

KNOWLEDGE AND AWARENESS-BASED SURVEY OF COVID-19 WITHIN EYE CARE PRACTITIONERS IN SOUTHERN PUNJAB

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Sana Zahra¹
Rashida Riaz²
Kiran Shahzadi³
Irfana Asad⁴

**For Authors' affiliation & contribution
see end of Article**

Corresponding Author:

Sana Zahra
Trainee optometrist
College of Ophthalmology & Allied Vision Sciences,
Lahore. (COAVS)
sanaxahra5@gmail.com

ABSTRACT

PURPOSE: The purpose of this study was to check the knowledge and awareness of COVID-19 within eye care practitioners in Southern Punjab.

METHODS: Ninety six eye care practitioners were invited from Southern Punjab. Data was collected through google form. Proforma and its link were sent to the participants via WhatsApp and Email. Then, this data was analyzed and presented by making charts, graphs and tables.

RESULTS: All 96 eye care practitioners responded to this survey. The confirmatory test for COVID-19 was known to 66% of the participants. While, 72% were well aware of eye disease related to coronavirus. 75% of eye care professionals were familiar to message regarding awareness of COVID 19 by World Health Organization. Only 47% research participants agreed about alcoholic solutions as the most effective disinfectant used in ophthalmic clinic. Thirty eight percent of the participants responded well that survival time for virus from a contaminated surface depends upon the material. Eighty three percent participants were well aware of how virus spreads. High risk practitioners of COVID-19 were known to 51% of the participants. Yet, 44% agreed with the statement that eating garlic/ginger, vitamin C and consuming hot fluids help to destroy the virus. Surprisingly only 33% of the participants agreed that personal protective equipment is important for eye care practitioners.

CONCLUSION: There was sufficient lack of awareness, understanding and knowledge about COVID-19 among eye care practitioners in Southern Punjab as this is an underdeveloped area of Punjab with low information flow rate. Therefore, there is a considerable need to expand the knowledge and awareness of coronavirus among eye care practitioners by training skills and workshops for proper use of personal protective equipment.

KEYWORDS: COVID-19, knowledge, awareness, ECP's of Southern Punjab.

INTRODUCTION

A virus is a protein coated nucleic acid molecule with characteristics of an infective agent that cannot be seen with naked eye and that can multiply only within host cells. Coronavirus consist of a cluster of RNA viruses that causes diversity of pulmonary, gastrointestinal and neurological diseases in humans and animals. Epidemic is a universal incident of a contagious ailment

occurring at a community level at a specific time. Pandemic is a universal expansion of a new disease. A new Pandemic (COVID-19) has become a global issue.¹

According to WHO, denotation for SARS-CoV-2 was presented as "2019-nCoV" but the Chinese scientists named this virus as "novel coronavirus-infected pneumonia (NCIP)" and this (NCIP) gave

the impression of being irrational. The COVID-19 consists of different nucleic acid sequence which is specified and identical to some known human Corona virus species, which resembles to the beta sequence COVID; originated in bats. These sequences of COVID were recognized in pleural effusion of lungs, plasma and nasopharyngeal specimen under compound microscope. Further study needs to be made for better understanding about the COVID to evolve antiviral medicines and vaccine injections.^{2,3}

By genealogical survey it is clear that Corona virus resembles Severe acute respiratory syndrome (SARS) because same genomic sequence like coronavirus was found in bats during 2015-2017, suggesting that genomic sequence found in bats and human corona virus might share a common predecessor. Therefore, Coronavirus can be regarded as SARS-CoV-2. The bat viruses were first discovered in Zhoushan, Zhejiang province China during 2015 to 2017. There is supposition that COVID-19 has been derived near Zhoushan or elsewhere. SARS-CoV-2 has 96.2% close resemblance with bat severe acute respiratory syndrome related viruses, 79% resemblance with SARS-CoV-1 and 50% resemblance with MERS-CoV. It is also supposed that secondary hosts (wild animals) may have been sold to the seafood market in Wuhan.^{4,5} Moreover, corona virus genealogy consists of 38 distinct species.

