WHAT IS THE DIFFERENCE ON IMPACT OF DAY TO DAY LIFE IN SARS, MERS AND COVID-19 - A PERCEPTIONAL SURVEY

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ABSTRACT:

COVID-19 is a viral infection associated with pneumonia that originated from Wuhan city in December 2019. In the end of 2019, it began spreading in China. It can spread through air droplets and close communication with those COVID-19 infected people. There were similar episodes of novel respiratory viral infection like SARS, MERS etc in the past. The main aim of this study is to determine the comparative impact of day to day life in SARS, MERS and COVID-19. An online survey with a self structured questionnaire to analyse the comparative impact of SARS, MERS and COVID-19 pandemic was carried out. The questionnaire was designed using the online survey platform google forms and the link was circulated through social networks and with the collected responses a descriptive statistical analysis was carried out using the "SPSS software 2.0". It is evident that around 97.7% of participants are aware about SARS and MERS and nearly 92.2% of participants were aware about the symptoms of SARS, MERS and COVID-19. Majority of participants were aware of the economic impact, social distancing and intensity of harm caused by the COVID-19 than other epidemics. SARS, MERS and COVID-19 are dead full respiratory disorders. This study revealed that the majority of the population were aware about the difference on impact of these respiratory diseases on day to day life and graded the COVID -19 has the most impact comparatively.

KEY WORDS: COVID-19, Day to day life, MERS, SARS

INTRODUCTION:

COVID-19 is a viral infection associated with pneumonia that originated from Wuhan city in December 2019. In 2019 which began spreading in China. It can spread through air droplets and close communication with those COVID-19 infected people. The coronavirus that causes SARS is called SARS-CoV. As per the World Health Organization (WHO), the primary bunch of SARS cases happened in China's Guangdong territory in November 2002. Examination has recognized horseshoe bats as the regular supply of SARS-CoV. Civets and creatures in wet markets likewise likely added to the infection crossing from creatures into people. The association was first informed of in excess of 100 passings because of another irresistible illness, on February 10, 2003. The following day, the Chinese wellbeing service made an official report of 300 cases and five passings because of an intense respiratory condition. On March 12, 2003, the WHO gave a worldwide alarm, cautioning of atypical pneumonia spreading among emergency clinic staff. An insignificant 3 days after the fact, the WHO begat the name SARS and put out a crisis tourism warning, requesting that voyagers be acquainted with the side effects of the condition. They additionally suggested that the sickness was spreading all through the world by individuals utilizing air transport. Later in March, the WHO suggested that air terminals in regions with instances of SARS screen travelers. From April of that year forward, the WHO gave various alerts, requesting that individuals defer everything except fundamental travel to influence areas (Zhu et al., 2020). These territories included, at

Sdifferent occasions, Hong Kong, Toronto, a few regions of territory China, and Taiwan. A paper distributed May 15, 2003 in The New England Journal of Medicine recognized another coronavirus as the hidden pathogen. The WHO authoritatively pronounced the SARS plague to be contained on July 5 of that year. From that point forward, there have been four little episodes of SARS. Of these, three included individuals who worked with the SARS infection in research facility settings and procured the infection unintentionally. The fourth frequency has been generally ascribed to contamination from a creature source. There have been no detailed instances of SARS from that point forward, in spite of the fact that the WHO caution that "These occasions exhibit that the resurgence of SARS prompting an episode stays a particular chance and doesn't take into consideration complacency (Gilbert, 2020),(Mahase, 2020),(Seppan *et al.*, 2018)**.**

MERS happens because of contamination with the coronavirus MERS-CoV. On September 20, 2012, the Program for Monitoring Emerging Diseases detailed a novel coronavirus separated from sputum tests of a 60-year-elderly person from Saudi Arabia, who had kicked the bucket 3 months sooner. Inside the following month, the quantity of affirmed MERS cases rose to nine, with five fatalities. The soonest case dated back to April 2012. Over the globe, 27 nations have revealed instances of MERS since 2012, however around 80% of cases have happened in Saudi Arabia. MERS-CoV is a zoonotic infection, implying that most instances of contamination go from creatures to people. As indicated by the WHO, immediate or backhanded contact with dromedary camels is the most widely recognized course of disease. Transmission among individuals is uncommon, and it for the most part happens among relatives or in medicinal services settings. The MERS-CoV infection has similarities to European bat coronaviruses (Krishna and Babu, 2016),(Menon and Thenmozhi, 2016).

