ORIGINAL RESEARCH ARTICLE
pISSN 0976 3325 | eISSN 2229 6816
Open Access Article
www.njcmindia.org
DOI: 10.5455/njcm.20210216052351

A Cross-Sectional Study to Assess Awareness and Practices Related to Prevention of COVID-19 amongst Shopkeepers near Medical Establishments

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ABSTRACT

Background: The World is experiencing Corona virus Disease 2019(COVID-19) pandemic. Respiratory and hand hygiene prevents COVID-19 infection. Shopkeepers near medical establishments have higher risk of catching and transmitting infection as they cater to patients and attendants. Awareness and practices regarding preventive measures is important for their safety.

Objective: To determine awareness and practices related to prevention of COVID-19 amongst shopkeepers near medical establishments.

Methods: Cross-sectional descriptive study conducted over a period of two months, started in month of March 2020 before nationwide locked down. Using simple random sampling method 160 shops near large medical establishments were selected and shopkeepers were interviewed.

Results: 90 shops were of eatables, 43 medical shops and 27 others. Mean age of participants was 40.6(±14.6) years. 96.3% were males. Around 81% were found to be aware of mode of transmission, common symptoms and one or more preventive measures. Around 50% were aware of non-availability of vaccine/definitive treatment. 57.5% had hand washing facility at/near shop**.** Majority of people used cloth/hands while coughing/sneezing. Only 14% were wearing mask.

Conclusion: Awareness of preventive measures of COVID-19 amongst shopkeepers was found to be moderate yet practices inadequate. Behavioural change communication would help inculcate respiratory and hand hygiene practices at work place.

Key words: COVID-19, Corona virus, Pandemic, Health education, Health Promotion

INTRODUCTION

Corona viruses (CoV) are a large family of viruses causes illness ranging from common cold to severe diseases like Middle East Respiratory Syndrome (MERS-CoV) & Severe Acute Respiratory Syndrome (SARS-CoV). Novel Corona Virus (n-CoV), the cause of current pandemic is a new strain that has not been previously identified in humans.[1] Common signs of infection include respiratory symptoms, fever, cough and breathing difficulties. In more severe cases, infection can cause pneumonia, severe acute respiratory syndrome, kidney failure and death.[2]

COVID-19 infection spreads through close contact, fomites, touching contaminated surfaces and droplets. Social distancing i.e., keeping at least two-meter distance from other individual, frequent hand wash with soap and water or hand sanitization by alcohol-based sanitizer, avoid handshakes, avoid touching facial T zone i.e., eyes, nose and mouth, use of cloth or tissue paper while coughing and sneezing and to

How to cite this article: Shastri S, Bhatnagar D. A Cross-Sectional Study to Assess Awareness and Practices Related to Prevention of COVID-19 amongst Shopkeepers near Medical Establishments. Natl J Community Med 2021;12(3):48-52.
DOI: 10.5455/njcm.20210216052351

Financial Support: None declared **Conflict of Interest:** None declared

Date of Submission: 16-02-2021; **Date of Acceptance**: 13-03-2021; **Date of Publication**: 31-03-2021

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discard it immediately or using flexed elbow for coughing or sneezing, use of face mask while in public and staying at home to restrict the movement of people to control pandemic were some of the preventive practices suggested. At present, vaccination has started in India for healthcare and frontline workers, and treatment is only supportive.[2]

The WHO had declared pandemic on March 11, 2020. Disease had spread to various countries including India. At the time of study, there were more than two lakh cases and over 8000 deaths reported all over the world. Also, elderly and people with chronic diseases were reported to be severely affected.[3] There was an urgent need to educate masses on prevention of corona virus infection. Correct knowledge of preventive measures and practicing personal and respiratory hygiene is utmost important to break the chain of transmission. In such situation frequent communication between health care providers and the public is recommended to dispel myths about the disease, to empower public with needed information and to help government in containing the disease outbreak.[4]

Some of the prevailing myths during the initial phase of pandemic were consumption of alcohol & eating garlic prevents infection of corona virus which were dispelled by World Health Organization (WHO).[1]

At the early stage of pandemic, with limited knowledge about the disease, it was not easy to differentiate between seasonal flu and COVID-19 infection. Cases with flu like illnesses come to the hospitals and clinics and will also visit nearby medical shops, restaurants, food stalls, fruit vendors etc. In the process they are likely to transmit infection. These shopkeepers therefore are at higher risk of contracting infection as well as they can act as carrier of infection. Their awareness about the disease dynamics plays an important role in their safety. Hence, the study was planned to assess awareness and practices related to prevention of COVID-19 amongst shopkeepers near medical establishments.

MATERIAL AND METHODS

It was a cross-sectional descriptive study conducted over a period of two months (March and April 2020) started in March 2020 before nationwide lockdown. Eight large hospitals both public and private at various locations in a tier two city were selected randomly. Shops located within the range of 100 meters on both sides of these medical facilities were included in the study. Simple Random Sampling method was used to select 20 shops from each location. Hence, total sample size was 160. Shops which were closed at the time of data collection were excluded.

