

## Covid-19 Awareness and Its Impact on Healthcare Workers- An Institutional Survey.

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### **Abstract:**

Spread of Covid-19 has been declared as an outbreak of pandemic by WHO. Though, there are many ongoing clinical trials for identifying potential treatments, currently, there are no specific vaccines or treatments. It's impact on our lives are expected to cause a lot of undue guilt and fear. COVID-19 has caused major trigger among the health care professionals as well and the aim of this study is to assess the awareness of the COVID-19 disease, psychological and occupational impact of this event among the health care workers.

The survey result shows that there is considerable awareness about Covid-19 with respect to its disruptive impact and about the uncertainty in when the world will be in a position to quell this virus. This has resulted in the creation of increased awareness about various self-preventive methods. Further, this uncertainty has increased the inquisitiveness in seeking information relating to Covid-19 research. The respondents are already feeling the impact of Covid-19 on the economic and emotional front. Since there is a large amount of uncertainty in the minds of respondents with respect to the time period within which the chances of returning of normalcy, there is a likelihood of an increase of the stated impacts on the health (physical and emotional) and wealth of the respondents.

**Key Word:** COVID-19; Corona Virus; awareness; economic and psychological impact of COVID;

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### **I. Introduction**

A pandemic is the worldwide spread of a new disease<sup>[1]</sup>. Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus. Most people infected with the COVID-19 virus will experience mild to moderate respiratory illness and recover without requiring special treatment. Older people, and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illness<sup>[2]</sup>. Spread of Covid-19 (Novel Coronavirus) has been declared as an outbreak of pandemic by the World Health Organization (WHO). Starting from the Spanish flu of 20th century, the world has witnessed several disease outbreaks. Few such major pandemics since the 20th century are: Spanish flu, Asian flu, Hong Kong flu, HIV, SARS, Swine flu, MERS, and Ebola. If one looks at the history of pandemics the worst known infectious disease outbreak of the Spanish flu occurred in 1918. H1N1 (influenza virus) virus has killed more than 50 million people and infected over 500 million population across the globe<sup>[3]</sup>. In India, the outbreak of COVID-19 has led to a peculiar scenario wherein those who can otherwise afford private healthcare are now relying on government facilities especially for testing (even though private facilities are permitted to test) and to be quarantined<sup>[4]</sup>.

Though, there are many ongoing clinical trials for identifying potential treatments, currently, there are no specific vaccines or treatments for COVID-19<sup>[5]</sup>. What scientists know about Covid-19 is changing fast and due to this public, politicians, press etc., (people by and large) are getting confused with the possible(s) and the probable(s). It's causing a lot of undue guilt and fear. We're faced with a rush of new data, much of which is noise, but the pace of genuine scientific understanding can only go so fast. At this juncture journals need to loosen their standard for papers on Covid-19 to enable the scientists to share information knowing very well that not every new finding is going to hold up<sup>[6]</sup>. Due to this the best way to prevent and slow down transmission is to remain well informed about this virus, the disease it causes and how it spreads. The impact of COVID-19 is likely to get extended well beyond the death and disease caused by the virus itself. Further, this pandemic has also forced countries to make difficult choices about suspending some health services<sup>[7]</sup>.

### **II. Aim of the study**

The aim of this study is to assess the awareness of the COVID-19 disease, psychological and occupational impact of this event among the health care workers. The COVID-19 pandemic has caused major trigger among the health service department in providing emergency medical services and major concern among

the health care professionals. Hence it is all the more important to study its psychological and occupational impact among the health care workers.

### **III. Methodology**

This is a survey conducted in the Department of Obstetrics and Gynaecology among the health care workers in a tertiary care teaching institution. The questionnaires were sent to all the faculties, postgraduates, interns and nursing staff and the responses were collected through Google Forms. Most relevant data including awareness, organisational factors, and personal factors such as psychological factors and financial implications were assessed and analysed.