Previously our team has carried out studies on mRNA (Sekar *et al.*, 2019), (Johnson *et al.*, 2020), numerous studies carried out on osteology and animals (Keerthana and Thenmozhi, 2016), (Samuel and Thenmozhi, 2015),(Kannan and Thenmozhi, 2016), (Choudhari and Thenmozhi, 2016), (Subashri and Thenmozhi, 2016), (Kannan and Thenmozhi, 2016), (Nandhini *et al.*, 2018), (Thejeswar and Thenmozhi, 2015), (Hafeez and Thenmozhi, 2016),(Kannan and Thenmozhi, 2016),(Sriram, Thenmozhi and Yuvaraj, 2015; Park *et al.*, 2018),(Pratha, Ashwatha Pratha and Thenmozhi, 2016). In the current scenario, COVID-19is spreading throughout the world, so the main aim is to determine the impact of day to day life in SARS, MERS and COVID-19.This research focuses on the difference in impact of the day to day lives in this situation like SARS MERS and COVID-19. In this way, the present study may help to differentiate the level of impact on lives of the public in today's world.

In the survey considering the population, the responses it appears that the Government is trying on its level to help the people who are suffering due to this lock down (Sengupta, no date),(Chan *et al.*, 2020),(Roy, no date).

MATERIALS AND METHOD:

A prospective descriptive study was done through google docs, for the survey a self structured questionnaire was created with 14 questions among 130 general population. The questionnaire was approved by SRB of Saveetha Dental College. The sampling method used was non-probability convenient sampling. Minimizing the errors in the questioning, planning the questions in simple language and avoiding irrelevant questions were the steps taken to reduce the bias. The results were collected and analysed using SPSS software and represented in the form of pie-chart.

RESULT AND DISCUSSION:

This study shows that it is certain that perceptions regarding the difference on the impact of day to day life in SARS, MERS and COVID-19 are very important among the masses to curb it. The present study consisted of a population in the ratio of 48.46% male and 51.54% female (Fig. 1). It is evident from the responses recorded for figure 2 in the present study that around 97.69% of the population were aware of the current Coronavirus situation and the remaining 2.31% were not aware about the current COVID-19 situation. When compared with previous study results it showed that their findings were similar to this study (Kim, Andrew and Jung, 2017),(Saif, 2020). Therefore, figure 3 findings reveal that around 96.15%

of the population possess basic ideas regarding SARS and MERS, the present findings were in correlation with the results recorded in their study (Peeri *et al.*, 2020).

In the current scenario, it is very much clear from the data recorded for figure 4 shows that the majority of the population about 96.92% possess adequate knowledge about the symptoms caused by viruses such as SARS, MERS and COVID-19. Olsen *et al. (2020)* conducted a study to analyse the knowledge and awareness level regarding current pandemic outbreak COVID-19 and found that the majority of the population possess adequate knowledge and awareness regarding the pandemic which when compared matches the findings of the current study.

The present study was compared to the study done by Overton *et al. (1986)* validates that the findings of figure 5 of the current study that 98.46% are aware of the symptoms of SARS, MERS and COVID-19 and the p value of statistical chi square test is 0.03 which is less than the standard p value 0.05 which proves that the finding are significant (Seppan *et al.*, 2018). In the present study, figure 6 depicts that 97.69% of the survey population are aware of the importance of social distancing practice to reduce the spread of COVID-19. The previous study showed that the current study findings were similar to our study conducted by Soni *et al.* (2018).

