

Knowledge and Awareness On Myths Related To COVID - 19 Among The General Population- A Questionnaire Based Survey

Research Article

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Abstract

Background: The novel Coronavirus disease (COVID-19) is rapidly spreading and its origin is from Hubei Province of China. In the outbreak of novel coronavirus there are more myths that were created and spread in social media causing great fear in public infection of COVID 19 Virus. It is important to know the different myths related to COVID 19, and their impacts on the general public and to make the general public aware of myths and truths about COVID 19.

Aim: The aim of the study is to analyse the opinions of the public on myths related to COVID 19 and to evaluate knowledge about the COVID 19 of the general public.

Materials and methods: A questionnaire has been prepared and distributed to 102 general public from March to may 2020 through social networking sites. The 15 questions were based on the myths about COVID 19 pandemic.

Results: 70% of the participants (general public) have knowledge to differentiate the truths and myths about COVID 19 pandemic.

Conclusion: From this study it can be concluded that the most of the general public has sufficient knowledge and has a negative opinion for spreading myths about COVID 19 pandemic and they are able to differentiate myths and truths about COVID 19 pandemic.

Keywords: COVID 19 Pandemic; Myths; Social Media; Public Opinion.

Introduction

A new public health crisis threatening the world with the emergence and spread of the 2019 novel. Now the COVID 19 has been spreading rapidly across the world [1]. Social media has a powerful influence on our daily activity. The amount of conversation taking place on social media, with respect to COVID-19 is emerging from myths shared about the virus. Myth is nothing but a traditional or legendary story, usually concerning events, with or without a determinable basis of fact [2]. Regarding COVID-19 in the outbreak of novel coronavirus there are more myths cre-

ated and spreading faster in social media and the internet which causes great fear in public than the infection of COVID 19 virus [3]. People are needed to be educated through health-care professionals about the importance of screening for COVID 19 disease if they have any one or two symptoms and also educate them to know the facts of COVID 19 pandemic in order to vanish the myths and also to reduce their fear due to misinformations. Myths were created about COVID 19 virus transmission, causes, symptoms, etc. Myths are more harmful than the spread of COVID 19 virus [4].

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There is much that remains unknown about the corona (COVID 19) virus. Knowledge gaps about the origin, epidemiology, clinical spectrum of the disease and duration of human transmission of the virus. So more myths were created due to this knowledge gap. Gathering accurate information regarding COVID 19 is essential to remove the fear due to the myths. But the general public believes what ever posted in social media and internet were true about COVID 19 pandemic [5]. All the messages shared about COVID 19 pandemic in social media internet are not scientifically correct. Creating the panic about novel coronavirus is not needed for this situation and we should take steps to fight against covid 19 “Let’s make the chain to break the chain of COVID 19 virus” [6].

The various social media and its over uses were advertising the myth about the novel coronavirus disease. Many unscientific rumours being spread over in the various social sites faster than the COVID 19 virus itself may impact negatively in the control of disease [7]. Lack of awareness often leads to an unconcerned attitude, which may adversely affect the preparedness to meet these challenges of infodemics. The fear and anxiety related to epidemics and pandemics also influence the behavior of people in the community [8]. Impacts of the pandemics like lockdown which also adversely affect the mental well-being of a population [9]. Most of the people perceive mental healthcare needs to deal with their issues during this COVID-19 pandemic due to the misinformations. The myths and conspiracy theories believed even by highly educated individuals. The level of education does not determine the knowledge of the general public because most myths are created by the educated people and they do like and share without any cross checking of the information with scientific data [10].

COVID-19 myth made a belief among the general public that the virus is not very dangerous and the lockdown is unnecessary. So most of the General public are not following lockdown and social distance and even not following the safety measures while travelling [11]. The government is trying to fight against the COVID 19 viruses and now due to these myths they also need to fight against the infodemics. The aim of the study is to analyse the opinions of the public on myths related to COVID 19 pandemic and to evaluate knowledge about the COVID 19 of the general public.

