

## Original research article

**Knowledge, attitude, practices towards covid-19 profile of patients attending outpatient department of ophthalmology in a tertiary care hospital in south Bihar - a cross – sectional survey**Devashish Seth<sup>1</sup>, Prakash Kumar<sup>2</sup>, Amresh Kumar<sup>3</sup>, Ashish Kumar Sharma<sup>4</sup>, Priya Singh<sup>5</sup><sup>1</sup>Post Graduate Junior Resident 3<sup>rd</sup> year, Department of Ophthalmology, Narayan Medical College and Hospital, Jamuhar, Sasaram, Bihar<sup>2</sup> Associate Professor, Department of Ophthalmology, Narayan Medical College and Hospital, Jamuhar, Sasaram, Bihar<sup>3</sup> Assistant Professor, Department of Ophthalmology, Narayan Medical College and Hospital, Jamuhar, Sasaram, Bihar<sup>4</sup> Associate Professor, Department of Ophthalmology, Narayan Medical College and Hospital, Jamuhar, Sasaram, Bihar<sup>5</sup> Assistant Professor, Department of Ophthalmology, Narayan Medical College and Hospital, Jamuhar, Sasaram, Bihar

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**Abstract**

**Introduction:** Ophthalmology as a speciality is at an increased risk as most of the procedures bring ophthalmologists in close contact with the patient's eyes and face. Various parts of the patient's face touch the ophthalmic equipment, thus increasing the risk of spread of infection through aerosolized particles from respiratory droplet and contact. There are also reports of SARS- CoV-2 identified in tears and conjunctival swabs, thus putting ophthalmologists at the risk. **Aim and Objectives:** To know the KAP (Knowledge, Attitude and Practices) towards COVID-19 and profile of patients and the various reasons for the lack of its knowledge in patients coming to Ophthalmology Out Patient Department in Tertiary Care Centre in South Bihar. **Methodology :** This is Cross-Sectional Study conducted from May 2020 to Sept 2020, After getting approval by Institutional Ethics Committee, data on demographics and awareness of COVID-19 were collected through face to face interview using pretested semi- structured questionnaire in the vernacular language, which is Hindi. **Result :** Very few respondent was aware about eye involvement in COVID 19 infection.78% respondent don't know about eye involvement in COVID-19 cases, 12 % say discharge is the most common symptoms of eye involvement in COVID cases. 7% say pain is the main symptoms, 3% say that redness in eye is important feature of COVID-19 infection.59% of the respondent believes that hand should be washed before touching face, otherwise infection can spread. Majority of study subjects (63%) believes that COVID-19 infection occurs mostly in old people, 23% say children is affected more, 11% don't know exactly whereas only 3% believes that COVID-19 infection occurs most commonly in adults

**Conclusion:** The findings suggest that study subjects who participated in this study have satisfactory level of knowledge on COVID-19, but compliance with the necessary guideline by the government, which are necessary for mitigating the spread of COVID-19 is not good. Internet and media play an important role in acquiring needed knowledge.

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**Introduction**

The corona virus disease 2019 (COVID-19) emerged in

Wuhan, China at the end of 2019. Since then, it has spread to 200 countries and has been declared a global pandemic by the World Health Organisation (WHO). To date, there are more than 44,888,869 positive COVID-19 cases recorded with at least 1,178,475 deaths globally [1].It was renamed on 7 January 2020 as severe acute respiratory syndrome Corona Virus by the ICTV (International Committee on Taxonomy of

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Viruses), causing a disease called Corona Virus Disease 2019 or COVID-19. On 30 January 2020, WHO (World Health Organisation) declared Global Public Health Emergency posing a greater threat to countries/regions with susceptible health systems<sup>[2]</sup>.

Li Wenliang, a young Chinese ophthalmologist working at the Wuhan Central Hospital in Wuhan, Hubei province, China, tried to alert his colleagues on the social media We Chat on December 30, 2019, about an outbreak of an illness that resembled Severe Acute Respiratory Syndrome(SARS)<sup>[3]</sup>.

