread of COVID-19 could be restricted by universal use of mask by people along with complementary public health measures. Even though repeated and widespread campaign by print and electronic media to wear mask in public places, peoples are not doing so. It shows lack of fear about the grievous situation of COVID-19 worldwide.

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#### INTRODUCTION

A novel coronavirus was identified in December 2019, as the pathogen to cause pneumonia in Wuhan, China, which was temporarily named as 2019-nCoV by the World Health Organization.<sup>1, 2</sup> On 11 February 2020, based on genetic homology, 2019-nCoV was officially named as SARS-CoV-2,<sup>3</sup> and the disease caused by SARS-CoV-2 was named as COVID-19.<sup>4</sup> SARS-CoV-2 can be transmitted from person to person through respiratory droplets and close contact, posing a great public health challenge.<sup>5</sup> SARS-CoV-2 shares 82% genome sequence similarity to SARS-CoV and 50% genome sequence homology to Middle East respiratory syndrome coronavirus (MERS-CoV)—all three corona viruses are known to cause severe respiratory symptoms.<sup>6</sup> Maximal viral shedding of SARS-CoV-2 occurs early in the course of the illness.<sup>7</sup> Patients may therefore be contagious before they develop symptoms or even know that they are infected. Transmission of SARS-CoV-2 by asymptomatic individuals has been clearly established, and 40-80% of transmission occurs from people who are presymptomatic or asymptomatic.<sup>8, 9</sup>

Several types of respirators and facemasks are available for preventing infection with SARS-CoV-2. Disposable N95 filtering face piece respirators are devices designed to achieve a very close facial fit and very efficient filtration of airborne particles (blocking at least 95% of very small [0.3 micron] particles). Surgical masks are loose-fitting, disposable devices designed to create a physical barrier between the mouth and nose of the wearer and the immediate environment, blocking larger particles and splashes or spatters. Cloth masks are non-medical, unstandardized face coverings that vary in the cloth material used, the number of layers, and tightness of fit. They are generally washable and reusable. Use of Face mask is a protective measure taken by individuals to protect them from contracting COVID 19. A Study is being conducted to see the Public awareness regarding use of mask during peak duration of COVID 19 in Patna Region, capital of Bihar state. Government of India and state government by means of Electronic and Print media, repeatedly announced awareness message regarding use of face mask. In spite of rigorous public awareness campaign, most of the people usually do not wear the mask.

#### MATERIAL AND METHOD

A general survey of public for awareness of wearing face mask in crowded area was conducted in Patna city.

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The Capital of Bihar, India. The study conducted during peak of COVID-19, July- September 2020. A sample of 10000 (ten thousands) individuals from different parts of the city taken together. Data was collected on printed performa by 20 different persons to avoid selection bias. Data was collected under following headings

- ) Sex of individual.
- ) Whether individual was wearing face mask or not?
- ) Was it proper or improper wearing? – Proper, Below nose, Below mouth or In neck.
- ) What type of mask? – N95, Surgical or Cloth made.

**Proper mask wearing method-** Keeping the mask over nose and mouth and secure it under chin. Fit the mask snugly against the sides of face, slipping the loops over ears or tying the strings behind head.

**Improper mask wearing:** Keeping the mask below nose or below mouth or wearing it in neck. It is a cross-sectional study.

## RESULTS

The study conducted for awareness regarding wearing of face mask in view of COVID-19 pandemic. A total of Ten thousand individuals randomly chosen, out of which 6814 (68.14 %) were male. Out of total only 3647 (36.47 %) persons wore the mask. About 63% persons do not wore the mask. Among the individuals who have the mask, only 1403 (38.47 %) applied it properly. Improper wearing of mask seen in 2244 (61.53 %). Among the individuals not wearing the mask properly, 35.94 % had the mask below nose, 23.64 % below mouth and 1.95 % in neck. Overall among ten thousand individuals only 14.03 % wore the mask properly. Various types of mask were used by individuals, of which cloth made mask was most common 70.24 %, followed by surgical mask in 26.14 %. The least common was N95 mask in only 3.62 % individuals. So it was seen that people were least bothered about wearing the mask in spite of repeated awareness messages by print and electronic media.

1. MASK APPLIED		
YES	3647	36.47 %
NO	6353	63.53 %
TOTAL	10000	

2. WEARING OF MASK		
PROPER	1403	38.47 %
BELOW NOSE	1311	35.94 %
BELOW MOUTH	862	23.64 %
IN NECK	71	1.95 %
TOTAL	3647	

3. TYPE OF MASK		
N95	132	3.62 %
SURGICAL	953	26.14 %
CLOTH MADE	2562	70.24 %
TOTAL	3647	

4. SEX		
MALE	6814	68.14 %
FEMALE	3186	31.86 %
TOTAL	10000	

## DISCUSSION

Currently, no proven treatments are available for coronavirus disease 2019 (COVID-19). Therefore, clinicians and policymakers advise preventive measures. Non-medical masks use materials that obstruct droplets of the necessary size. People are most infectious in the initial period post-infection, where it is common to have few or no symptoms. Non-medical masks have been effective in reducing transmission of influenza; and places and time periods where mask usage is required or widespread have shown substantially lower community transmission. The available evidence suggests that near-universal adoption of non-medical masks when out in public, in combination with complementary public health measures could successfully reduce community spread if such measures are sustained.<sup>10</sup> In this study it was found that only about 14 % peoples wore the mask properly, that can prevent virus transmission. Non medical mask (cloth made) uses was about 70%. Thus it was seen that in spite of repeated awareness messages peoples are not bothered to wear the mask.

## Conclusion

Community spread of COVID-19 could be restricted by universal use of mask by people along with complementary public health measures. Even though repeated and widespread campaign by print and electronic media to wear mask in public places, only 14 % wore the mask properly. It shows lack of fear about the grievous situation of COVID-19 worldwide.

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