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KNOWLEDGE, AWARENESS AND PERCEPTION ON COVID 19 INFECTION AMONG ADOLESCENT AND ADULT POPULATION FROM TAMIL NADU - A SURVEY

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ABSTRACT:

COVID- 19 was first reported in Wuhan, China.(Bakrania et al., n.d.) The sudden outbreak had affected many and had also spread rapidly to all over the world COVID- 19 is a type of pneumonia with an unknown cause. This disease usually spreads through cough, handshake, sneeze, touch, etc and considered as a communicable disease and needs more attention and care for preventing the same. (Dutta, 2014) The sudden infectious outbreak of COVID 19 has changed the routines of the entire world, where social distancing has turned in to an anthem in everyday life and people can't step out of the house, self- quarantine has also become mandatory. The self isolation protocols and lockdown has created emotional changes and has also imparted psychological impacts among the general public especially among elderly and sick people. This was a questionnaire-based study using an online survey portal called "survey planet." An e-form was circulated among 202 adolescents and adult participants from Tamil nadu. The data were collected during May 2020. Results were obtained using proper statistical methods, and thus, the awareness on the causes and precautions to avoid COVID 19 infection among adolescents and adults was studied. A majority of (91.4%) of the participants strongly believed the first lockdown of 21 days would be very effective in

controlling the spread of infection. 75.2% of the participants were already anxious and depressed about the spreading infection. All segments of people will not be at the same level of risk for the infection and it varies with many factors. 45.5% of the participants were aware that older people were at a high risk category compared to any other population. 33.8% of the participants believe that people who suffer from chronic disorders like diabetes and hypertension were at higher risk for infection. Thus the best approach to tackle this pandemic is to take initiatives and strategies in the interest of creating knowledge and awareness on the spreading pandemic and its preventive measures

INTRODUCTION

COVID- 19 was first reported in Wuhan, China. (Bakrania et al., n.d.) The sudden outbreak had affected many and had also spread rapidly to all over the world. COVID- 19 is a type of pneumonia with an unknown cause. This disease usually spreads through cough, handshake, sneeze, touch, etc and considered as a communicable disease and needs more attention and care for preventing the same. (Dutta, 2014) The sudden infectious outbreak of COVID 19 has changed the routines of the entire world, where social distancing has turned in to an anthem in everyday life and people can't step out of the house, self- quarantine has also become mandatory. The self isolation protocols and lockdown has created emotional changes and has also imparted psychological impacts among the general public especially among elderly and sick people. Depression, anxiety, and a sense of loneliness has become common among the general population and it gets intensified with elderly and economically weaker section due to the sudden infectious disease outbreak and lockdown. (Kuang et al., n.d.)

During the lockdown period, the public, especially economically weaker society and people from remote villages must be given a lot of support and encouragement to overcome the situation and not to overthink about the pandemic. Lockdown is the word, which is not familiar for most of the people. Suddenly when it was announced, people especially from remote villages were unaware of the fact. It is very important that the health department and educated public spread awareness on the outbreak of the COVID 19 infection and also about the precautions and importance of lockdown announced in the country. They may get stressed by overthinking about such factors like the consequence of the pandemic, whether they would be able to overcome the pandemic or not, etc. (Murugeswari and Rajeswari, 2020)

World has not seen a severe pandemic like this for the past hundred years, so it is very important that each and every single person in the country be educated about the causes and precautions to be taken to keep themselves healthy. Though the health department takes necessary steps like lockdown, if there is no proper education regarding the same will make it a big failure. It is the responsibility of each and every learned person to spread the message regarding the importance of lockdown, social distancing and self isolation (Barclay and Openshaw, 2018).

From the previous studies, it is very clear that mostly the people from good economic background, educated, people above the age of 50 are more aware of the symptoms and the necessary precautions to fight the infection, rather than the people from low economic background, uneducated, people from remote villages. (Sarani et al., 2015)

Lockdown measures were considered to be an essential and effective method to curb the infection in many of the countries. Since the nature of the virus is almost unknown, the spread from human to human was believed to be prevented only by the social distancing. Due to the uncertainty regarding the nature of the virus, its mode of spread, the clinical risk associated and the treatment modality, people have not been given a solid support or cure regarding the same. The only method to combat the situation was to take necessary precaution (Lau et al., 2020). The challenge for the Government or any healthcare worker is to teach and impart knowledge about the necessary precautions to be taken to avoid the infection. The first hand safety to fight the infection was the knowledge and awareness about the spread of the virus. Continuous spread of information regarding the precautions to be taken by the Government and health care workers through media, social media and the implementation of lockdown has created knowledge among the public. In any society, adolescent and young adults are considered to be more important. (Bahl et al., 2020) If they gain proper knowledge, no doubt the entire family will gain knowledge from them. The basic knowledge or awareness includes, social distancing, washing hands frequently, avoiding touching face unnecessarily, taking care when a person suffers from cough or sore throat, and increasing immunity by taking healthy food. (Mallya and D'Silva, 2020) Knowledge on what not to be done is also equally important. Unnecessary panic among the society is equally unhealthy.