On January 30, 2020, the WHO declared COVID-19 to be a Public Health Emergency of International Concern and declared it as an epidemic<sup>[4]</sup>. Initial symptoms include fever(90%), cough(75%), and dyspnoea(50%). A small subset of patients may have gastrointestinal symptoms<sup>[5]</sup>.

Given the large population of over 1.3 billion, the government of India declared a total lockdown across the country as a part of its efforts to control the disease spread. At the time of the announcement, India had 519 confirmed cases and 10 reported deaths due to COVID-19. The restrictions came into force at midnight local time on 24th March 2020 and would be enforced for 21 days and onwards<sup>[6]</sup>. As a result of this lockdown, all regular Out Patient Departments across hospitals and clinics in India were to be shut and it was advised that all elective surgeries be deferred, but emergency healthcare services should continue to function. As a result of this step, Ophthalmologists across the country temporarily ceased clinical services at their respective practice locations.<sup>[7]</sup>

Awareness is important also because many countries have repeated a second wave of infection. Lifting of lockdown makes awareness and precaution more important now.

As no herd immunity has been developed yet, awareness leading to preventive precaution is very necessary to this stage.

As no vaccine has been developed yet, if and when it is available it will take another few months to be given to a wide spread population, so awareness leading to safe practice is a must and lack of awareness must be avoided.

Ophthalmology as a speciality is at an increased risk as most of the procedures bring Ophthalmologists in close contact with the patient's eyes and face. Various parts of the patient's face touch the ophthalmic equipment, thus increasing the risk of spread of infection through aerosolized particles from respiratory droplet and contact<sup>[8]</sup>. There are also reports of SARS-CoV-2 identified in tears and conjunctival swabs, thus putting ophthalmologists at risk of acquiring the infection<sup>[9]</sup>.

The rapid gathering of information on the KAP(Knowledge, Attitude and Practices) of individuals in this area of world in Ophthalmic OPD will aid and speed up the planning, development and implementation of behaviour change programs campaigns, provision of needed interventions and to some extent tracking of COVID-19.

#### **Aims and objectives**

To know the KAP (knowledge, attitude and practices) towards COVID-19 and profile of patients and the various reasons for the lack of its knowledge in patients coming to Ophthalmology Out Patient Department in Tertiary Care Centre in South Bihar

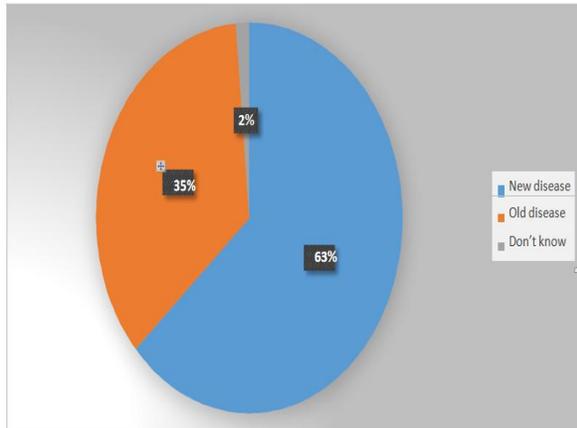
#### **Methodology**

Since Ophthalmologists are at higher risk of exposure by aerosol particle from respiratory droplet and close contact. So, proper knowledge, awareness, attitude towards prevention of COVID-19 is must for patients attending Ophthalmology Out Patient Department to prevent chances of spread of COVID-19 Disease from patients to Ophthalmologists.