WHO reported coronavirus 2019 a universal epidemic on March 11, 2020. However, more than 100 countries had been affected with COVID-19 in a couple of weeks. Since April 12, 2020, severe acute respiratory syndrome coronavirus-2 had spread to more than 200 countries. In Pakistan, the first case of corona virus 19 was accounted on February 26, 2020. As of April 12, 2020, Pakistan had more than five thousand affirmed cases of Coronavirus and more than eighty demises. Highest number of cases had experienced by Punjab (N>2000), followed by Sindh (N>1200), Khyber Pakhtunkhwa (>600), Baluchistan (N>200),

Gilgit Baltistan (N>200), Islamabad (>100) and less cases than all above areas in Azad Jammu Kashmir (N≤35).⁶⁻⁸

Eye care practitioner is an individual who provides services related to eyes or vision. According to WHO, ophthalmic team consists of ophthalmologist, optometrist, orthoptist, ophthalmic technician, ophthalmic nurses and other ophthalmic personnel. These practitioners may be at risk of having coronavirus infection. Even though the ophthalmologists were considered to low risk subspecialty during this epidemic in some researches, the instruments (slit lamp, tonometer tip, ultrasound probe, gonio lenses for gonioscopy and pachymeter etc.) which are used during eye examination must be sterilized with the alcoholic solutions because transmission of virus also take place through contaminated surfaces.

According to Lea and colleagues' management policy, Three-level grading of contagious disease resistor actions were adopted in the two eye hospitals by them, (1) Managerial or Administrative control (2) Environmental control (3) The usage of personal protective equipment (PPE). Organizational resistor system consisted of lowering patient attendance, dangling elective clinical facilities and diseased number of infected parsons. Environmental control involved pure air access, repeated sterilization of objects that were often used by health practitioners and patient. Personal protective equipment consisted of overalls and protective aprons, safety glasses or goggles, respirators and masks, earmuffs and earpieces and safety boots or shoes.

The Royal College of Ophthalmologists & the College of Optometrists, The British Contact Lens Association and experienced personnel in the USA & Australia provided the guidelines for both practitioner and patient in regarding COVID-19, including guidance on usage of personal protective equipment.^{9,10}

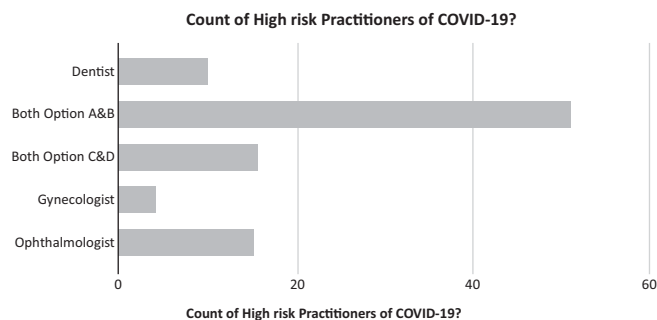
MATERIALS AND METHODS

A cross-sectional study was conducted on 96 eye care practitioners of Southern Punjab in the age range between 25-50 years. The attitude and practice level of eye care practitioners was excluded from this study and data was collected by a self-designed Performa and analyzed by making graphs, charts and tables. Percentages of results are mentioned.

RESULTS

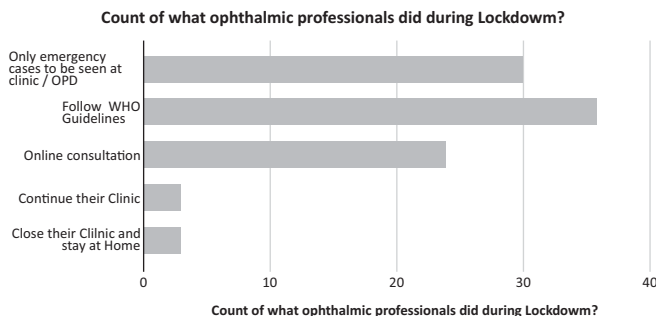
High risk practitioners are those who directly come in contact with the infected individuals. In comparison with the ophthalmologists, dentists and gynecologists are high risk practitioners. Most people said that 51% high risk practitioners are ophthalmologists and dentists. Only 16% of the participants agreed that high risk practitioners are gynecologists and dentists. 16% selected the option “ophthalmologists” (fig 1).