### **IV. Findings and discussion**

A total of 255 participants completed the survey questionnaire. After excluding 38 questionnaires which had missing data (few questions remained unanswered by these respondents) the data collected from the remaining 217 questionnaires was analyzed.

Out of the 217 respondents, 99% of the respondents are found to have the awareness about the COVID 19 outbreak (Fig 1). Only 2% of the respondents were found to be unaware of the signs and symptoms of the disease (Fig 2). The awareness level among the respondents was measured due to that fact that in case of country like Taiwan which is not a member of World Health Organization (WHO) and does not have WHO observer status has to fought the virus outbreak like SARS in 2003 by creating huge public awareness. This experience critically raised the public's awareness of the need for an early, quick, and effective response to emerging (Covid-19] epidemic<sup>[8]</sup>. Public health preparedness and response to natural disasters and climate change are linked Domains<sup>[9]</sup>. 76% of them are of the opinion that the health department is doing enough to prevent outbreak from spreading. 24% of them said that what is being done is not enough to prevent the break (Fig 3).

There has been a high level of awareness among the respondents regarding the self-preventive measures. 99% of the respondents reported that hand hygiene is important to protect themselves from the deadly virus (Fig 4). Healthcare workers treating patients with infections such as coronavirus (COVID- 19) are at risk of infection themselves. Also 89% of the respondents were also found to have the awareness that wearing mask/gloves will help to prevent the spread of the virus. Use personal protective equipment (PPE) by healthcare workers to shield themselves from droplets from coughs, sneezes or other body fluids from infected patients and contaminated surfaces that might infect them. PPE may include aprons, gowns or coveralls (a one- piece suit), gloves, masks and breathing equipment (respirators), and goggles<sup>[10]</sup>. Only 2% of the respondents were not aware that wearing mask will prevent the spread (Fig 5). 89% of those surveyed said that wearing Personal Protective Equipment (PPE) is important while seeing all patients. Greater awareness could help slow the spread of a disease, for example through increased attention to hygiene, mask-wearing and reduced interpersonal contact (Fig 6). However, in some circumstances enhanced awareness could have negative impacts, such as unnecessary panic or ostracism of groups perceived as being at greater risk of infection<sup>[11]</sup>.

71% of them said that they are aware of various research work going on for identifying new treatments for the disease (fig 7). About 78% of the respondents reported that they are aware that the vaccine for the prevention is yet to be discovered (Fig 8). 64% of the respondents said that in their opinion, the homemade remedies (immune boosters) and yoga would help in prevention (Fig 9). There are more than 100 candidate COVID-19 vaccines in development, with a handful in, or soon to be in, phase 1 trials to assess safety and immunogenicity. Candidate vaccines encompass diverse platforms that differ in the potency with which immunity is stimulated, the specific arsenal of immune mediators mobilised, the number of required boosts, durability of protection, and tractability of production and supply chains. COVID-19 vaccines will need to be of the highest rigour<sup>[12]</sup>.

The respondents reported to source various information regarding the virus, disease, preventive methods and other related information through different means (Fig 10). Majority of them, about 45% of the respondents said that their main source of information is newspaper and television news while 33% of them said they get information through social media. Social media has become an increasingly popular source of awareness and information for health communications, especially during an outbreak. Social media has become a source of rapid information and can be updated promptly. If the utilization of social media becomes more accurate or scientific then the social media can provide a very efficient and user-friendly way of monitoring the facts and figures of epidemic both locally and at an international level. Social media exposure is associated with two relevant variables, awareness knowledge and information exchange, and these variables mediate the relationship between social media exposure and preventive behavior among people regarding COVID-19<sup>[13]</sup>. Only 13% of the respondents are found to check with official websites of the government for the information.

While 4% of the respondents get the information from their friends and family, the rest 5% of them rely on their doctors for any such information.