Institutional ethics committee approval was obtained. After taking consent and building a rapport with research participants, data collection was done by one-on-one interview of participants using a pre-tested Interview Schedule. This included identification details, questions regarding awareness and practices related to prevention of COVID-19. Shop premises and shopkeepers were observed for preventive practices such as respiratory and hand hygiene. Width of counter which determines distance between shopkeeper and customer was measured and shopkeepers were observed for one minute for frequency of touching one's face. One shopkeeper was interviewed from each shop. The study was followed by an awareness campaign for prevention of COVID-19 infection. Later, first nationwide locked down was announced in India in the last week of March 2020 which caused temporary closure of most of the shops except for essential items such as medical shops, grocery etc. Data entry and descriptive analysis was done using Microsoft Excel.

RESULTS

Out of 160 shops interviewed 90 were shops of eatables such as restaurants, fruit juice stalls, fruit and vegetable vendor etc., 43 were medical shops and 27 were others such as hair salon and grocery shop. The mean age of shopkeepers was 40.6±14.6 years. Table 1 shows the demographic details of the participants.

Almost all participants (159) had heard about corona virus. Sources of such information were different and multiple (Table 3). Around 81% knew some common symptoms of the disease, 83% were aware about the mode of transmission of corona virus and 82% could enumerate one or more preventive measures (Table 2). Only 37% participants were worried about catching infection themselves or their family members. Table 2 also shows knowledge of shopkeepers about non-availability vaccine and definitive treatment and prevailing myths.

About 92 (57.5%) shopkeepers had hand washing facility at or near the shop yet only 27 used to wash their hands very often (Table 3). Table 3 also shows measures used by shopkeepers to prevent spread while coughing/sneezing. Majority of people only used cloth or hand while coughing/sneezing. Only 8% participants reported handshaking as a way of greeting people at work.

Table 1: Demographic details of participants

Demographic details	Frequency (%) (n=160)
Sex	
Male	154(96.3)
Female	6(3.7)
Occupation	
Shop owner	132(82.5)
Employee	28(17.5)
Educational status	
Illiterate	17(10.6)
Primary school	18(11.2)
Middle school	32(20)
High school	23(14.4)
Higher secondary	10(6.3)
Graduate and above	60(37.5)

Table 2: Awareness about COVID-19 (n=160)

Awareness of participants about COVID-19	Frequency (%)
aware of common symptoms (cough, fever, breathing difficulty)	130(81.2)
knew about mode of transmission (close contact, coughing/sneezing)	133(83.1)
enumerated one or more preventive measures (hand wash, distancing from sick, no hand-shake, use a cloth while coughing/sneezing)	131(81.9)
knew about non-availability of definitive treatment	81(50.6)
knew about non-availability of vaccine	77(48.1)
did not agree with the prevailing myth that 'drinking alcohol prevents corona'	96(60)
did not agree with the prevailing myth that 'eating garlic prevents corona'	86(53.8)
said that elderly age group is most affected by this virus	60(37.5)

Table 3: Practices related to prevention of COVID-19 (n=160)

Practices	Frequency (%)
Source of information*	
Family, relatives and friends	31(19.4)
Media (TV#, Radio, Newspaper)	129(80.6)
Internet and social media	50(31.2)
Frequency of washing hands while at work	
Never	7(4.4)
Before eating	4(2.5)
Sometimes	34(21.2)
After every customer	20(12.5)
Very often	27(16.9)
Measures used while coughing/sneezing	
Hand	40(25)
Clot	90(56.3)
Tissue paper	4(2.5)
Flexed Elbow	21(13.1)
None	5(3.1)

*frequency represents multiple responses. #Television

Observation of shop premises revealed that 78 (49%) shops had wash basin or wash area for washing hands. Out of remaining shops only 22 had hand sanitizer in use. Only 23 (14.3%) shopkeepers were found wearing masks at work, out of which 11 (6.8%) were wearing plain cloth mask and only 12 (7.5%) were wearing surgical mask.

Around 139 shops had a proper built-up counter. In 81 shops the width of this counter i.e., distance between customer and shopkeeper was found to be less than one meter. Shopkeepers were also observed for one minute for frequency of touching their nose, eyes or mouth. Around 60% did not touch the face at all, 35% of them have touched face 1 to 4 times, while 5% touched face for 5 to 7 times in a minute.