Figure - 1:



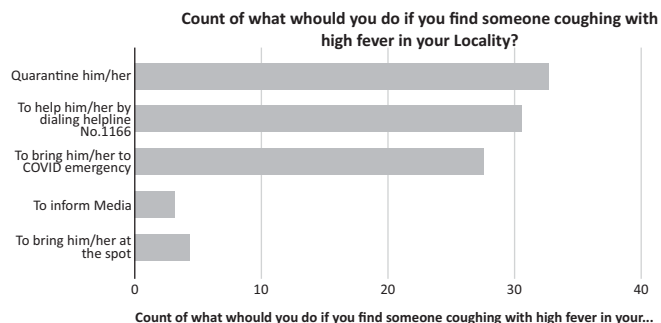
A survey to determine 'what ophthalmic professionals did during lockdown' was done. 37.5% of the participants said that they followed WHO guidelines. 31.3% said that they saw only emergency cases at clinic OPD/clinic. 25.5% agreed with the statement of online consultation. Just 3% were agreed for continuing their clinic or closing their clinic during pandemic (Fig 2).

Figure - 2:



A query was asked from the participants that what will be your behavior when you find someone coughing with high fever in your area. One third agreed for the option “quarantine him/her.” 31.3% were agreed that they will help him/her by dialing helpline number “1166”. 28.1% of the individuals said that they will help in bring him/her to COVID emergency. 4.2% were agreed by leaving him/her at the spot. 3.1% people said that they will inform media (fig 3).

Figure - 3:



Three questions were asked from the 96 research participants. To what extent do you agree with the statement that PPE is important for eye care practitioners? 33% were agree, 62% were strongly agree, 2% were agree and disagree with this statement. A question was asked about ophthalmic processes that should be avoided during the pandemic. 37% were agreed, 22% were strongly agreed and 26% were disagreeing with this statement. 44% were agreeing with the remark that consuming garlic/ginger, vitamin C and hot fluids kill the virus. 27% were disagreeing with this

statement (table 1).

Table - 1:

VARIABLES	RESPONSESIN (%)				
	Agree	Strongly Agree	Disagree	Strongly Disagree	Unsure
PPE is important for ECP's?	33	62	02	02	01
Ophthalmic processes should be avoided?	37	22	26	08	07
Consuming hot fluids kills the virus?	44	09	27	08	12

DISCUSSION

According to this study, it was found that knowledge about COVID-19 was not high among eye care practitioners. In comparison with the ophthalmic nurses and other ophthalmic personnel, the ratio of knowledge about coronavirus was high in ophthalmologists and optometrists. However, high COVID-19 related knowledge (overall 90%) has been described among Chinese residents.¹¹

The survey depicts that there is significant bewilderment amongst those queries regarding COVID-19. A question was asked about the importance of knowledge of coronavirus. 68% people said that knowledge of SARS-CoV-2 is very important for eye care practitioners. A query about the confirmatory test for COVID-19 was asked and just 66% people confirmed "RT-PCR" test and remaining 34% did not know the right answer. Though, for the detection of coronavirus, real time RT-PCR test had been suggested internationally.¹²

