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KNOWLEDGE AND PERCEPTION OF WORKERS IN NON-PATIENT CARE AREAS OF A TERTIARY HOSPITAL REGARDING PREVENTION AND SPREAD OF COVID-19

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Abstract

INTRODUCTION

The novel coronavirus also known as severe acute respiratory syndrome coronavirus-2 (SARS-COV2) causes a severe respiratory disease known as covid 19 because this strain was discovered in December 2019, in Wuhan, China [1,2]. It was reported first on the 31st of December, 2019, by the WHO and regarded as a global pandemic on 11th march 2020[3]. It crossed boundaries worldwide and affected millions of people all over the world. In India, the average daily cases are nearly 98000 cases and the numbers are rising every day.

MATERIALS AND METHODS

It is a questionnaire-based survey, taken by a total of 80 respondents, who were posted in non-patient care areas of a tertiary care hospital and the questionnaire was framed using information from the world health organization (WHO), UpToDate, Indian council of medical research (ICMR), Centre for disease control (CDC) and National Institute of Health (NIH) website resources.

RESULT

Out of 80 workers, 51.25% workers were permanently employed in the setup (figure 1). Highest in the job category of store manager, tailor and chowkidar, while the highest number of contractual workers were employed as supervisor, there were no contractual workers employed as tailor, chowkidar and store manager in the hospital. Out of 80 workers, highest number of workers were employed in the category of administrators (16.25%) followed by kitchen staff (13.75%).

CONCLUSION

To conclude, the degree of awareness portrayed by the staff posted in non-patient care areas of the hospital is adequate to some extent, yet it lacks in certain dimensions like covid-19 transmission and awareness regarding myths and beliefs. Based on this survey it is recommended that all non-frontline workers posted in non-patient care areas of the hospital should at least be trained in order to increase their awareness and knowledge on the transmission modes and prevention of COVID-19.

Keywords: PREVENTION AND SPREAD OF COVID-19, NON- PATIENT CARE AREAS, TERTIARY HOSPITAL

INTRODUCTION

The novel coronavirus also known as severe acute respiratory syndrome coronavirus-2 (SARS-COV2) causes a severe respiratory disease known as covid 19 because this strain was discovered in December 2019, in Wuhan, China [1,2]. It was reported first on the 31st of December, 2019, by the WHO and regarded as a global pandemic on 11th march 2020[3]. It crossed boundaries worldwide and affected millions of people all over the world. In India, the average daily cases are nearly 98000 cases and the numbers are rising every day. Coronavirus can be transmitted most essentially by coughing and sneezing leading to droplet infection, through direct contact with infected person, by using the same utensils of the affected persons and by touching surfaces which may potentially have the virus droplet nuclei resting on them. In the era of COVID-19, all are at the risk of contracting the infection through different routes of contact. Healthcare workers are under constant threat and those directly dealing with patients have access to personal protective equipment, COVID testing and treatment with adequate institutional support. Transmission is more pronounced through healthcare workers and workers posted near a health care facility due to constant contact with infectious articles and infected patients. Workers posted in the non-patient care areas are neglected under the notion that they are not directly affected and remain unaware about the topic, but they come in contact frequently with other healthcare workers who directly involve in COVID patient care and prone to infection. Very few studies have been undertaken where actual knowledge and perception of workers posted in non-patient care area of healthcare set up, to evaluate their knowledge and combat the problem of transmission and fear among the population.

MATERIALS AND METHODS

It is a questionnaire-based survey, taken by a total of 80 respondents, who were posted in non-patient care areas of a tertiary care hospital and the questionnaire was framed using information from the world health organization (WHO), UpToDate, Indian council of medical research (ICMR), Centre for disease control (CDC) and National Institute of Health (NIH) website resources. The questions assessed awareness, attitude and possible practices towards ensuring safety for themselves as well as breaking the chain of transmission. Descriptive statistics were used to portray the characteristics of the participants as well as their awareness, sources of information, attitudes and practices related to SARS-COV-2.