Results of figure 7 showed 96.15% of the population responded that they think respiratory syndromes like SARS, MERS and COVID-19 will affect the economic condition of the countries and when it come to the figure 8 the survey results were obtained that 93.06% of participants responded as major population loss is taken place due to these diseases. The current findings are matched with the report conducted by Mizumoto *et al. (2015)*. In the present study, 93.08% of the population responded that they think that all diseases are harmful, 3.85% of participants responded as COVID-19 is harmful, 1.54% of participants responded as SARS is harmful and remaining 1.54% of participants responded as MERS is harmful when it comes to figure 9 the study shows that majority that is 97.69% of the participants responded that these respiratory diseases are highly contagious. Results of the present findings were similar to the other findings (Mizumoto *et al.*, 2015; Ren *et al.*, 2020).

In the present study (Figure 10), the participants responded that 96.92% government should show efforts to find the vaccination for these diseases, on the other hand in figure 11 the 97.69% of the participants responded that they will take initiative to report them self in hospital if they find COVID-19 symptoms in them. The previous study showed that of the current study findings were similar to our study conducted by (Park *et al.*, 2018).

In the present study figure 12 the 96.15% of the participants responded that lockdown is the temporary proper solution for the present COVID-19 situation, besides in figure 13 96.15% of the participants responded that they will report to government officials if they find any person with COVID-19 symptoms. The previous study showed that the current study findings were similar to our study conducted by (Ding *et al.*, 2020).

The figure 14 represented the association between gender and awareness about the current coronavirus situation. it was found to be non-significant. The figure 15 represents the association between gender and idea about SARS, MERS. it was found to be non-significant. The figure 16 represented the association between gender and idea about symptoms of SARS, MERS and COVID-19. It was found to be non-significant. The figure 17 represented the association between gender and idea perception of participants towards participating in social distancing to reduce spread of COVID-19 and it was found to be non-significant. The figure 18 represents the association between gender and idea about economic conditions in countries due to diseases like these. It was found to be non-significant.

CONCLUSION :

This research can conclude that deadly respiratory syndrome like SARS, MERS and COVID-19 are very harmful for life. It will directly attack the respiratory system which causes difficulty in breathing, fever and some other problems which will lead to death if there is no proper treatment. So, proper measures

should be taken for safety like washing hands, wearing masks, and maintaining social distancing. Following government regulations will help to stop or reduce the spread of these deadly diseases. This research concludes that the majority of the participants are aware of the impact on day to day life because of SARS, MERS and COVID-19 and that the impact of COVID-19 is higher than the other two respiratory viral infectious diseases .

AUTHOR CONTRIBUTIONS:

All the authors contributed equally in concept, design , carrying out the research and analysis of the study.

CONFLICT OF INTEREST:

The authors have none to declare.