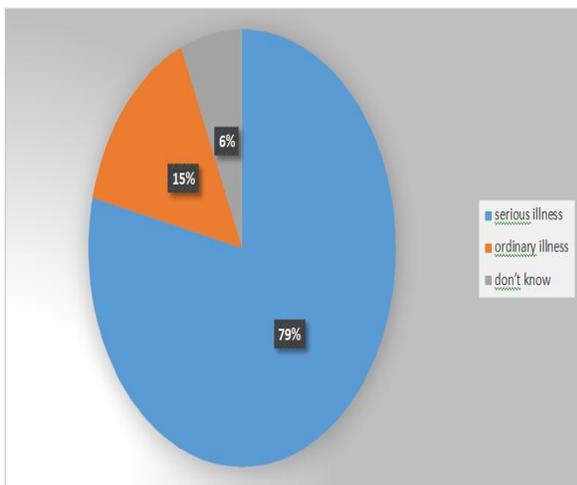
This study is a Cross-Sectional Study conducted from May 2020 to Sept 2020 in Department of Ophthalmology. Study sample was selected from all the patients coming to Ophthalmology Out Patient Department who were ready to give written informed consent and were in adult age group. Those with unstable vitals were excluded from study. Statistical analysis was done in terms of percentage, statistical data were being shown by diagrammatic representation wherever necessary. After getting approval by Institutional Ethics Committee, data on demographics and awareness of COVID-19 were collected through face to face interview using pretested semi- structured questionnaire in the vernacular language, which is Hindi. The questionnaire was developed in English and was translated in Hindi, which is the local language of this area. First the Biographic data was collected, then the subjects were asked whether they have heard of the disease. The subjects were said to be aware of COVID-19 if they had heard about the disease. If the subjects had some understanding of the disease, they were said to have knowledge about the disease. If the participant was found to be aware of, then the person was asked further questions which included whether the participant had heard of a positive COVID-19 patient and the seriousness of disease. Participants were asked if they are aware about spread of disease by eye eg-touching eye, droplets spilling on eye. Whether they are aware of proper use of mask/cloth cover. Whether they inconsistently cover/uncover nose or mouth.

A total of 500 respondents participated in this study. Majority of the study population were male 59.6% (298), 60.6% (303) were between ages 60-70 years, 51.2% (256) were having 10<sup>th</sup> level education or above and 86.2 % (431) reside in rural areas respectively. 55.6% (278) stating the Television (TV) as their major source of knowledge about COVID-19.

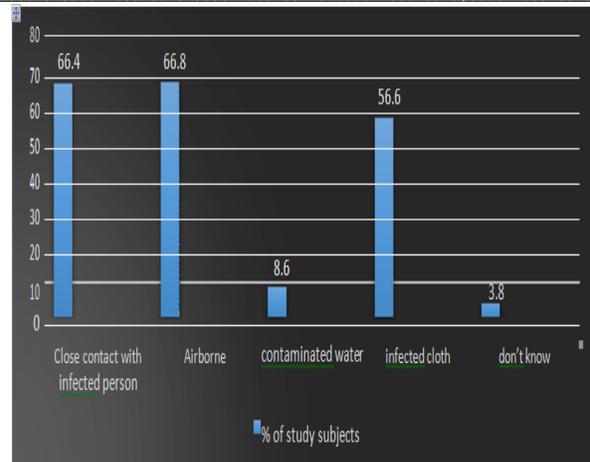
The current findings showed that majority of the respondents 77.6% (388) had heard about COVID-19 with the majority of the respondents. Only 35.3% (326) believed that it is old disease and is similar to SARS whereas 63.3% believes it as new disease and 1.4% don't about this.



Majority of respondent i.e about 78.7% think that it is a serious disease, 14.8% think that it is ordinary illness whereas rest 6.5% don't know about it.



Majority of study subjects i.e 66.4% study subjects believes that COVID-19 spread by Close contact with infected person, 66.8% believes that it is spread by airborne droplet, 8.6% thinks that it is spread by contaminated water, 56.6% think that COVID-19 spread by infected clothes and 3.8% don't know about it.