RESULT

Out of 80 workers, 51.25% workers were permanently employed in the setup (figure 1). Highest in the job category of store manager, tailor and chowkidar, while the highest number of contractual workers were employed as supervisor, there were no contractual workers

employed as tailor, chowkidar and store manager in the hospital. Out of 80 workers, highest number of workers were employed in the category of administrators (16.25%) followed by kitchen staff (13.75%).

Most of the workers belonged to age group of 45-54 (30%) years and 25-34 years (30%) followed by 35-44 years (25%), while people belonging to younger age groups were not highly employed in the non- patient care areas (table 1).

Male predominance was 58.75% in terms of employment in these areas (table 2).

PERCEPTION AND KNOWLEDGE

Over 70% of the workers said that they did not have access to area specific Protective personal equipment (PPE), (Figure 2). An equivocal number of the workers (50%) (figure 3) said that they were provided with personal safety policies and procedures and many workers said they were not available to them. All the workers had access to covid testing and treatment facility for themselves and their family members in the hospital. 94% of the workers agreed to availability of sanitizer (figure 2) to them along with N95 masks and disposable latex gloves, while majority of the workers said that face shield and gowns were not available for use.

KNOWLEDGE AND PRACTICES

Over 65% of the workers had incorrect knowledge of the prevention and spread of virus. More than 90% of the workers said that vaccination by influenza vaccine and consuming antibiotics could prevent the transmission and spread of Covid-19 (figure 4).

Out of 80 respondents in the study, on a Likert scale of 0-2, only 11 workers said that they had no support from the hospital or local authorities if they were affected with covid infection, while 55 workers said that local authorities took appropriate measures to help them. Most of the workers were only partially satisfied with the institutional support provided to them in sickness (figure 5).

Only 29% of workers could ascertain on the fact that the spread of COVID-19 virus is through droplet infection, whereas majority of the workers perceive the spread of infection is through eating food together and by eating undercooked meat (figure 6).

DISCUSSION

This survey was done during the early phase of the pandemic and enrolled 80 workers posted in non-patient care area aimed at assessing their knowledge and attitude towards the covid 19 pandemic as well as identifying key areas of concern and need for optimal intervention. Many studies have been done worldwide to evaluate the knowledge and attitude of HCW's in combatting COVID-19 [4,5,6]. However, to the best of our knowledge no KAP study related to covid-19 have focused exclusively on workers working in non-patient care areas of a hospital. It is important to focus on non-frontline hospital staff posted in non-patient care areas like administration , security, kitchen, reception etc. and their knowledge regarding covid-19 need to be assessed because although they are at low risk of occupational exposure as they do not supposedly require direct contact with suspected/confirmed covid -19 patients admitted in the hospital still they should remain aware of clinical symptoms, transmission, prevention, policies of the institute and government for covid 19 infection during the pandemic. At times while working, these non-frontline workers in non-patient care areas like

security guards, chowkidars, kitchen staff, liftman etc. might have to interact and unknowingly assist patients infected with COVID-19 or their attendants on day-to-day basis while working in the hospital premises. Guards stationed at hospital entry and exit gates ensure that social distancing protocols issued by the institute and government are adhered to as much as possible. Also, they have to do additional tasks like to check the body temperature of all persons entering the institute. Therefore, their awareness is important to perform these activities for the entire safety of the hospital premises. This situational awareness of guards means their ability to observe, inspect, and make the right decisions (7). Even other staff like storekeepers, kitchen staff, liftman etc. might have to communicate with suspected patients and their attendants while performing their duties.