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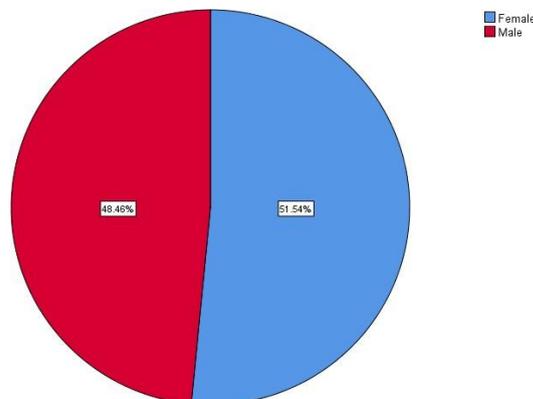
Figure 1: Pie chart represents the gender of the participants. 48.46% of participants are male (red) and the remaining 51.54% of participants are female (blue).
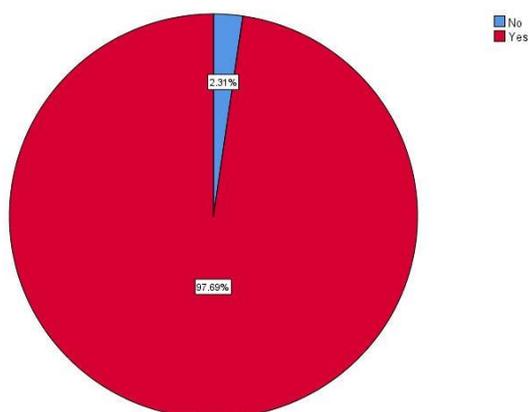
Figure 2: Pie chart represents percentage distribution of awareness among participants about the current COVID-19 situation. Majority of the participants 97.69% responded yes (red) and the remaining 2.31% responded no (blue).
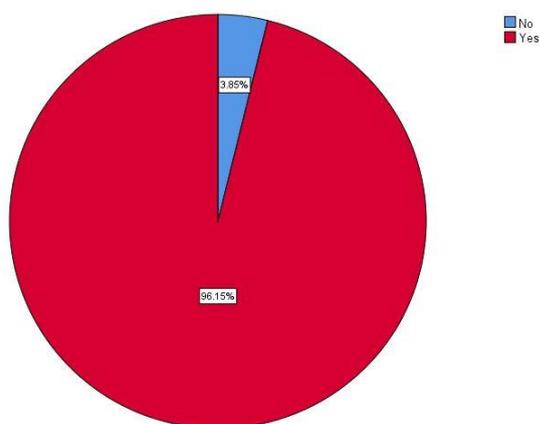
Figure 3: Pie chart represents percentage distribution of awareness among participants about SARS and MERS. Majority of the participants 96.15% responded yes (red) and the remaining 3.85% responded no (blue).