When we ask about the importance of physical distancing to respondents, 54.6% believes it as very important, 34.4% believes it had some importance, 7.2% subjects do not believes physical distancing had importance in prevention of COVID-19 infection whereas rest 3.8% study subjects do not know about it. When we go in detail and asks how much physical distancing needed for prevention of COVID- 19, only 14.4% thinks it as 6 ft , 22.8% believes it should be 2 ft, 18.6% believes it as 3 ft, 18.8% thinks it as 4 ft, rest 15.4% do not know about it.

69% of study subjects know about importance of hand washing for the prevention of COVID-19 infection, however only 48 % know that through hand washing is needed to prevent the infection, rest 31% do not know the importance of hand washing in prevention of COVID-19

Very few respondent was aware about eye involvement in COVID 19 infection.78% respondent don't know about eye involvement in COVID-19 cases, 12 % say discharge is the most common symptoms of eye involvement in COVID cases. 7% say pain is the main symptoms, 3% say that redness in eye is important feature of COVID-19 infection

**Table 1: distribution of study subjects as per the knowledge of ophthalmic symptoms.**

Eye symptoms	No	%
Pain	35	7
Redness	15	3
Discharge	60	12
Don't know	390	78
Total	500	100

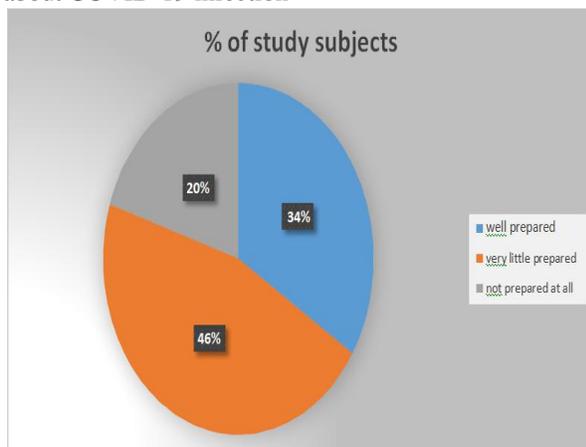
59% of the respondent believes that hand should be washed before touching face, otherwise infection can spread. Majority of study subjects (63%) believes that COVID-19 infection occurs mostly in old people, 23%

say children is affected more, 11% don't know exactly whereas only 3% believes that COVID-19 infection occurs most commonly in adults

Following/respecting health recommendations and adopting behaviour change, frequent hand washing, Face shield/Face mask / clothes dupatta, social distancing/avoiding crowd, avoiding handshakes were some of the practices to reduce community spread COVID-19 as reported by 34.2% (171), 38.8% (194) and 24.4% (122) of the respondents.

56% believes that COVID-19 spread by virus, 23% believes it is by bacteria, 7.8% believes it by fungus, 7.4% believes it by any other reason whereas 5.8% don't know about it.

As far as preparedness is concerned, only 34% believes that they are well prepared for fighting COVID-19 infection, 46% believes that they are very little prepared rest 20% are not prepared at all. 83% were very worried about the COVID-19 infection, 11% were very less worried whereas only 6% were not worried about COVID-19 infection



## Discussion

The emergence of COVID-19 from the city of Wuhan, China in December 2019 and its rapid global spread across over 215 countries and territories has become one of the largest pandemics in recent times with several devastating and significant public health challenges. Being the nation of high density and the 2<sup>nd</sup> most populated country in the world, India's population could undoubtedly be associated with a higher risk of increased morbidity and mortality due to COVID-19. With the Infection, Prevention and Control (IPC) strategies adopted by the CDC and ICMR to curtail COVID-19, the adherence of the citizens depends largely on their level of awareness and knowledge regarding the pandemic. Unconcerned attitudes and adherence to false and superstitious beliefs by the public often arise due to inadequate

awareness, which further affects the level of preparedness and the proper implementation of control measures at the national or state levels.