Foremost important is to impart the knowledge on the importance of lockdown. People, if not properly advised, take the lockdown for granted and plan to finish their works of priority. When the lockdown was announced, most of them rushed to shops to buy essentials, without a proper understanding that even during lockdown essentials like medicine and provisions will be always available. When people rush to shops and gather as a crowd, again it becomes a major point of contact for the spread of infection. (Hudson, 2020)

Adolescents and young adults are usually considered to be an active generation in any country. Thus, if there is a proper awareness among this community, fighting any kind of pandemic will be easy for a nation. Thus, this survey aims to study the knowledge, awareness and perception on COVID 19 infection among adolescents and adults in Tamil nadu.

MATERIALS AND METHODS

Study Design

This was a questionnaire-based study using an online survey portal called "survey planet." An e-form was circulated among 202 adolescents and adult participants from Tamil nadu. The data were collected during May 2020. The Questionnaire was prepared which included questions to assess their

knowledge, awareness and perception towards COVID 19 infection. The Questions were framed in such a way to create awareness on the causes , myths and precautions to be taken to avoid COVID 19 infection. Results were obtained using proper statistical methods, and thus, the awareness on the causes and precautions to avoid COVID 19 infection among adolescents and adults was studied.

The study subjects were recruited on a voluntary basis. The inclusion criteria required participants to be active, this inclusion criterion was important since we wanted to test the awareness towards the new infection that has started spreading. The exclusion criteria included physical deformities and chronic diseases.

Survey Instrument

The survey instrument which was a questionnaire was prepared after extensive review of the existing literature. The questionnaire was reviewed and amendments were made to improve clarity of the questions to eliminate ambiguous responses. The questionnaire consisted a total of 14 questions. The questionnaire was shared to the participants using online survey platform.

Data Analysis

Only completed surveys were taken for analysis and the incomplete ones were eliminated. The statistical test used is descriptive statistics. All the responses obtained were tabulated and reliability of the data was checked. The data was statistically analysed.

RESULTS AND DISCUSSION

The majority of the participants of the survey were undergraduates from various universities (82.2%) and 14.4% were school students and the remaining were post graduates. (Figure 1) From this it is evident that all the participants of the survey were educated. When asked for the main symptom of COVID 19 infection about 22.9% of the participants opted as cough , fever was considered as main symptom by 21.2% of the participants and an equal number of participants has opted breathlessness as an important symptom, Around 20.1% of them have opted for sore throats. (Figure 2) Aware of the symptoms of an infection is very important , as with the knowledge of it, treatment can be given immediately. Most of the participants were found to be well aware of the symptoms of the infection. .When asked about the transmission of infection , 83.7% of the participants strongly believe that an adult or child without any symptoms can still transmit infection and can act as silent carriers. (Figure 3). Usually, people with some common symptoms of cold only be suspected for COVID infection. When a person becomes a silent carrier, it can be dangerous for the community. When asked about the mode of spread of infection, around 29.4% of the participants feel that sneezing of the infected person is the major cause for the spread, followed by 25% of the participants feel that direct contact or touching the respiratory droplets as a major cause , around 23% of the participants think that going to a crowded place can be a mode of infection and 22.1% of the survey participants feel that touching the infected person can be a major mode of infection. (Figure 4). When asked , whether implementation of social distancing can prevent the spread of infection, almost all the participants (99.5%) were sure that social

distancing can be a key factor in preventing the further spread of COVID infection.(Figure 5). The most surprising response was when asked about the importance of wearing a mask, for this only 27.2% of the participants were positive about wearing masks and believe that wearing a mask can completely prevent them from getting infected. A majority of (72.8%) participants were reluctant and do not believe in wearing masks. This can be because they don't feel comfortable wearing a mask for a long period of time and moreover it is expensive. (Figure 6). All segments of people will not be at the same level of risk for the infection and it varies with many factors.45.5% of the participants were aware that older people were at a high risk category compared to any other population. 33.8% of the participants believe that people who suffer from chronic disorders like diabetes and hypertension were at higher risk for infection. 20.7% of the participants think that children are at higher risk .(Figure 7).When the participants were asked about the solution to slow down the spread of infection, 22.6% of the participants, were positive about staying at home and 21.5% of the participants wanted to maintain social distancing to avoid the further spread of infection. 16.8% of the participants believed that wearing a mask and properly covering their nose and mouth ,21.5% of the participants voted for washing hands frequently with soap and water and 17.25% of the participants think that cleaning frequently touched surfaces and objects can avoid the further spread of infection.(Figure 8). 28.7% of the participants strongly believe the myth that COVID infection will not spread in hot countries like India (Figure 9).A majority of (77.7%) the participants strongly believe that improving the immunity by taking immune booster foods like garlic and ginger can help fight the infection. Health is a major factor to fight any infection. Awareness to keep fit among the participants was again a positive sign. (Figure 10). When asked about whether the pneumonia vaccines can be effective against COVID 19 infection ,a majority (77.2%) of the participants disagreed with the fact that the pneumonia vaccine can act as a shield for COVID infection.(Figure 11). When asked about the effectiveness of thermal scanners in the screening of infected, 61.7% of the participants accepted that the thermal scanners were effective in detection.(Figure 12). A majority of (91.4%) of the participants strongly believed the first lockdown of 21 days would be very effective in controlling the spread of infection.(Figure 13). When asked about the first thing to be done when met an infected person, a majority of (48.5%) the participants think that the infected person should be admitted in an hospital immediately, 33.2% of them felt panic and wanted to call an ambulance immediately and 18.3% of them said that they will call the doctor immediately.(Figure 14). A majority of (89.6%) the participants were happy that their neighbours and family members have taken the lockdown seriously and they have self isolated themselves from the crowds and gatherings (Figure 15). 75.2% of the participants were already anxious and depressed about the spreading infection. (Figure 16).