Abdulkadir et al (8) in their study showed that the hospital ancillary staff (cleaners, security guards, housekeepers, ambulance drivers, etc.) had the highest rate of infection (36%) compared to HCWs like doctors and nurses. The authors state that the lack of proper training and knowledge regarding risk of human-to-human transmission caused the SARS-COV-2 virus may explain why this category of staff has been more susceptible to infection. It is a fact that most of the training sessions conducted in hospitals are mainly for the frontline HCWS like doctors, nurses, technicians, housekeeping staff who directly deal with patients while lack of training for non-frontline workers in non-patient care areas might predisposed them to exposure.

This survey was dominated by permanent workers (51.25%) and by male (58.75%) which is similar to study reported by Reuben et al. (9) and Zang et al (10) where males were 53.4%. Most respondents were between the ages of 31 and 40 years. Similar finding was observed by sahashi et al (11) for both frontline and non-frontline HCWs where 1648 (64.7%) were aged 30–39 years and 2379 (54.2%) were male.

This study's finding on the reality and perception about the safety and resources available for workers posted in non-patient care area could inform medical institution authorities about the need for urgent implementation of safety policies. Most of the workers (70%) believed that they did not have access to area specific Protective personal equipment (PPE), 94% of the workers agreed to availability of sanitizer to them along with N95 masks and disposable latex gloves. Only 11 workers thought that there was lack of support from the hospital or local authorities in case they were affected with covid infection, while 55 workers said that local authorities took appropriate measures to help them. Most of the workers were only partially satisfied with the institutional support provided to them in sickness. Worry and anxiety among HCWs exist due to lack of appropriate personal protective equipment (PPE); accidental exposure to COVID-19 at work; not having rapid access to testing if they develop COVID-19 symptoms, and fear of spreading infection at work; uncertainty that their organization will support/take care of their personal and family needs if they develop infection; and support for other personal and family needs as work hours and demands increase [12]. Similar thought process applies to the staff posted in non-patient care areas also. One study (11) concluded that there was no significant difference in the degree of worry between frontline and non-frontline HCWs ($p = 0.25$) and that both frontline and non-frontline HCWs expressed comparable concerns regarding the COVID-19 pandemic.

It was observed in this survey that over 65% of the workers had incorrect knowledge of the prevention and spread of virus. More than 90% workers said that influenza vaccine and consuming antibiotics could prevent the transmission and spread of Covid-19. Only 29% of workers could ascertain on the fact that the spread of COVID-19 virus is through droplet infection, whereas majority of the workers perceive the spread of infection is through eating food together and by eating undercooked meat. These workers have the knowledge that is prevalent among the general public about covid-19, from social media, news channels etc. So, they have their own perceptions and interpretations of the whole pandemic scenario. Jaber et al (13) in his study among general public showed that both medical staff and social media platforms are the main sources of information, from which participants seek COVID-19 related knowledge. This highlights the vital role of health care workers in providing accurate and reliable information regarding the virus. Ideally, all staff posted in non-patient care areas should also be well aware of the transmission modes of the virus because otherwise unknowingly they may transmit the virus to others (in case they themselves are infected) or may acquire the infection while interacting with people around them. Moreover, if the staff is unaware of the transmission route, then they are more likely to underestimate the importance of the recommended preventative measures i.e., use of face masks, social distancing and hand hygiene, resulting in less adherence and increased spread of the virus. Transmission of SARS-Cov 2 can occur anywhere be it in the hospital campus or in the community where the workers are residing as it is a pandemic present everywhere. It is necessary to update their knowledge by organizing frequent training sessions regarding covid-19 situation, its transmission and prevention for this category of workers too. The hospital policy should also include training of staff in non-patient care areas also along with the HCWs and frequently assess their adherence to infection control measures so as to reduce exposure to the disease caused by COVID-19.

LIMITATION

This study has several limitations. It was limited in scope. Participants were asked to answer very specific questions that might not cover the complex situation of personal safety of personnel posted in non-patient area. Recruitment of participants was based on their willingness to participate and whole number of workers were not included in the study.