DISCUSSION

Almost all participants had heard of the new virus. Majority of them had fair awareness of common symptoms, mode of transmission and preventive measures of COVID-19. For majority of participants source of information was traditional media i.e. television, radio and newspaper. Apart from this internet and social media like WhatsApp and Facebook were also the sources of information for some. The participants in our study were mostly in their middle age. This explains the use of traditional sources of information over social media. In contrast to this, studies from Egypt, conducted on population younger than our study, reported major source of information as social media.[5,6] Use of internet and social media helps in increasing awareness but at the same time it may feed lot of information and misinformation. This may lead to spread of myths about the disease. Authentic sources of information should be promoted to control the epidemic of false information. Another study suggests that people have more trust in authentic media and it can be utilised in achieving better health literacy.[7]

Along with the information about prevention of COVID-19 there were some myths prevailing in the community. Eating garlic and drinking alcohol can prevent corona virus infection were some of them. Although majority of study participants did not agree with this, some of them still believed in these myths. Consumption of healthy food might boost immunity but certainly cannot prevent virus to enter body. Excessive consumption of alcohol in times of crisis and lockdown may lead to additional health and social problems. Consumption of alcohol does not have any preventive or therapeutic benefit against COVID-19.[8]

Around one third participants showed concern about the disease. They were worried about catching infection. Another study also found similar level of concern and reported that participants with low health literacy were less likely to be more worried about the pandemic.[9] Another study reported heightened level of anxiety regarding disease where sleep disturbances, paranoia about catching infection and distress related to social media were also reported despite adequate knowledge of preventive measures.[10]

In present situation prevention is the mainstay of control of pandemic. Awareness about self-care needs to be created to reduce burden on health care facilities during rapidly spreading pandemic. Most of participants were aware of common symptoms, mode of spread and measures to prevent transmission of COVID-19. Studies have reported similar levels of awareness regarding symptoms and preventive measures as that of our study.[2,9,10,11,12,13] Another study reported better awareness in general public regarding symptoms & precautions to be taken but reported confusion about vaccine and treatment.[14] Other Studies have reported good knowledge regarding COVID-19 prevention.[5,6]

Half of the participants in the study were unaware about non-availability of vaccine or definitive treatment. This is alarming because until there is no vaccine or cure available the understanding needs to be developed that prevention is the only choice left to protect population. Although variety of treatment options are tried and combination of antiviral have been used, there is no definitive drug treatment currently exists.[15] At present there are candidate vaccines either under development or under trial available but until whole population of the world gets the vaccine the preventive measures such as social distancing, proper hygiene and use of personal protective measures will have to be continued.[16] Another study on younger population found better knowledge of non-availability of vaccine.[13]

Older population, immune compromised and patients with chronic diseases are more vulnerable to COVID-19 infection. In our country where joint family system still exists in villages, small towns and cities, people live with their parents and grandparents. Hence awareness about protecting older individuals of family becomes a priority. Social distancing and proper hand & respiratory hygiene should be practiced inside the house having elderly people, where younger people go outside to work. Study reported that older individuals despite concern about the disease have not made changes in their routine due to lack of knowledge.[9]

Use of cloth, hands or tissue paper for coughing/sneezing demands immediate hand wash or sanitization of contamination hands. This is a very important practice to prevent surface contamination yet rarely followed. Nearly half of the study population had access to hand washing facility and only a third washed hands very often. Only a third had hand sanitizers available. Studies have reported that COVID-19 virus can survive on inanimate surfaces for as long as 9 days. Hence, repeated hand washing and surface disinfection is an important preventive practice.[17]

COVID-19 enters through the mucus membrane of eyes, nose and mouth by self-inoculation. A systematic review suggest that average frequency of facial touch is 50±47 times per hour and that of facial T zone is 68±27 times. Although, it is challenging to restrict such face touching movement but, it is important to prevent self-inoculation of virus.[18] Although the way of greeting did not pose much risk to our study participants, but exchanging goods and currency, touching contaminated surfaces and then touching facial T zone i.e., eyes, nose and mouth unknowingly may lead to entry of virus.

Only a few participants were found wearing face mask and small counters of shops bring shopkeepers at higher risk of close contact. Another study shows good practices of social distancing but bad when it comes to wearing mask.[6] Another study reported participants acknowledging social distancing as preventive measure but less than half enacting it.[12]

Despite adequate knowledge about the disease dynamics the practices are subjected to inherent hygiene behaviour and availability of adequate resources. Resources such as availability of soap and water, proper personal protective measures, surface and hand disinfectants, use of digital payment options, regular health check-up and keeping the record of customers if needed, should be made available. As the time passes the practices may fade away as practicing these preventive measures are not in the habit of individual. Behavioural change communication is therefore required to achieve adequate preventive practices.

CONCLUSION

Awareness of the shopkeepers regarding COVID-19 and its preventive measures was found to be moderate and respiratory & hand hygiene practices were found to be inadequate. Lack of knowledge about non-availability of vaccine or definitive treatment and the fact that prevention is the only cure explains poor practice of preventive measures. Also, Non-availability of resources such as soap and water etc; to maintain hygiene at work place resulted in poor hygiene practices.

RECOMMENDATIONS

COVID-19 pandemic has disrupted the normal lifestyles in the last eleven months in India. It affected the economy of household as well as country. The threat is not over yet, we may have to live with the pandemic for quite some time. The preventive practices should therefore become the new lifestyle of individuals. Even after a good level of knowledge, the adequate practices will require a high level of motivation. Information, education and communication (IEC) and behavioural change communication (BCC) would therefore be helpful to inculcate hand hygiene and respiratory hygiene practices at work place. Improved availability of hygiene facilities at work place will must be provided to fight against the pandemic.

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