Awareness on the Spread of COVID-19 Infection Among People from Interior Villages of South India - A Survey

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ABSTRACT

Introduction: COVID-19 infection, so-called Coronavirus is a rapid, widespread virus creating an outbreak in different parts of the world. This was officially announced as an outbreak pandemic by the WHO [World Health Organisation]. It was first administered in the seafood and wet animal wholesale market in Wuhan, Hubei Province, China. The incubation period of the virus is 14 days which is an infectious disease that spreads directly from person to person.

Materials and Methods: A questionnaire was prepared and administered to 100 participants through Google form - an online survey platform. The study population included all the interior village people of different age groups. The results were collected and data were generated using SPSS software

Result: The people from the interior villages of South India were aware of the spread of COVID-19 infection.

Conclusion: The survey has created awareness on the spread of COVID-19 infection among people from the interior villages of South India.

Key Words: Spread, Awareness, COVID-19 infection, People, Precautions, Outbreak

INTRODUCTION

COVID-19 which is also known as Coronavirus was reported in Wuhan, China which created a major outbreak in almost every country.1 Coronavirus is an infectious disease that significantly targets the human respiratory system. The firstly administered patients who were reported by the presence of the virus were epidemiologically linked to the seafood and wet animal wholesale market in Wuhan, Hubei Province, China.2 COVID-19 primarily spreads through droplets of saliva / discharge from the nose. They are reported to have a severe illness, fever, dyspnea and pulmonary infiltrates on chest,3 pneumonia, and many more clinical conditions when in severe conditions.4 The virus is transmitted from person to person which is more likely to spread by the aerosol of the infected person.5

On March 11, 2020, the World Health Organisation declared the COVID-19 situation as a pandemic. The data and statistics from China indicated that older people and people with underlying medical problems like cardiovascular diseases, diabetes,7 chronic respiratory disease, and cancer8-12 are more likely to develop serious illness.13 The possibility for these viruses to grow seems determined for the public to be in health risk.

In the very meantime, scientists are working very hard and tirelessly in different clinical trials14,15 to identify diagnosis16, treatment and prevention17, and therapeutic strategies18 to solve the greatest pandemic which spread after many years. Scientists from different parts of the world are very seriously involved in the identification19 and carrying many research procedures20.
The main aim of the study is to analyze the awareness of the spread of COVID-19 infection among people from interior villages of South India and to make sure that the information about the pandemic reaches the people of interior villages.

**MATERIALS AND METHODS**

A self-structured questionnaire survey based on the spread of COVID-19, a prospective observational study, comprising about 100 people (sample size) belonging to all age group in the interior villages were circulated on an online survey link using Google form (https://drive.google.com/drive/mobile/my-drive?usp=forms_web) and were asked to take up the survey, for illiterate the questionnaire was read by people and filled. The sampling method involved non-probability convenient sampling. The questionnaire was checked for validity in Saveetha Dental College, Chennai.

**Statistical analysis**

The results were collected and the data was generated using SPSS software and finally, the statistics were analyzed.

**RESULTS AND DISCUSSION**

The majority of the respondents show a positive perception (aware) regarding the spread of COVID-19 all over the world. When asked about COVID-19 which was spreading all over the world [Figure 1], 100% of respondents - 84% were aware of the spread and 16% were unaware of the COVID-19 spread. Thus, in the bar graph representing Chi-square analysis between gender and the awareness about COVID-19, the P-value was 0.676 was not statistically significant. According to the article, knowledge, attitude, and practice towards COVID-19 among the Chinese residents were asked by a questionnaire during the rapid rise period of the COVID-19 outbreak. 70.2 - 98.6% overall or 90% correct answer rate of the 12 questions on the COVID-19 knowledge questionnaire was recorded.

From the results when asked if they were aware that this virus is highly contagious [Figure 2], out of 100% of respondents - 74% were aware and 26% were unaware that it is highly contagious. According to the study done earlier, it analyses the effect of COVID-19 pandemic, contagious infectious disease on the Chinese stock market. The study also assessed the low market capitalization stocks and sectors which performed better than others during the outbreak of the COVID-19, specifically, information technology, and medicine manufacturing sectors.

When asked if the social distancing is significant during an outbreak pandemic in controlling the spread of this virus [Figure 3], 100% respondents - 75% answered ‘yes’ and 25% answered ‘no’. Thus, in the bar graph representing Chi-square analysis between gender and the awareness about social distancing to prevent COVID-19, the P-value was 0.177 was not statistically significant. According to the significance of age and social contact figures in examining the country - was the outcome of lenitive social distancing. The study also mentions that it is important to critically follow social - distancing in the absence of vaccines to control the spread of the contagious virus.

When asked about the symptoms of coronavirus (COVID-19) [Figure 4], 100% of respondents - 69% answered that they were aware and 31% answered that they wear unaware of the symptoms of COVID-19. Thus, in the bar graph representing Chi-square analysis between gender and the awareness about symptoms of COVID-19, the P-value was 0.1416 was not statistically significant. According to this article, the symptoms of COVID-19 include fever, Dyspnea, pulmonary infiltrates, and respiratory syndrome. When asked if they should visit the doctor if they have any of these symptoms [Figure 5], 100% respondents - 82% answered ‘Yes’ and 18% answered ‘No’.