Materials and Methods

The cross sectional questionnaire study was conducted among the general population of tiruvannamalai district from March to may 2020. The survey focused on public opinion on the myths about covid 19 pandemic. A Self structured questionnaire was prepared and has been typed in google forms and distributed to 102 general public. The 15 questions are based on myths about COVID 19 pandemic. The type of sampling method used is simple random sampling. The resulting data have been analysed using SPSS statistical software. The chi square test was done to analyse the association between variables. The descriptive statistical analysis was carried out and the results were given in the form of pie charts and bar graphs. The institutional review board has given the approval to conduct the survey.

Results

An online survey, related to myths about covid 19 pandemic opinion in the community during the new corona pandemic was conducted. A total of 102 responses were recorded. The study included only those participants who understood English and had access to the internet. All the participants were above 18 years of age.

Table 1 depicts the sociodemographic of the participants. About 74.5% belongs to 18- 30 years, there are more female participants (80.3%) and only few male participants (19.6%) were participated. Most of the participants are educated and one fourth (24.5%) were employed.

Most of the participants were passably aware of the basic elements of the COVID 19 pandemic where 98% are aware of COVID 19 pandemic (figure 1) and 95% are aware of mode of transmission of COVID 19 virus. Most of the participants (95%) answered that they do hear myths about COVID 19 pandemic (figure 3). The association between gender and awareness of myths about COVID 19 pandemic. Majority of females (75.4%) are aware about the myths of COVID 19 pandemic (figure 4). The awareness of the source behind myths about 68% of the participants answered social media (figure 5). The association between gender and awareness on the source behind myths of COVID 19

Table 1. Sociodemographic of the participants (n = 102).

characteristics	Frequencies, n(%)
Age category (year)	
18-30	76 (74.5%)
31-40	16 (15.6%)
41-50	8 (0.07%)
>50	2 (0.01%)
Gender	
Female	82 (80.4%)
Male	20 (19.6%)
Occupation	
Students	62(61.8%)
Workers	24 (23.6%)
House wives	12 (12.7%)
Retired officers	2 (1.9%)

Figure 1. Pie chart shows the participants' awareness on COVID 19 pandemic where 98% of participants are reported yes (blue) and 2% of participants are reported no (red).

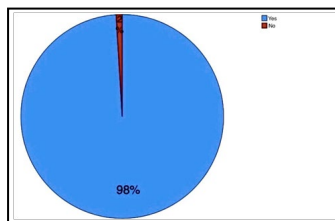


Figure 2. Pie chart shows the participants' awareness on mode of transmission of COVID 19 virus where 95% of participants are reported air droplets (blue) and 3% of participants are reported water (red) and 1% of participants are reported food (green).

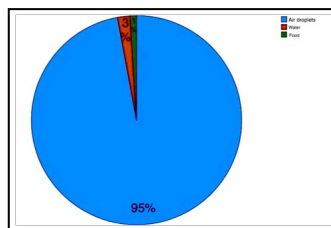


Figure 3. Pie chart shows the participants' awareness of spread of the myths about COVID 19 pandemic where 95% of participants reported yes (blue) and 5% of participants reported no (red).

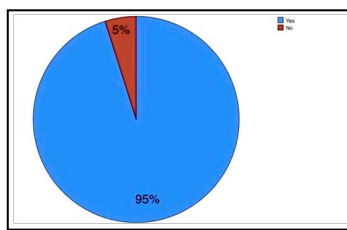
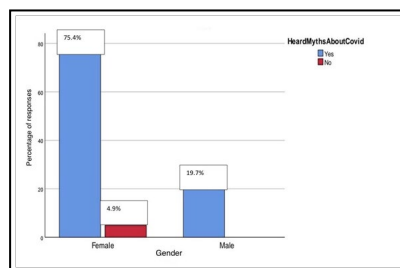