CONCLUSION

To conclude, the degree of awareness portrayed by the staff posted in non-patient care areas of the hospital is adequate to some extent, yet it lacks in certain dimensions like covid-19 transmission and awareness regarding myths and beliefs. Based on this survey it is recommended that all non-frontline workers posted in non-patient care areas of the hospital should at least be trained in order to increase their awareness and knowledge on the transmission modes and prevention of COVID-19. They need to be appropriately protected and providing them with adequate PPE is fundamental responsibility of the hospital. Local authorities should conduct massive awareness campaigns and other activities regarding COVID-19 and make available affordable hand sanitizers and facemasks to low-income households.

FIGURE 1

TABLE 1- DISTRIBUTION OF EMPLOYEES ACCORDING TO VARIOUS AGE-
GROUP DISTRIBUTION

AGE GROUP DISTRIBUTION	PERCENTAGE OF EMPLOYEES
18-24 YEARS	3.75%
25-34 YEARS	30%
35-44 YEARS	25%
45-54 YEARS	30%
>= 55 YEARS	11.25%

TABLE 2 - GENDER BASED DISTRIBUTION OF EMPLOYEES IN THE NON-
PATIENT CARE AREAS.

GENDER	PERCENTAGE OF EMPLOYEES
MALE	58.75%
FEMALE	41.25%

Figure 2- Depicting perception of workers regarding availability of area specific PPE,
appropriateness of PPE.

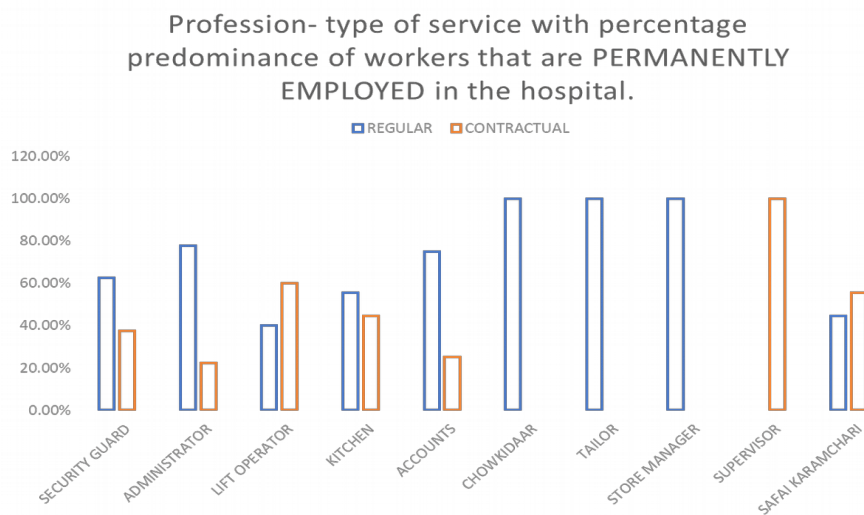


Figure 3- DEPICTING THE PERCEPTION OF WORKERS REGARDING INSTITUTIONAL SUPPORT IN TERMS OF COVID TESTING AND TREATMENT IN THE HOSPITAL, ALONG WITH PERSONNEL SAFETY AND POLICY PROCEDURES OF THE HOSPITAL.

Figure 4- KNOWLEDGE ABOUT THE PREVENTION OF COVID-19 AMONG WORKERS POSTED IN NON-PATIENT CARE AREAS.