From the above survey, it was evident that a majority of the participants were well aware of the precautions to be taken to avoid COVID infection. Most of the participants wanted to improve their immunity to fight infection. Though there was good knowledge and awareness on the spreading infection, people still lack the knowledge about the first aid or the first care to be given when they suspect an infection. Since the survey has been done with educated

people, most of the participants were well aware of the importance of lockdown and social distancing. The knowledge and awareness among the people shows obviously the society's willingness to accept the changes in their lifestyle according to the health rules laid by the government. It is the willingness of the community to understand and cooperate with the health department that matters a lot in improving and implementing new strategies to fight against an infection spread. Though the survey depicts the educated community, it is from them the other part of the community get and learn new information. Several studies conducted on assessing the knowledge of COVID 19 have concluded stating that , people who were above 50 were quite knowledgeable than the youngsters and the people who had low income were not aware of the precautions to be taken(Azlan et al., 2020).

When there is an extraordinary occurrence such as a pandemic, it is the awareness and the readiness to accept the situation that becomes a limiting factor among society. The present study has shown that a large majority of the participants showed a positive attitude in fighting the disease. It is not only the awareness and knowledge towards the pandemic which is important, it is the emotional status of the society , which needs to be addressed.(Shilpa et al., 2014) As , there is an announcement of lockdown, which has left most of them unemployed and many were forced to return to their native to combat the financial crisis. Even in this survey, a majority of the participants have expressed their anxiety and depression towards the spread of infection. The infection can be monitored and treated , but the emotional stress which the people undergo cannot be monitored and it is the social responsibility to fight the situation together. (Ohannessian et al., 2020)

From the survey, it was evident that the community has taken lockdown and social distancing seriously, it shows that the people not only possess knowledge and awareness along with that they are responsible. Though participants are quite aware, from the survey, it was known that most of them don't trust and neglect wearing a mask. Proper knowledge towards wearing a mask has to be imparted.

It is a well known fact that the entire world is fighting towards the pandemic, it is not for a single nation. Scientists from all over the world work diligently to invent vaccines and other treatment modalities to put off the spread of infection. Public health campaigns and health education is also equally important like a vaccine to fight against this pandemic. The current survey, focusses on the value of health education and it should be understood that the information flow regarding health from government and related authorities to all the people in a nation is very important. It is also very important that there should not be any misinformation regarding COVID 19, which will make the situation even worse. There should be proper communication and all the media has to function with one aim to educate and impart knowledge among the public regarding COVID infection and its precautionary measures.

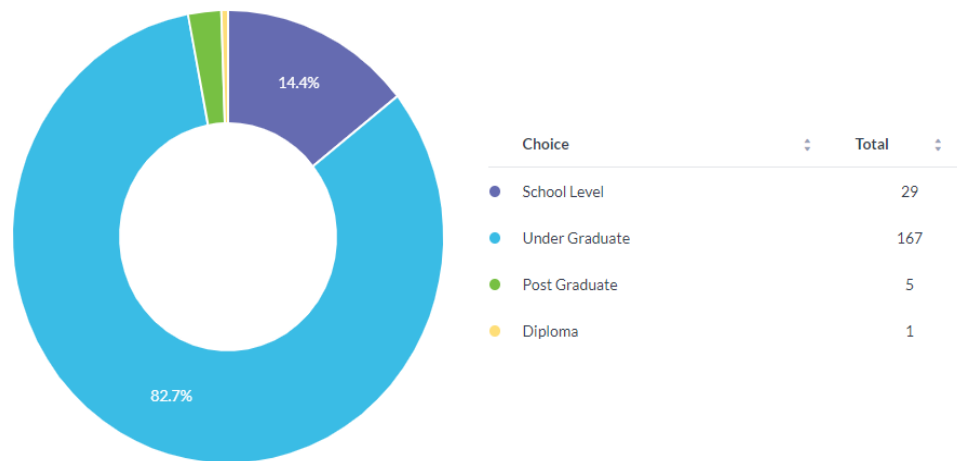


Figure 1: pie chart represents the distribution of participants based on their education qualification , where the majority of the participants (82.7%) (light blue) were under graduates.