Figure 4. The bar graph represents the association between gender and awareness on myths about COVID 19 pandemic. X axis represents the gender and Y axis represents the percentage of responses. Blue denotes yes and red denotes no. Majority of females(75.4%) are aware about the myths of COVID 19 pandemic. Chi square test was done to associate the variables. Chi square test value is 1.282 ;p value is 0.257 (p >0.05). Hence there is no statistical significant difference between gender and awareness on myths about COVID 19.



pandemic. Majority of females (51.9%) are aware of the myths of COVID 19 pandemic (figure 6). The awareness on whether drinking hot water prevents infection of COVID 19 virus is answered as a myth by 72% participants (figure 7). The association between gender and awareness on whether drinking hot water prevents COVID 19 infection. Majority of females (54.9%) are aware that hot water drinking cannot prevent COVID 19 pandemic (figure 8). The awareness on whether old people are more affected than young people, 90% participants answered myth (figure 9). The association between gender and awareness on whether the older adult affected more than the younger adult by new coronavirus. Majority of females (70.6%) are aware that older patients are not only affected (figure 10). The awareness on whether hot water baths prevent infection of COVID 19 virus is answered as a myth

by 85% participants (figure 11). The awareness on whether pneumonia vaccine prevents infection of COVID 19 virus where 21% of participants reported fact and 79% of participants reported myth (figure 12). The awareness on whether antibiotics kill COVID 19 virus, 78 % of participants are answered as a myth (figure 13). The association between gender and awareness on whether antibiotics kill COVID 19 virus. Majority of females (61.8%) are aware that antibiotics cannot kill COVID 19 virus (figure 14). The awareness on whether eating immune boosters prevents COVID 19 virus, 56% of participants are reported myth (figure 15).

Discussion

Epidemics and pandemics are periodic phenomena. People in the

Figure 5. Pie chart shows the participants' awareness on the source of myth spreading about COVID 19 pandemic where 68% of participants reported social media (blue), 6% of participants reported both news and social media (red) and 26% of participants reported news (green).

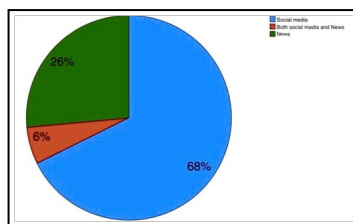


Figure 6. The bar graph represents the association between gender and awareness of the source spreading myths of COVID 19 pandemic. X axis represents the gender and Y axis represents the percentage of responses. Blue denotes myth and red denotes fact. Majority of females (51.9%) were aware of sources (social media) spreading myths of covid 19 pandemic. Chi square test was done to associate the variables. Chi square test value is 1.831; p value is 0.400 ($p > 0.05$). Hence there is no statistical significant difference between the gender and awareness of the source of spreading myths of COVID 19 infection.

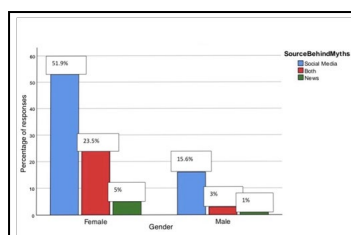


Figure 7. Pie chart shows participants' awareness on whether drinking hot water prevents from COVID 19 infection where 72% of participants are reported myth (blue) and 28% of participants are reported fact (red).

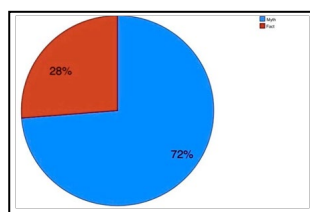
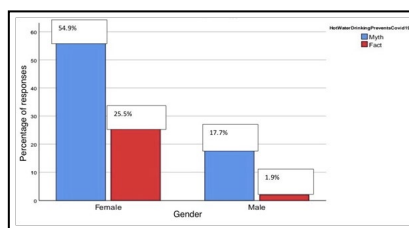