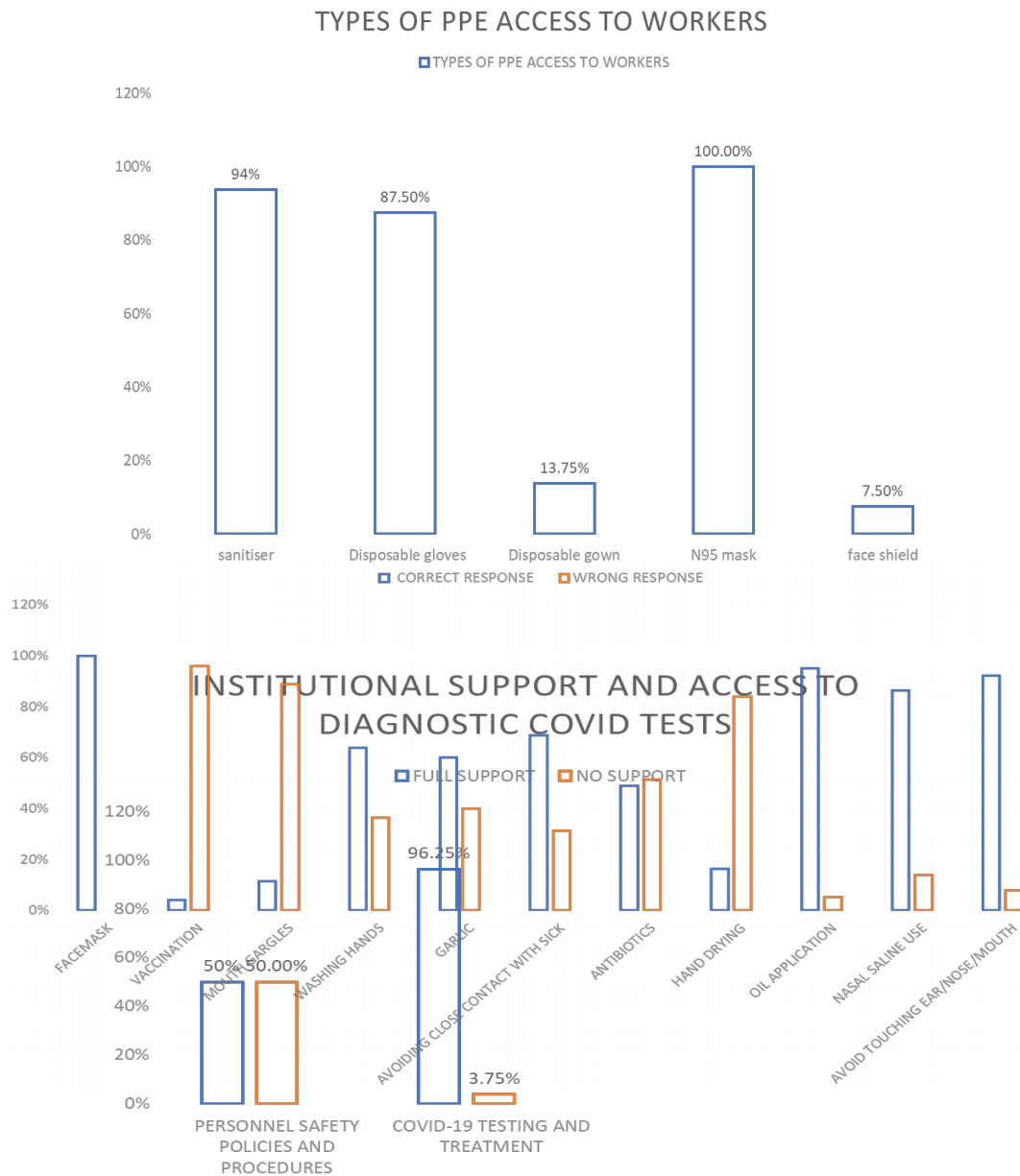


Figure 5- DEPICTING THE PERCEPTION OF WORKERS REGARDING PROTECTIVE MEASURES PROVIDED BY THE INSTITUTION AND LOCAL AUTHORITIES FOR THE WORKERS IN SICKNESS.