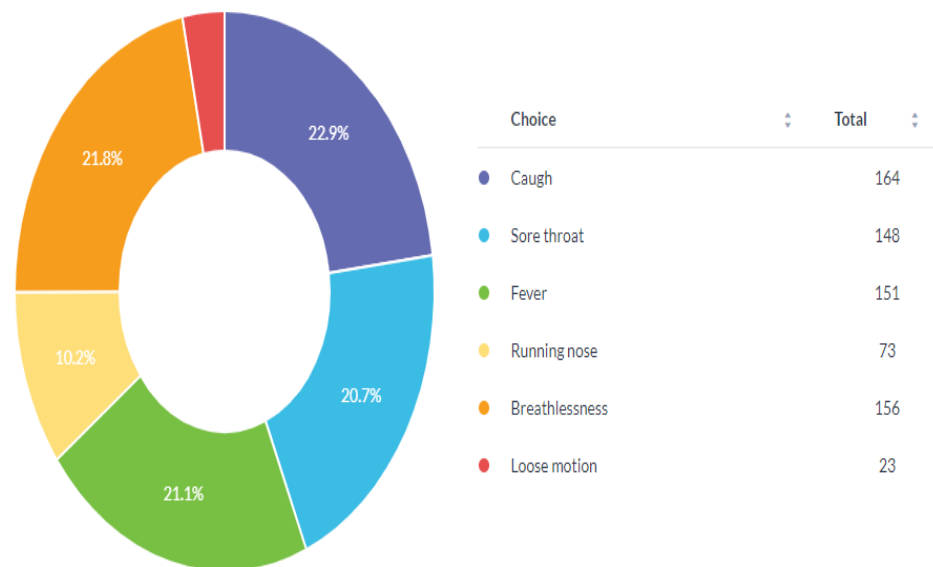


Figure 2: pie chart represents the distribution of participants based on their awareness on the main symptom of COVID infection, where 22.9% (Navy blue) of the participants think cough as a main symptom followed by 21.8% (orange) of the participants think breathlessness as a main symptom for COVID infection.

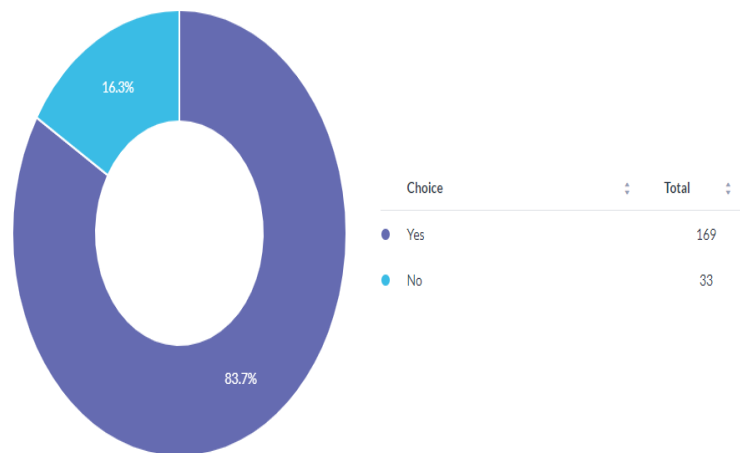


Figure 3: Pie chart represents the distribution of participants based on their awareness on whether an adult or a child without symptoms transmit infection, where a majority (83.7%)(Navy blue) of the participants were aware that people without symptoms can still be a carrier of the infection.

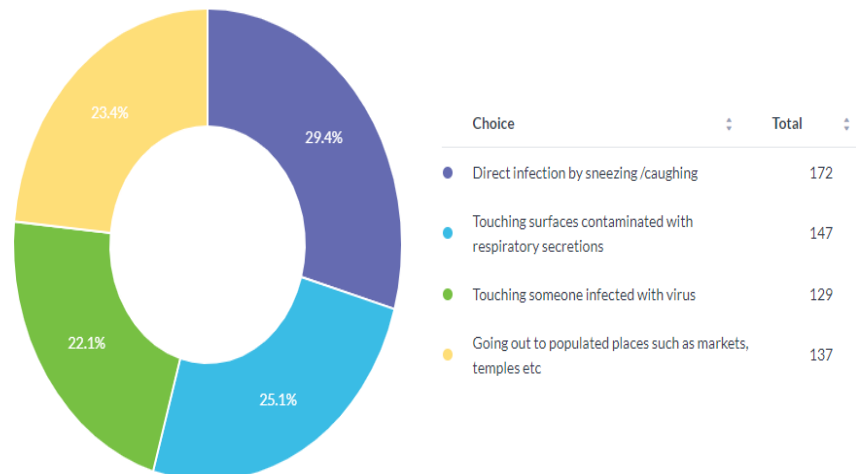


Figure 4: Pie chart represents the distribution of participants based on their awareness on the various modes of transmission of infection, where a majority (29.4%)(Navy blue) of participants believe that the infection spreads by sneezing and coughing of the infected person, 25.1%(light blue) think that touching the contaminated surface, 23.4%(yellow) of the participants think the crowded places are the major mode of infection transmission.

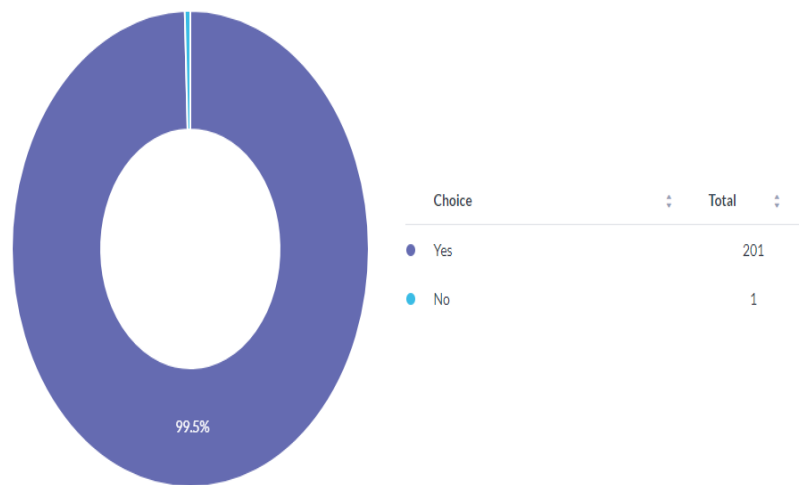


Figure 5: Pie chart represents the distribution of participants based on their awareness on the effectiveness of social distancing in preventing the COVID infection, where a majority (99.5%)(Navy blue) of participants strongly believe that social distancing is the best method to prevent infection.