Figure 8. The bar graph represents the association between gender and awareness on whether drinking hot water prevents COVID 19 infection. X axis represents the gender and Y axis represents the percentage of responses. Blue denotes myth and red denotes fact. Majority of females (54.9%) are aware that hot water drinking cannot prevent COVID 19 pandemic. Chi square test was done to associate the variables. Chi square test value is 3.804; p value is 0.051 ($p > 0.05$). Hence there is no significant difference between the gender and awareness on whether drinking hot water prevents COVID 19 infection.



community face several challenges during these periods. Impacts of these myths about COVID 19 pandemic are often intense, which may adversely affect the mental well-being of a given population. The fear and anxiety related to myths also influence the behavior of people in the community. About COVID 19 virus, various myths are circulating throughout the entire world about its diagnosis, treatment and prevention [12].

The normal body temperature remains stable between 36.5°C to 37°C despite the temperature by drinking hot water, The transmission of novel coronavirus has been seen in people of all ages and the doctors suggest that people with conditions like blood

pressure, heart or respiratory diseases are at a higher risk if they get infected with Covid-19, The consumption of immune boosters like garlic, ginger, kabasura water boosts the immune system and not safeguards one from being infected with Covid-19, The anxiety and concerns in society are globally affecting every individual to variable extents [13]. Mostly the negative psychological impact of quarantine and creating myths in this situation affects the public psychologically. In this situation the psychiatrists play a vital role in supporting the well being of those affected and their family [14]. The age group of 45-55 years are more easily affected is a myth. In a study it is stated that all age groups are affected equally but their recovery period is different for different

Figure 9. Pie chart shows the opinion of participants' on only Older adults affected by covid 19 pandemic and the younger adults are not affected by COVID 19 infection where 90% of participants are reported myth (blue) and 10% of participants are reported fact (red).

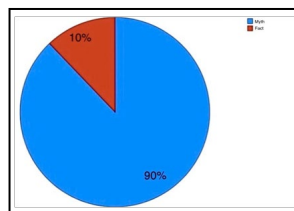


Figure 10. The bar graph represents the association between gender and awareness on whether the older adult affected more than the younger adult by COVID 19 virus. X axis represents the gender and Y axis represents the percentage of responses. Blue denotes myth and red denotes fact. Majority of females(70.6%) are aware that both older and younger age group people are affected. Chi square test was done to associate the variables. Chi square test value is 0.865; p value is 0.352 (p >0.05). Hence there is no significant difference between the gender and awareness on whether older adults are affected more than the younger adult by COVID 19 virus.

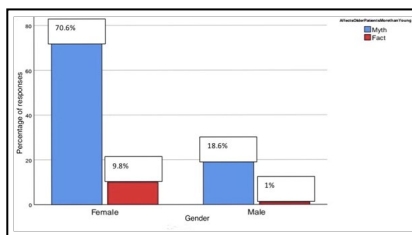


Figure 11. Pie chart shows the participants' awareness on whether taking hot water baths to prevent COVID 19 infection where 85% of participants are reported myth (blue) and 15% of participants are reported fact (red).

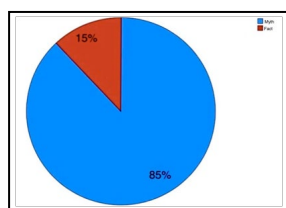


Figure 12. Pie chart shows the participants' awareness on whether pneumonia vaccine prevents infection of COVID 19 virus where 79% of participants reported myth (blue) and 21% of participants reported fact (red).

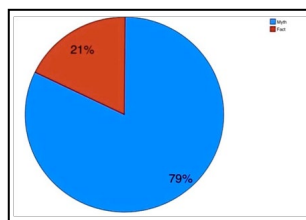
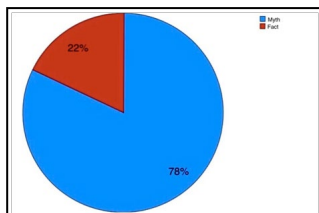


Figure 13. Pie chart shows participants' awareness on whether antibiotics can kill COVID 19 virus. 78% of participants are reported myth (blue) and 22% of participants are reported fact (red).



age groups [15].