41% of the respondents are feeling distressed due to increased work load (Fig 11) and 30% of the respondents said they considered resignation due to this outbreak (Fig 12). Perceived susceptibility, perceived severity and perceived threat modify behaviors in a way that an individual is more likely to take health outcomes seriously if the perceived threat is greater. As the perceived threat will be bigger if the perceived severity is bigger, as perceived threat is bigger if the perceived susceptibility is bigger –thus an individual experience adverse outcome. Effective mitigation of disease and COVID-19 mitigating behaviors require significant efforts to strengthen beliefs about disease which includes the severity and susceptibility of threat, eliminate barriers to act and reinforce self-efficacy beliefs while applying health belief model for medial staff to general public<sup>[14]</sup>.

For many, the fear of getting ill is not new but has been aggravated by the novel coronavirus<sup>[15]</sup>. Infection among health-care workers has been a problem during other outbreaks. In the early stages of the COVID-19 epidemic, because of insufficient understanding of the virus and prevention and control measures, more than 3000 medical staff were infected in Hubei, 40% of whom were infected in hospitals<sup>[16]</sup>. Due to this this survey tried to measure the fear factor also. 60% of the respondents are found to be afraid of being infected by the virus (Fig 13) and 35% of the respondents are even worried that the virus might have already infected them (Fig 14). 85% of the respondents are also fearful that they might be infecting the family members by going home (Fig 15). Workforce safety is a high priority. To help health-care providers reduce uncertainty and fear, in addition to improving knowledge of infection prevention and control and personal protection skills, hospitals need to provide a safe working environment and sufficient protective supplies and have personnel responsible for continuous training, monitoring, and supervision of infection prevention and control. Sound infection prevention practices are also needed in the living quarters of medical teams from other provinces. For frontline health-care providers who lived at home, the concerns about transmitting the virus to family members need to be addressed. Supportive conversations and recommendations, such as separation of living spaces, changing clothing, and immediately showering after duty, might help to reduce anxiety<sup>[16]</sup>. Grief is an ongoing and important factor of the COVID-19 pandemic that affects patients, families, and medical providers. Some grief processes are novel related to social distancing/isolation, uncertainty/self-blame related to infection, and inability to implement usual burials/funerals<sup>[17]</sup>.

The outbreak is found to have significant impact on the economy of the individuals. 59% of the respondents reported that the outbreak had already affected them financially (Fig 16). 51% of them said that their income has been hampered due to this outbreak (Fig 17). 15% of the respondents predicted that it would take many days before their work getting back to normal while 55% of them predict that it would be months and not days before the work could return to normal. 30% of the respondents are clueless when things will be back to normal (Fig 18).

91% of the respondents feel that their quality of life has changed during the lockdown (Fig 19) period and 82% of the respondents have realized that spending quality time with family is important than working overtime (Fig 20). In treating patients with COVID-19, healthcare providers showed a great deal of professional dedication and acceptance of the need to place themselves at risk and to overwork. The intensive work drained health-care providers physically and emotionally; therefore, comprehensive support should be provided to safeguard the wellbeing of health-care providers and preparedness and efficacy promoted to manage crises<sup>[27]</sup>. Frontline healthcare providers should be closely monitored as a high-risk group for depression and anxiety, and given proper training (e.g., COVID-19 knowledge, stress management, self-care) before deployment; some require psychological interventions. Greater protection gear supplies, on-going monitoring and provision of psychological support, strong family support may also increase frontline healthcare providers resilience to stress and psychological symptoms during a public health emergency<sup>[18]</sup>.

## **V. Review of literature**

The coronavirus outbreak came to light on December 31, 2019 when China informed the World Health Organisation of a cluster of cases of pneumonia of an unknown cause in Wuhan City in Hubei Province. Subsequently the disease spread to more Provinces in China, and to the rest of the world.<sup>[19]</sup>

WHO have made the assessment that COVID-19 can be characterized as a pandemic and as on March 11, 2020 reported that there were more than 118,000 cases in 114 countries, and 4,291 people have lost their lives. It was expected to see the number of cases, the number of deaths, and the number of affected countries climb even higher. As on May 11, 2020 the number of cases rose to 40,13,730 and number of deaths to 2,78,994. On March 11, 2020 India reported 60 confirmed cases and 0 deaths and the same rose to 67,152 and 2206 respectively as per WHO statistics dashboard.<sup>[19]</sup>

The most common symptoms of COVID-19 are fever, tiredness, and dry cough. Some patients may have aches and pains, nasal congestion, runny nose, sore throat or diarrhea<sup>[20]</sup>. These symptoms are usually mild and begin gradually. Some people become infected but don't develop any symptoms and don't feel unwell.