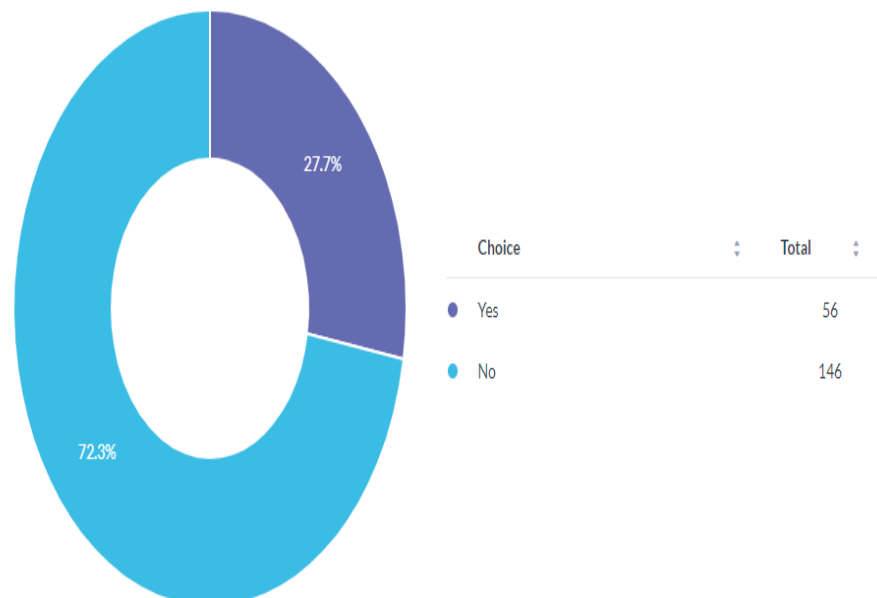


Figure 6: Pie chart represents the distribution of participants based on their awareness on the effectiveness of wearing face mask to fight COVID infection, where a majority (72.3%)(Light blue) of the participants don't think that wearing face mask can prevent them from infection.

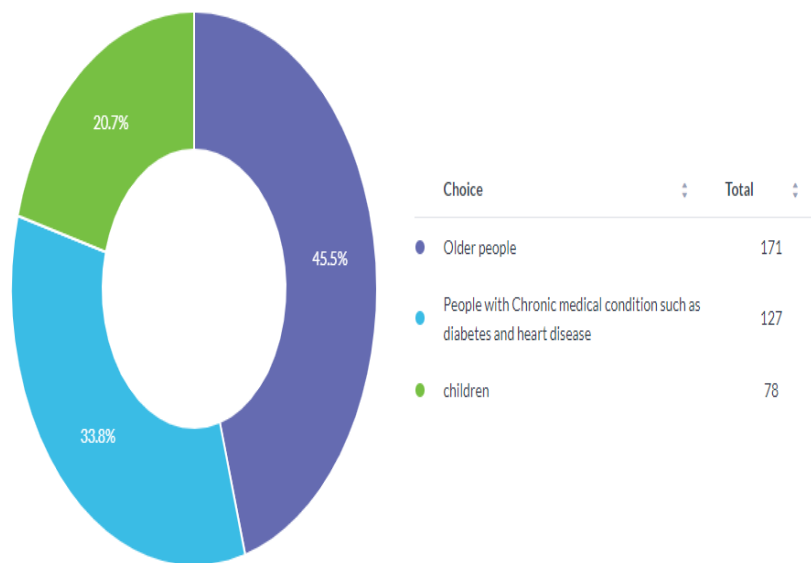


Figure 7: Pie chart represents the distribution of participants based on their awareness on the category of people who are most at risk, where a majority (45.5%)(Light blue) of the participants feel the people who suffer from chronic ailments such as diabetes and hypertension, 33.8%(Navy blue) of the participants feel that older people and 20.7% (Green) of them feel that small children were more prone and at risk for the infection.