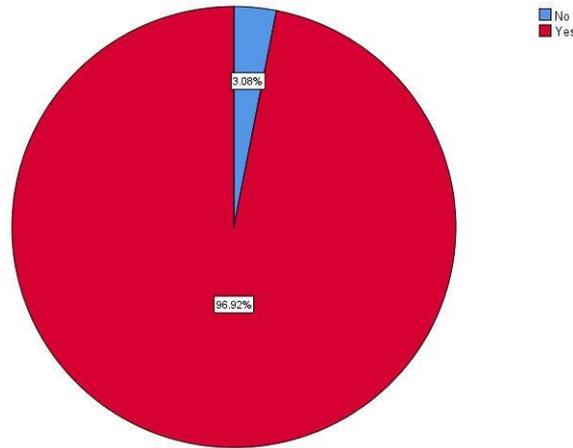
Figure 4: Pie chart represents percentage distribution of awareness among participants about symptoms of SARS, MERS and COVID-19. Majority of the participants 96.92% responded yes (blue) and the remaining 3.08% responded no (red).
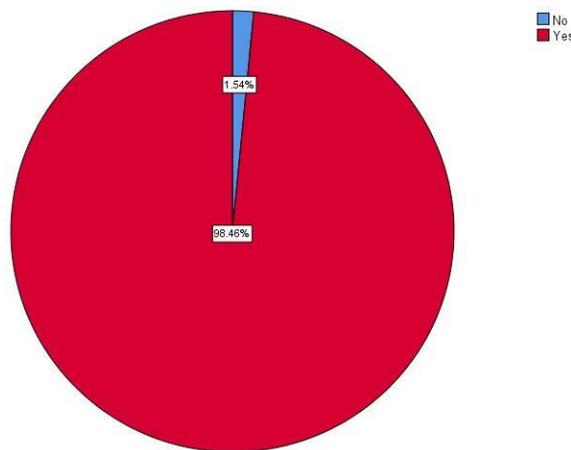
Figure 5: Pie chart represents percentage distribution of awareness among participants about social distancing to stop the spread of COVID-19. Majority of the participants 98.46% responded yes(red) and the remaining 1.54% responded no(blue).
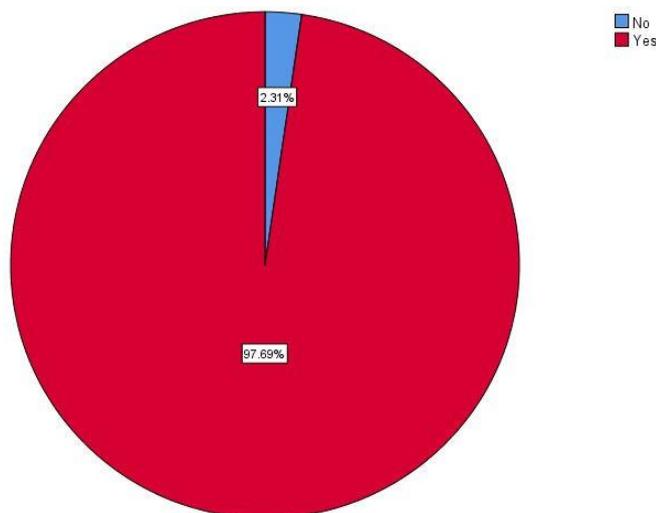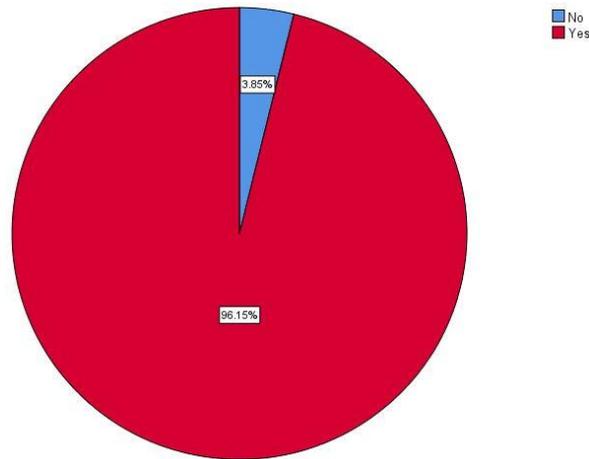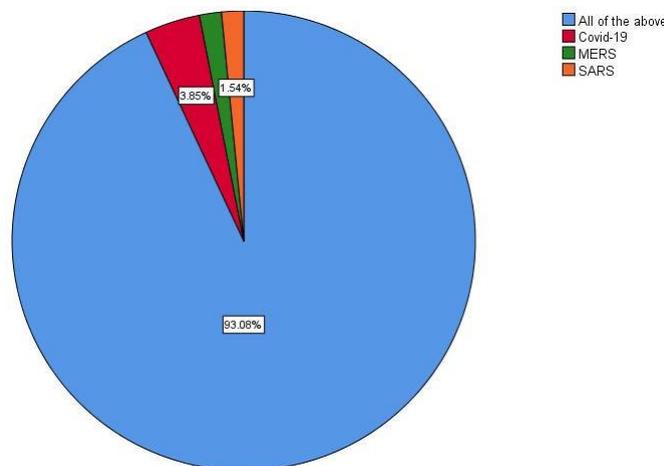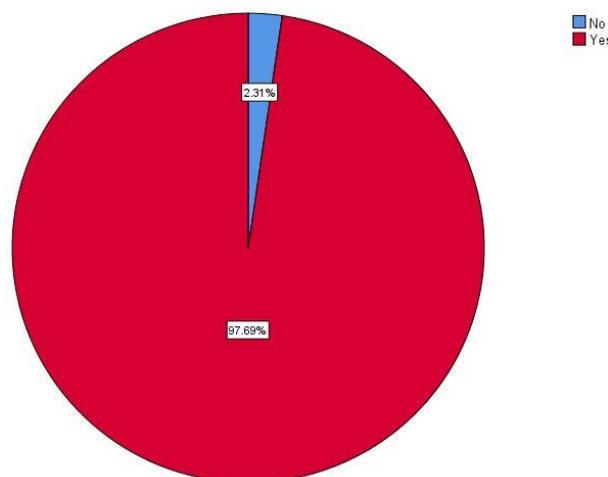