There is lack of knowledge and awareness. However, the eye disease (conjunctivitis) is considered the corona-related disease and is one of the main clinical signs in corona virus positive patients during the early period of disease.¹³ 72% of the persons said that conjunctivitis is related to coronavirus. Like a question was asked to the participants that eating ginger-garlic mix, vitamin C or drinking hot fluids kills the virus. 44% were strongly agree and 27% were disagree with the

statement. But, there is no confirmation of this remark which has been spreading as a rumor on the social apps. However, garlic (*Allium sativum*), tea (*Camellia sinensis*), ginger (*Zingiber officinale*), turmeric (*Curcuma longa*), pomegranate (*Punica granatum*), black pepper (*Piper nigrum*) and several other plants can be used to strengthen the immune system of human beings.¹⁴

A question was asked about the abbreviation of PPE and RDT. 74% and 72% of the participants knew the abbreviation of personal protective equipment and rapid diagnostic test respectively. Use of personal protective equipment should be made necessary in eye clinic.¹⁵

The preventive measures about coronaviruses proposed by world health organization are using face masks, using gloves. Avoiding crowd and following Sop's. 75% of the individuals were well aware of these preventive measures.¹⁶ 37% of the participants were strongly agreed with the statement that ophthalmic procedures should be avoided during the pandemic. 26% of the participants were disagree with this statement.

According to a survey, high risk practitioners of COVID-19 are general physicians, dentists, gynecologists, surgeons and ophthalmologists. 51% participants said that high risk practitioners are ophthalmologists and dentists. There are 44% chances of contracting coronavirus among general physicians. At the designated checkpoints, general physicians (GPs) play the most important role in treating patients and providing medical services at different levels in China.¹⁷

Some participants said that they followed WHO guidelines during lockdown. COVID-19 spreads by touching, sneezing and coughing and mostly participants (75%) agree with this statement. Face masks should be disposed after using every time and half of the participants (51%) agreed with this remark. Indian anesthesiologists said that COVID-19 transmission can be prevented by using surgical face masks. N95 masks prevent the droplet and

airborne transmission while surgical masks prevent COVID-19 droplet transmission.¹⁸

A person with weak immune system is most likely to get infected with COVID-19. A person immune system becomes very weak having any disease (like diabetes, hypertension etc.¹⁹ Half of the research participants said that adults (more than 50 years) and children are most likely to get infected with coronavirus.

Alcoholic solutions are mostly used in ophthalmic clinic. Predominantly, alcoholic solutions (isopropanol or ethanol) were found to be impotent against human coronaviruses. 2047% people agree with this remark that alcoholic solutions are used in ophthalmic clinic. A question about dying period of coronavirus was asked from the participants. Only 38% people agree with this remark that COVID-19 depends upon the material to die from a contaminated surface.

CONCLUSION

This study on “Knowledge and awareness-based survey of COVID-19 within eye care practitioners in Southern Punjab” concluded that there is significant lack of information and awareness about COVID-19 among the eye care practitioners in Southern Punjab. Therefore, more training skills are required on accurate usage of personal protective equipment (PPE) and there should be proper workshops about safety and measure to cope this pandemic condition and it will definitely raise their confidence level. Moreover, Social media, Telecommunication, Newspaper, Pamphlets, Brochettes and all such social networks will be helpful in improving the knowledge and awareness about COVID-19 among eye care practitioners (ECP's) in this definite region.

RECOMMENDATION

This study revealed that use of personal protective equipment among eye care practitioners should be made mandatory because without its use, virus

would spread very rapidly.

Authors' Affiliation & Contribution

¹Sana Zahra
Trainee optometrist
College of Ophthalmology & Allied Vision Sciences (COAVS), Lahore.
sanaxahra5@gmail.com
Main idea, Literature search, Data collection,

²Rashida Riaz
Research Officer
College of Ophthalmology & Allied Vision Sciences (COAVS), Lahore.
rashidariaz@gmail.com
Results, Discussion

³Kiran Shahzadi
Optometrist
College of Ophthalmology & Allied Vision Sciences (COAVS), Lahore.
krnshahbaz@gmail.com
Manuscript editing

⁴Irfana Asad
M.Phil Trainee Optometrist
College of Ophthalmology & Allied Vision Sciences (COAVS), Lahore.
irfanabibi786@gmail.com
Data analysis, Discussion

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