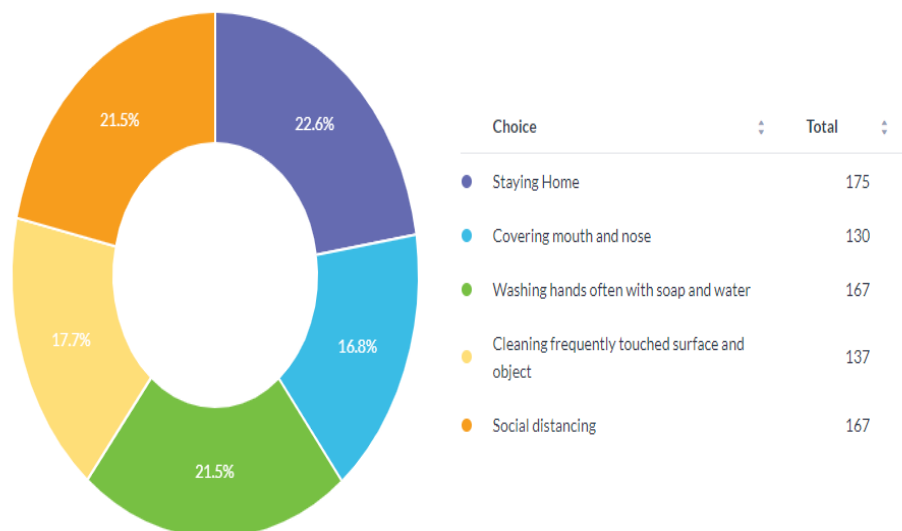


Figure 8: Pie chart represents the distribution of participants based on their response for the question regarding the way to slow down the infection, where 22.6%(Navy blue) of the participants feel that staying at home, 21.5%

(green) feel washing hands with soap and water, 16.84 % (light blue) wearing mask can slow down the spread of infection.

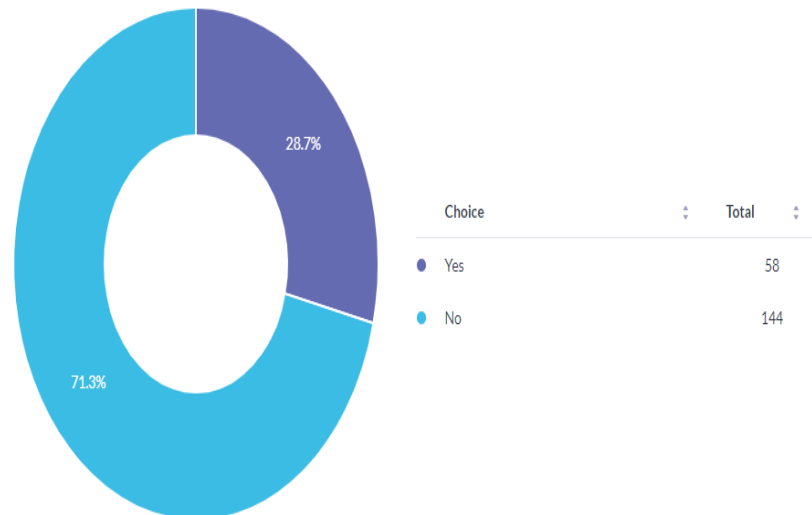


Figure 9: Pie chart represents the distribution of participants based on their opinion on the myth that there will be decreased spread of infection in hot countries, where a majority of the (71.6%) (Light blue) participants do not believe the myth and they are aware that the hot temperature cannot stop the infection.

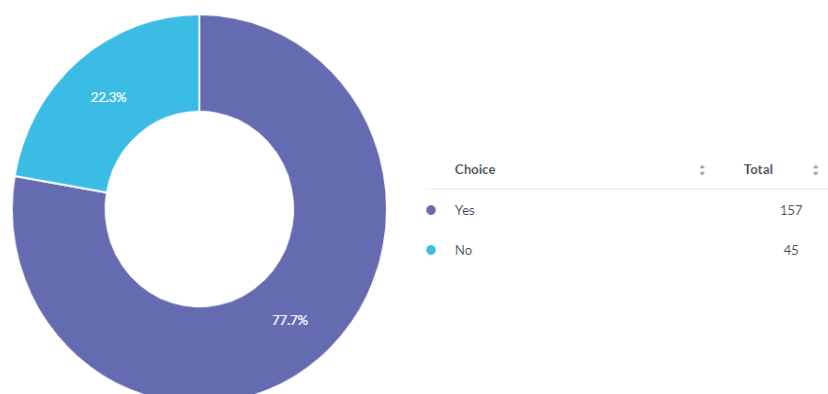


Figure 10: Pie chart represents the distribution of participants based on their opinion that "can improve immunity by eating food like ginger and garlic help fight against COVID infection, where a majority of the (77.7%) (Navy blue) participants believe the immune booster foods can stop the infection.

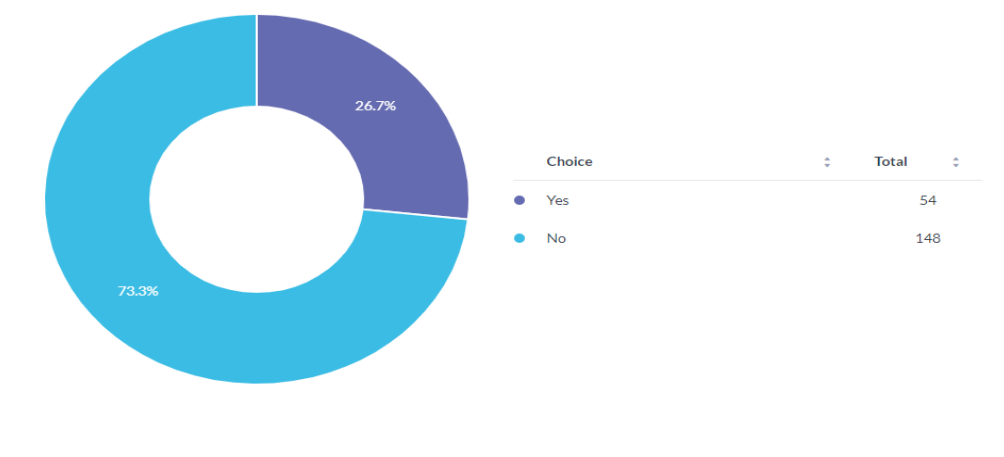


Figure 11: Pie chart represents the distribution of participants based on their opinion whether “taking pneumonia vaccine can help protect against COVID infection” where a majority of the (73.2%) (Light blue) participants do not believe that taking pneumonia vaccine can help them against infection.