This study is one of the unique epidemiological study in ophthalmic OPD aimed at assessing the KAP (Knowledge, Attitude and Practices) of individuals within India towards the COVID-19 pandemic as well as identifying key areas of concerns and needs for optimal national and community intervention. Collating such information is necessary for the promotion of major preventive behaviours including personal hygiene, social distancing as well as appraising the challenges emanating as a result of prolonged lockdown and restrictions. With the novelty of COVID-19 and its pathological and epidemiological uncertainties, the study of the population levels of KAP (Knowledge, Attitude and Practices) becomes critical for efficient health planning, implementation and management of the public.

This study was dominated by male (59.6%) respondents who are mostly educated up to matric class or above (51.2%) with an overall 77.6% awareness of COVID-19 thus, depicting that lesser no of respondents are knowledgeable about COVID-19 pandemic. Previous studies conducted in different Asian countries<sup>[10,11,12]</sup>, Egypt, Kenya and Nigeria<sup>[13, 14, 15]</sup> indicated high COVID-19 knowledge among the population. The lower level of COVID-19 knowledge recorded in this study could be attributed to lower socioeconomic background, illiteracy, less access to media and social media. In the study area, only the educated use social media and the internet since their understanding of the English language is limited. Although this much of COVID-19 awareness among the respondents of this particular geographical area signifies a positive predictor in curtailing COVID-19 pandemic within India. The use of TV (55.6%) constitute the major sources of information about COVID-19. This is consistent with other findings that reported the use of TV as the major tool for COVID-19 information<sup>[10,12,13]</sup>

Right from the WHO declaration of COVID-19 as pandemic, several guidelines and information on COVID-19 have been uploaded online by WHO which are easily accessible by internet users. Access to such reliable information could help dispel the pandemic of misinformation, misconception and citizenry ignorance about COVID-19.

In present study Very few respondents were aware about eye involvement in COVID-19 infection. 78% respondent don't know about eye involvement in COVID-19 cases, 12 % say discharge is the most common symptoms of eye involvement in COVID

cases. 7% say pain is the main symptoms, 3% say that redness in eye is important feature of COVID-19 infection. This is in accordance with the literature as most of the literature do not mention ophthalmic knowledge.

Although 56% of the respondents believed that COVID-19 is caused by a virus, only 37% agreed that it is similar to SARS. The transmission routes, incubation period and symptoms of COVID-19 are well recognized by the respondents. Also, 79.2% of the respondents believed that everyone is at risk of getting infected with the COVID-19 virus. This further reflects the effectiveness of the social media and internet in the creation of awareness about COVID-19 pandemic within the Indian population however, some media platforms often exaggerate the risk associated with COVID-19 pandemic.<sup>[13]</sup>

Our findings on respondents' knowledge on the transmission, incubation period and symptoms of COVID-19 aligns with the findings of Saqlain et al.<sup>[12]</sup> and Gao et al.<sup>[16]</sup> who reported good knowledge (93.2% and 89.51%) of participants regarding COVID-19 transmission and symptoms. Nevertheless, in another study conducted among the Iranian population, a lower proportion of the study population (56.5%) had sufficient knowledge of COVID-19 transmission and symptoms<sup>[17]</sup> when compared with the current study.

A low use of protective measures such as social distancing and use of face mask in our study compared to other studies done may be due to lower literacy and lower access to media and social media, but this leads to greater risk of spread of disease among public and there is high risk of transmission to Ophthalmologist as well.

### Conclusion

This study assesses the knowledge, awareness of patient coming to ophthalmic OPD in tertiary medical institute of South Bihar. The findings suggest that study subjects who participated in this study have satisfactory level of knowledge on COVID-19, but compliance with the necessary guideline by the government, which are necessary for mitigating the spread of COVID-19 is not good. Internet and media play an important role in acquiring needed knowledge. So there must be Efforts to improve KAP (Knowledge, Attitude and Practices) of the underprivileged and vulnerable population and for that health education by local languages among these groups should be intensified.

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