Figure 6: Pie chart represents percentage distribution of awareness among participants about the effect on economic conditions on counties due to diseases like these. Majority of the participants 97.69% responded yes (red) and the remaining 2.31% responded no (blue).

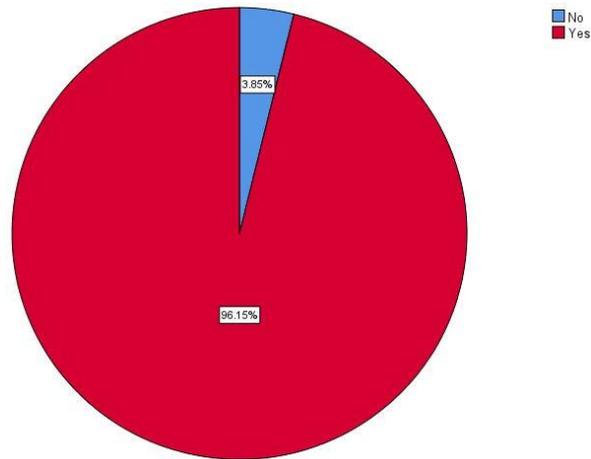Figure 7: Pie chart represents percentage distribution of awareness among participants about the population loss due to pandemics. Majority of the participants 96.15% responded yes (red) and the remaining 3.85% responded no (blue).

Figure 8: Pie chart represents percentage distribution of awareness among participants about the intensity of sickness caused by following respiratory diseases. Majority of the participants 93.06% responded as All of the above (blue), 3.85% of participants responded as COVID-19(red), 1.55% of participants responded as MERS(green) and remaining 1.54% of participants responded as SARS(orange)

Figure 9: Pie chart represents percentage distribution of awareness among participants about contagiousness of the diseases like SARS,MERS and COVID-19. Majority of the participants 97.69% responded yes (red) and remaining 2.31% responded no(blue).

Figure 10: Pie chart represents awareness among participants about vaccine discovery efforts made by the government. Majority of the participants 96.92% responded yes(red) and the remaining 3.08% responded no(blue).
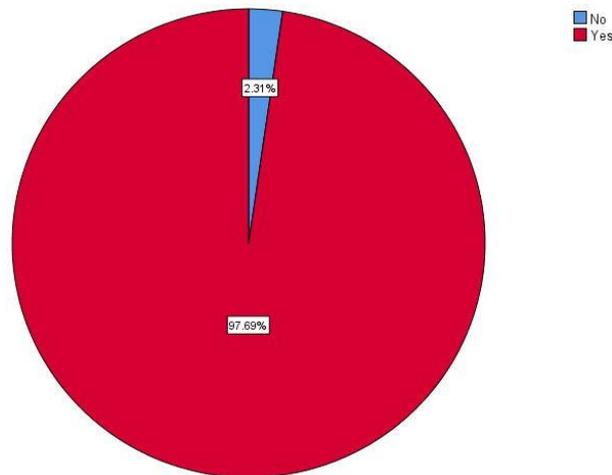