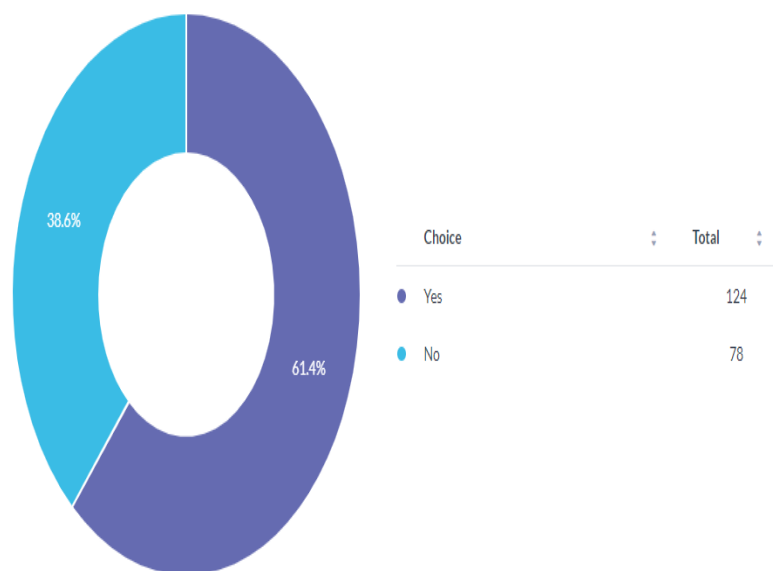


Figure 12: Pie chart represents the distribution of participants based on their opinion whether the thermal scanners are effective in detecting the infection, where a majority of (61.4%) (Navy blue) participants believe that thermal scanners are effective in detecting the infection.

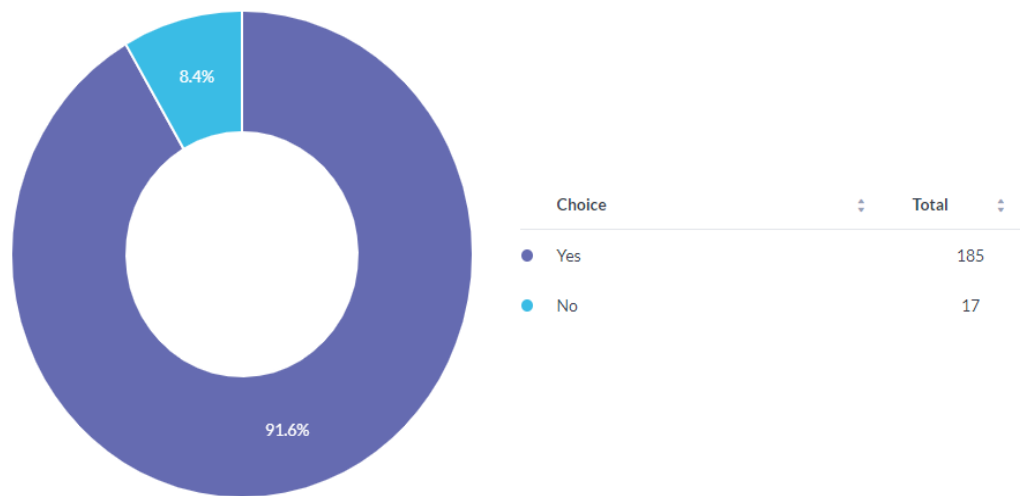


Figure 13: Pie chart represents the distribution of participants based on their opinion whether the lockdown is really effective in preventing the spread of infection, where a majority of (91.4%) (Navy blue) participants believe that lockdown is more effective in preventing the infection.