People can catch COVID-19 from others who have the virus. The disease can spread from person to person through small droplets from the nose or mouth which are spread when a person with COVID-19 coughs or exhales.

One can reduce the chances of being infected or spreading COVID-19 by taking some simple precautions: hand hygiene, social distancing, avoid touching surfaces, avoid touching eyes, nose and mouth and use of face masks.

Effective communication and creating awareness are very critical during the time infectious disease outbreaks<sup>[21]</sup>.

In the event of infectious disease breakouts like SARS it is very critical to have access to up-to-date scientific information, as well as conceptual, ethical and practical frameworks in place in order to protect and to minimize the damage to the patients, doctors, nurses and other health care professionals<sup>[22]</sup>.

The Government of India [GOI] and state governments have been found to be doing their best to keep the public informed of the disease, how they spread and how one could protect against getting infected. National Center for Disease Control, GOI has published notification on Modes of transmission of COVID-19 virus and Strategies for preventing/limiting spread of COVID-19 for the public and healthcare workers<sup>[23]</sup> through various sources. The same has been published, broadcasted, aired, updated on Government websites, and by promoting AarogyaSetu mobile App so as to reach as many public as possible to create awareness.

According to WHO, Health workers are at the front line of the COVID-19 outbreak response<sup>[24]</sup> and as such are exposed to hazards that put them at risk of infection. Hazards include pathogen exposure, long working hours, psychological distress, fatigue, occupational burnout, stigma, and physical and psychological violence.

Though the innate professional and ethical obligation drives the staff to continue work during the epidemic, the staff, however, did feel fearful during this outbreak<sup>[25]</sup>.

Healthcare workers risk their lives due to nature of duty. These hospital staff are under huge stress not only during the epidemic, but they can also suffer from long-term psychological consequences<sup>[26]</sup>. This was evident with the SARS outbreak and most recently with the *Ebola virus* outbreak.

The results of past studies of the impact of infectious diseases on the healthcare providers are relative to the current COVID-19 pandemic; they infiltrate fear, anxiety, emotional distress, and post-trauma stress symptoms<sup>[27]</sup>.

Any epidemic brings with it great harm not only to peoples' physical and psychological wellbeing, but also to the economy of the nation, industries, societies and down to the individuals to a greater extent.

The coronavirus outbreak might cost the global economy \$1-2 trillion in 2020, according to the United Nations Conference on Trade and Development. Its potential impact on the Indian economy is not yet known, but several sectors are already feeling the pain<sup>[28]</sup>. An overall economic shock obviously means millions of individual repercussions, many of them drastic: loss of jobs and earnings, and temporary shortages of several products and services. In an evolving crisis, when no one is able to say for sure when it will be contained and what its long-term impact could be, the stress will be placed unequally on the individual and society, and on the government. And the structural risk, which affects everyone, is as economic as it is biological<sup>[29]</sup>.

## VI. Conclusions

The result of the survey shows that there is considerable awareness about Covid-19 with respect to its disruptive impact and about the uncertainty in when the world will find a cure or will be in a position to quell this virus. This has resulted in the creation of increased awareness about self-preventive methods such as hand hygiene, the use of masks, PPE kits, and the use of homemade immune boosting methods. Further, this uncertainty has increased the inquisitiveness in seeking information relating to Covid-19 research. The respondents are already feeling the impact of Covid-19 on the economic and emotional front. Since there is a large amount of uncertainty in the minds of respondents with respect to the time period within which the chances of returning of normalcy, there is a likelihood of an increase of the stated impacts on the health (physical and emotional) and wealth of the respondents.

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