Figure 11: Pie chart represents percentage distribution of awareness among participants about taking initiative to report themselves in hospital if they find COVID-19 symptoms. Majority of the participants 97.69% responded yes(red) and the remaining 2.31% responded as no(blue).
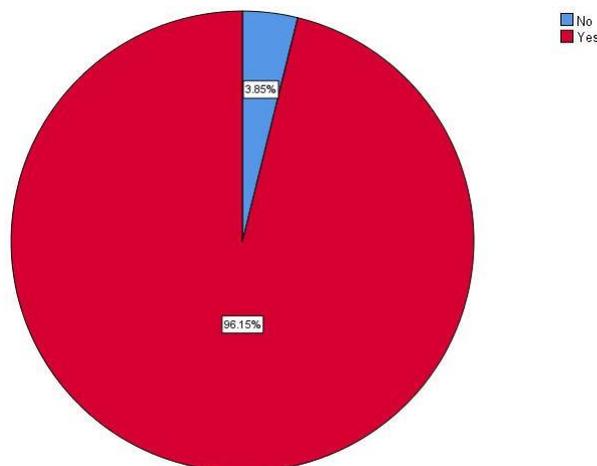
Figure 12: Pie chart represents percentage distribution of awareness among participants whether lockdown is the temporary proper solution for the present situation. Majority of the participants 96.15% responded yes(red) and the remaining 3.85% responded as no(blue).
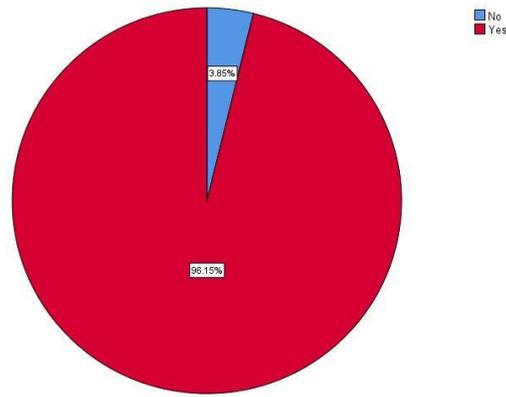
Figure 13: Pie chart represents percentage distribution of awareness among participants whether they will inform government officials if they see any person with COVID-19 symptoms. Majority of the participants 96.15% responded yes(red) and the remaining 3.85% responded no(blue).
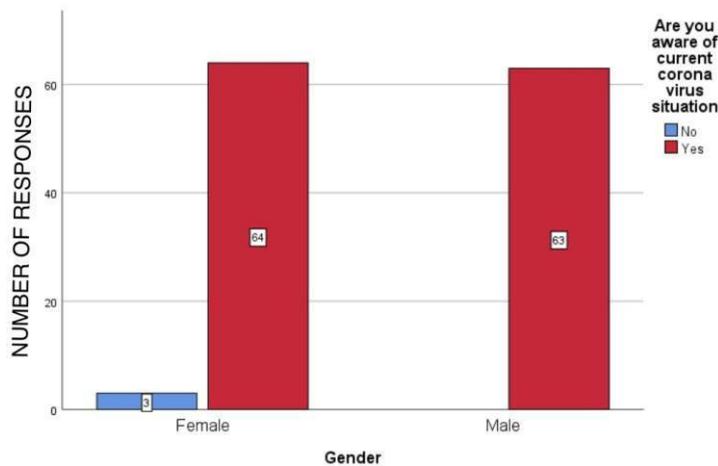

Figure 14: Bar graph representing association between gender and awareness of current coronavirus situation. X axis represents the gender of study participants and Y axis represents the number of responses of the study participants who were aware(red) and not aware(blue). This comparative bar graph results show that females 64% are slightly more aware of the current coronavirus situation than males 63%. Chi square test was done and the association between the variables was found to be statistically not significant. Pearson Chi Square value: 0.888, P value: 0.346(>0.05) statistically not-significant.
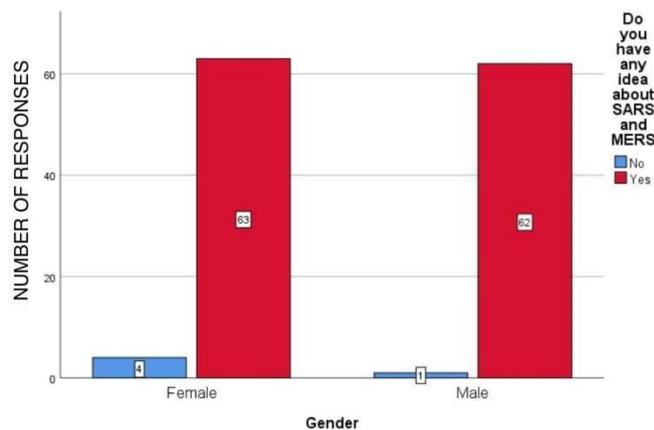