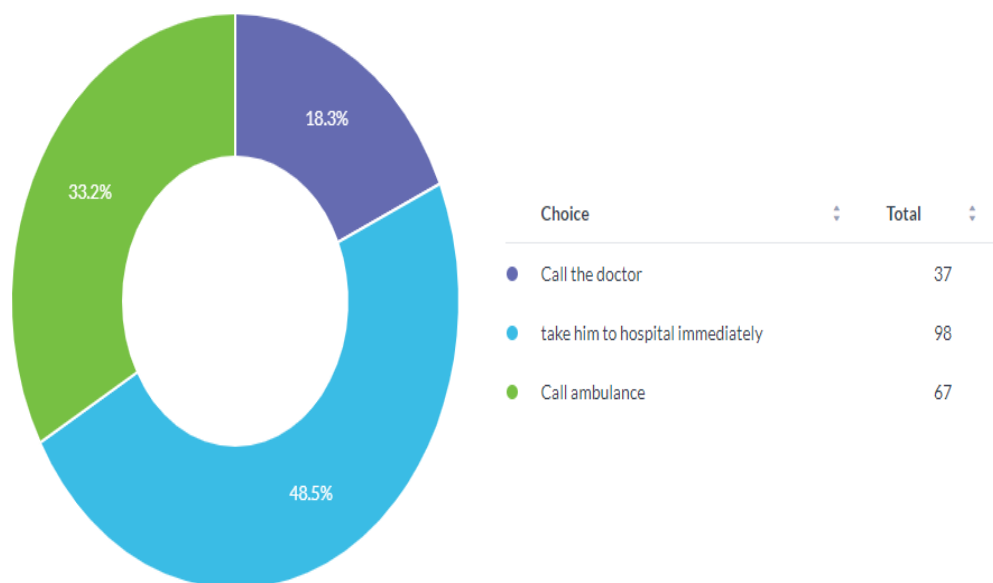


Figure 14: Pie chart represents the distribution of participants based on their awareness on first aid to be given to a person showing symptoms similar to COVID infection, where 48.5% (Light blue) of the participants opt for taking the person to a doctor, 30.2% (green) of the participants has told that they will call an ambulance and 18.2% (Navy blue) of the participants will call the doctor as a first aid.

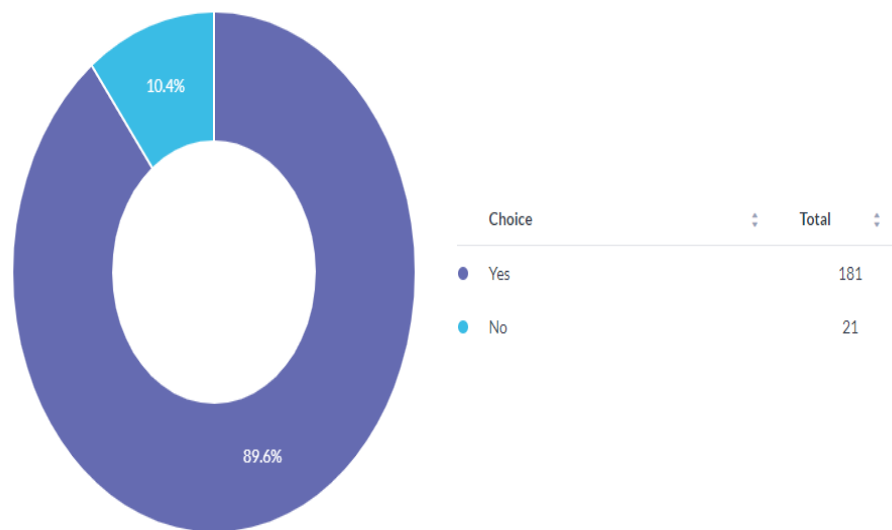


Figure 15: Pie chart represents the distribution of participants based on their opinion whether their neighbours and friends had taken this lockdown seriously, where a majority of 82.6% (Navy blue) participants has accepted that their friends and neighbours had taken the lockdown seriously and followed it properly.

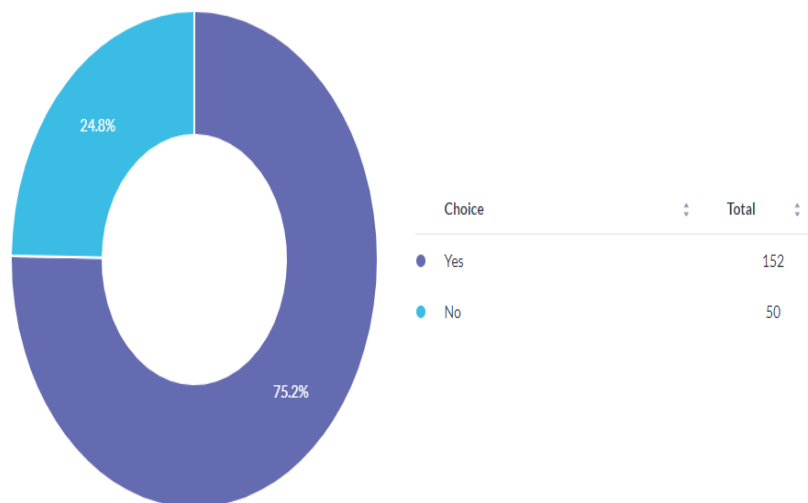


Figure 16: Pie chart represents the distribution of participants based on their opinion whether they feel anxious and depressed about the spread of infection, where a majority of (75.2%) (Navy blue) participants feel anxious and depressed about the spreading infection.

CONCLUSION

The current survey provides a comprehensive knowledge, awareness and practises of adolescents and teenagers of Tamil nadu towards fighting COVID 19 infection. The findings suggest that the participants have an acceptable

level of awareness and knowledge on the precautions to be taken to avoid infection. Health authorities have to take care in such a way to arrange education programs and campaigns in order to reach the people in remote villages to spread the knowledge and awareness. COVID 19 has to be considered as an humanitarian crisis. The effects of this pandemic on families and society can be unimaginable. Thus the best approach to tackle this pandemic is to take initiatives and strategies in the interest of creating knowledge and awareness on the spreading pandemic and its preventive measures.

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CONFLICT OF INTEREST

The authors declare that there were no conflicts of interest in the present study

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