The myths create more panic among the general public and also divert people's observations towards the disease. The government has provided proper public health information in government approved websites, based on scientific research to general people to reduce stress and anxiety, otherwise it will be difficult to

implement control measures [16]. Social media users commonly depend on external information to convey ideas, support claims, and serve information needs. The mental health issues are other major health concerns, which are expected to increase day by day during this epidemic [17]. Eating more immune boosters does not prevent the covid 19 infection; it only increases the immunity to protect from disease [18]. Social stigma has arisen in general pop-

Figure 14. The bar graph represents the association between gender and awareness on whether antibiotics kill COVID 19 virus. X axis represents the gender and Y axis represents the percentage of responses. Blue denotes myth and red denotes facts. Majority of females(61.8%) are aware that antibiotics cannot kill COVID 19 virus. Chi square test was done to associate the variables. Chi square test value is 0.635; p value is 0.426 ($p > 0.05$). Hence there is no significant difference between gender and awareness on whether antibiotics kill COVID 19 virus.

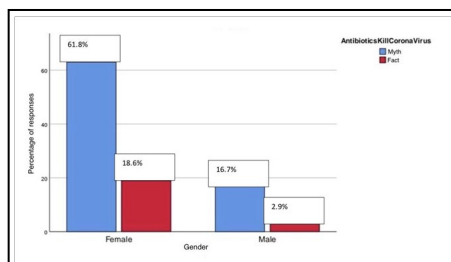
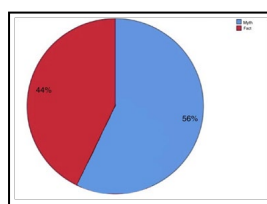


Figure 15 . Pie chart shows participants' awareness on whether eating immune boosters prevents from COVID 19 disease. 56% of participants are reported myth (blue) and 44% of participants are reported fact (red).



ulations and are targeted as being the reason for this outbreak. It is vital to avoid this stigma as it can make people hide their illness and not seek health care immediately [19].

In the time of widespread use of social media, most of the general public kept trusting the information posted in social media, including educated individuals. These are sometimes very disturbing for certain individuals [20]. In 2004, the Chinese Government issued guidelines on strengthening SARS epidemic several psychological counselling telephone helplines were opened for the public, and quickly became important mechanisms in addressing psychological issues like pandemic [21, 22].

Anemia [23], cancer patients [24] and cancer patients under radiation therapy [25], Diabetes patients [26, 27, 28] surgically organ removed patients [29] and with increasing age people tend to develop more systemic diseases so the old patients are more easily affected by COVID 19 pandemic. Personal protective equipment in hospital workers (sweepers and cleaners) is very important for this situation like covid 19 pandemic [30]. One of the threats to the COVID-19 response in India is the spread of misinformation. General public has been raising more violence against health-care workers like doctors, nurses etc. A welcome initiative to combat fake news is being led by a group of multidisciplinary Indian scientists, who have voluntarily responded to the myths about COVID-19 pandemic [31].

The present study is only conducted for above 18 years but for below 18 years we must create awareness [32] about COVID 19 by the schools. Mostly the youngsters and children were using social media and mentally affected by the fake news about covid 19 pandemic because they do believe the news spreading in social media [33]. This study evaluated that most of the participants (70%) had knowledge and were able to differentiate truths from myths about covid 19 pandemic. Less number of participants and the lack of time to carry out a survey are the limitations of this

survey.

Conclusion

Based on the results of the study, it can be concluded that most of the general public has sufficient knowledge of myths about COVID 19 pandemic and they were able to differentiate the truths and myths about COVID 19. The participants were aware about myths like antibiotics, pneumonia vaccination and drinking hot water can not prevent COVID 19 virus infections.

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