Figure 15: Bar graph representing association between gender and awareness about SARS and MERS. X axis represents the gender of study participants and Y axis represents the number of responses of study participants who were aware(red) and not aware(blue). By this comparative bar graph results show that females 63% are slightly more aware about SARS and MERS than males 62%. Chi square test was done and the association was found to be statistically not significant. Pearson Chi Square value: 1.687, P value: 0.194(>0.05) statistically not-significant.
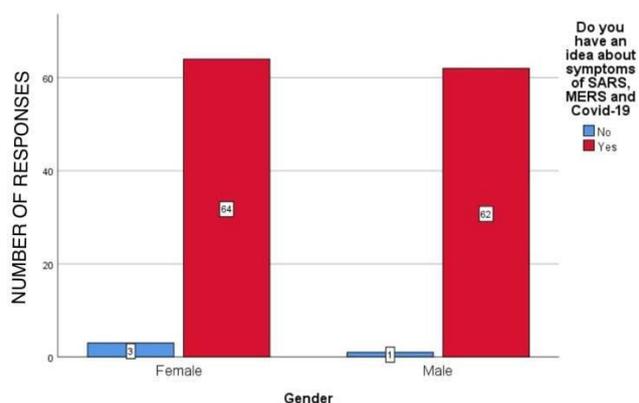
Figure 16: Bar graph representing association between gender and awareness about symptoms SARS, MERS and COVID-19. X axis represents the gender of study participants and Y axis represents the number of responses of study participants who were aware (red) and not aware(blue). By this comparative bar graph results show that females 64% are numerically more aware about symptoms SARS, MERS and COVID-19 than males 62%. Chi square test was done and the association was found to be statistically not significant (Pearson Chi Square value: 0.910, P value: 0.340(>0.05).
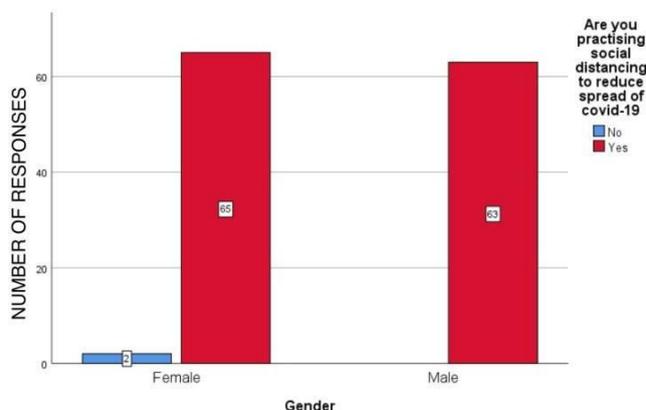

Figure 17: Bar graph representing association between gender and perception of participants practicing social distancing. X axis represents the gender of study participants and Y axis represents the number of responses of study participants who were aware(red) and not aware(blue). This comparative bar graph results show that females 65% are more aware of the benefits of social distancing in reducing the spread of COVID-19 than males 63%. Chi square test was done and the association was found to be statistically not significant. [Pearson Chi Square value: 1.910, P value: 0.167(>0.05)].
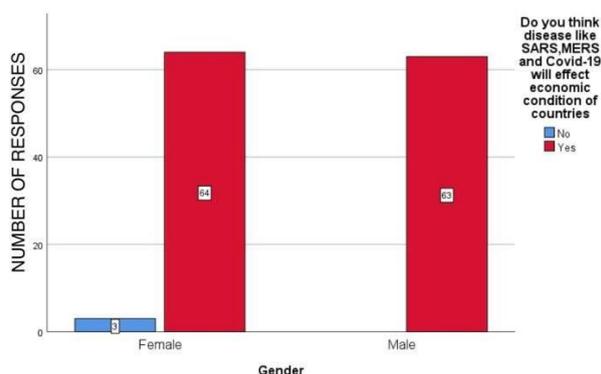

Figure 18: Bar graph representing association between gender and effect on economic conditions due to epidemics and pandemics by respiratory viruses. X axis represents the gender of study participants and Y axis represents the number of responses of study participants who were aware(red) and not aware(blue).This comparative bar graph results show that females 64% are slightly more aware about the effect on economic conditions due to epidemics and pandemics by respiratory viruses than males 63%. Chi square test was done and the association was found not to be statistically significant. [Pearson Chi Square value: 2.888, P value: 0.089(>0.05)].s