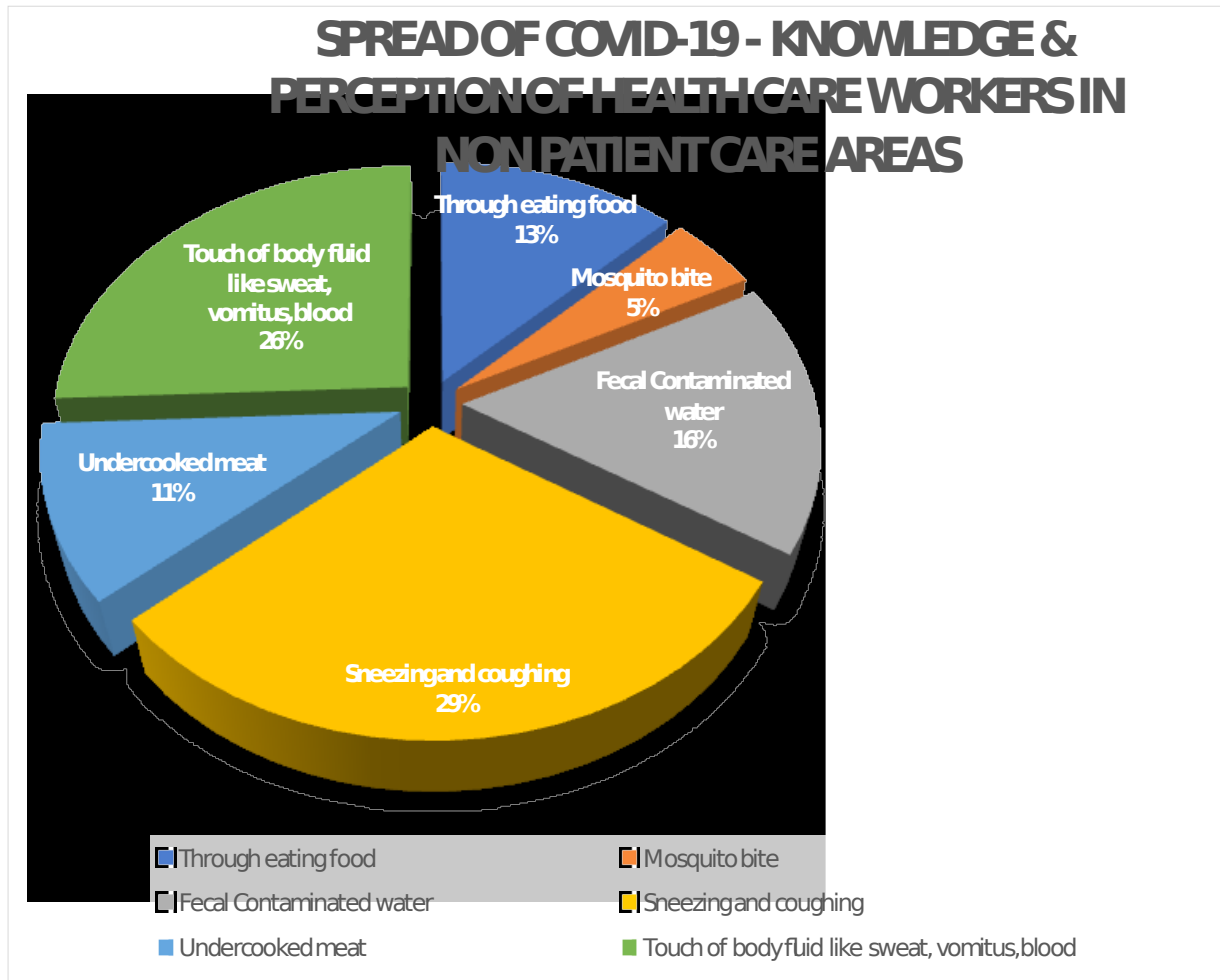


Figure 6 - DEPICTING KNOWLEDGE AND PERCEPTION OF WORKERS IN NON-PATIENT CARE AREAS REGARDING SPREAD OF COVID-19.

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Nil

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