When asked if we should use hand sanitizer to prevent infection, 100% respondents - 82% answered ‘yes’ and 18% answered ‘no’. When asked if we should use face masks to cover our mouth and nose preventing the aerosols from entering a body, 100% respondents - 81% answered ‘yes’ and 19% answered ‘no’. According to the article, health workers should be provided with gloves, masks, goggles, gowns, hand sanitizer, soap, and water and various other cleaning supplies to treat and assess test patients as well as maintain preventive measures in order to maintain safety.

When asked if they know the main symptoms of COVID-19 that it is fever and cough, 100% of respondents - 83% answered ‘Yes’ and 17% answered ‘No’. When asked if there are high possibilities for the old people to get infected [Figure 6], 100% of respondents - 77% answered ‘yes’ and 23% answered ‘no’. Thus, in the bar graph representing Chi-square analysis between gender and the awareness about possibilities of spread of COVID-19 among old people, the P-value was 0.476 and was not statistically significant. According to the article, special attention is necessary to protect or reduce transmission in susceptible populations. To be noted, the elderly population is more susceptible to the contagious virus.

When asked if the lungs are the main organ to get affected by COVID-19, 100% of respondents - 88% answered ‘yes’ and 12% answered ‘no’. According to the article, the patients infected showed severe lung abnormalities on CT scans in 10 days after the initial onset of symptoms.

When asked about the virus which takes 14 days to show symptoms, 100% of respondents - 80% answered that they were aware and 20% answered that they were unaware.
When asked if they should follow the orders to stay safe [100% respondents - 81% of respondents answered that they were aware and 19% answered that they were not aware.

When asked if they were aware that if a person entered their village from another city or country they should be quarantined [Figure 7], 100% of respondents - 83% voted that they were aware and 17% were unaware. Thus, in the bar graph representing Chi-square analysis between gender and the awareness about quarantine to control the spread of COVID-19 among old people, the P-value was 0.70 and was not statistically significant. According to the article27, quarantines, self-quarantine, travel bans were the first response against the normal virus infection.

When asked if they should avoid family gatherings during lockdown 100% of respondents - 86% of respondents answered ‘yes’ and 14% answered ‘no’. When asked if lockdown is essential to control the spread of the virus, 100% respondents - 88% answered ‘Yes’ and 12% answered ‘No’.

The future scope of the study may enable us to create and analyze the awareness on COVID-19 spread among interior villagers of South India in a larger population.

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**Figure 1:** Awareness of COVID-19 among the people of Interior villages. Bar graph representing the association between gender and awareness of COVID-19 which is spreading all over the world. X-axis represents the ‘Gender of the respondents’ and Y-axis represents the participants who were aware (Blue) or not aware (Red). Out of 100 participants, 14 male and 11 female participants were not aware of the precautions to be taken. Though, statistically not significant males are more aware than the female population. Pearson’s Chi-square analysis = 1.824, DF = 1, p-value = 0.177 (>0.05) Statistically not significant.

**Figure 2:** The pie chart depicts the knowledge of COVID-19 and its highly contagious nature. The people who knew that COVID-19 is contagious, out of 100% of respondents were - 74% were aware (blue) and 26% (red) were unaware.

**Figure 3:** Knowledge about social distancing to control the spread of COVID-19. Bar graph representing the association between gender and awareness about social distancing which is significant in controlling the spread of the viral infection. X-axis represents the ‘Gender of the respondents’ and Y-axis represents the participants who were aware (Blue) or not aware (Red). Out of 100 participants, 14 male and 11 female participants were not aware of the precautions to be taken. Though, statistically not significant males are more aware than the female population. Pearson’s Chi-square analysis = 1.824, DF = 1, p-value = 0.177 (>0.05) Statistically not significant.

**Figure 4:** Knowledge of the symptoms of COVID-19. Bar graph representing the association between gender and knowledge about the symptoms of COVID-19. X-axis represents the ‘Gender of the respondents’ and Y-axis represents the participants who were aware (Blue) or not aware (Red). Out of 100 participants, 19 male and 12 female participants were not aware of all the symptoms of COVID 19 infection. Pearson’s Chi-square analysis = 0.662, DF = 1, p-value=0.416 (>0.05) Statistically not significant.
Figure 5: The pie chart depicts the awareness of the participants that they should visit a doctor if they have any of the symptoms of the viral infection. Out of 100% of respondents - 82% (blue) were aware that they should visit a doctor once they get a symptom and 18% (red) were unaware.

Figure 6: Knowledge about old age people is at high risk to get affected by COVID infection. Bar graph representing the association between gender and awareness about the high possibilities of old people to get affected by COVID-19 infection. X-axis represents the ‘Gender of the respondents’ and Y-axis represents the participants who were aware (Blue) and not aware (Red). Out of 100 participants, 12 male and 5 female participants were not aware that the person who enters their village from outside needs to be quarantined. This awareness is an individual’s interest to learn things and does not depend on gender. Pearson’s Chi-square analysis = 0.199, DF = 1, p-value = 0.730 (>0.05) Statistically not significant.

CONCLUSION

COVID-19 is a highly contagious viral infection that is spreading all over the world rapidly. The virus is infectious, hence, it is necessary for everyone to know about the preventive and safety measures. This survey has imparted knowledge, created awareness about COVID-19, its symptoms, and various preventive and safety measures to be taken among the people of interior villages.

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Conflict of interest

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