

Knowledge, Awareness and Perception on the Prevention and Cure for Covid 19 among Dental Students - A Survey

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Abstract

Aim and introduction

The present world is facing the challenge due to the widespread of the coronavirus pandemic which is known as COVID-19. It is a life threatening disease. This disease is caused due to the severe acute respiratory syndrome. Middle east respiratory syndrome coronavirus is the first respiratory disease. This disease is caused due to the severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2). More than 188 countries were affected by this disease. The first case of COVID-19 was reported in Wuhan in China in the year 2019. The main aim of this study is to assess the awareness, knowledge and perception on the prevention and cure for COVID-19 among dental students.

Materials and Method Self-administrated questionnaire was designed based on awareness. The questionnaire was distributed through an online Google forms link. The study population included dental students belonging to the 18 – 26 age group. Method of representation of each output variable was in pie chart and bar graph. The statistics was done using SPSS software, chi square test was done to check the association and a p value of 0.05 was said to be statistically significant. The survey was completed in the month of may 2020

Result

84.3% were aware of the pandemic disease that prevails worldwide today. Survey revealed that a majority of the participants were aware of the preventive measures to fight the infection. Male participants strongly believe that lock down can be the best preventive measure for covid infection than females and it was statistically significant($p < 0.05$)

Conclusion

This survey proves that the majority of the participants were aware about the preventive measures to be taken to avoid COVID 19 that prevails worldwide , and also found that both male and female students were equally aware of the same. Male participants strongly believe that lockdown can be the best preventive measure for covid infection than females and it was statistically significant

Keywords

Awareness; Knowledge; prevention; COVID-19; dental students.

Introduction

The present world is facing the challenge due to the widespread of the coronavirus pandemic which is known as COVID-19. It is a life threatening disease. This disease is caused due to the severe acute respiratory syndrome (Bawazir *et al.*, 2018). Middle east respiratory syndrome coronavirus is the first respiratory disease. This disease is caused due to the severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2). More than 188 countries were affected by this disease. The first case of COVID-19 was reported in Wuhan in China in the year 2019. COVID-19 is a zoonotic pathogen which is first transmitted from the animals to humans and it spreads rapidly among humans through human to human interaction (Yin and Wunderink, 2018). Incubation period of Coronavirus in humans is about 2-14 days (Admin, 2020). Some of the common symptoms of this life threatening disease are fever, cough, nausea and diarrhea (Guan *et al.*, 2020). Currently, there is no antiviral drug discovered for this problem, though supportive treatments are available temporarily which is In Vitro-interferon treatment against the human coronavirus (Malpani *et al.*, 2020). In this pandemic situation, anxiety levels among the people are being increased which severely affects their mental health (Roy *et al.*, 2020). It is revealed that this virus affects males more than females comparatively and the method used to detect the infection in a person is by real time RT-PCR (Chen *et al.*, 2020). The COVID-19 infected patients in Wuhan were mainly adults and children were not affected much and among these most of them were diabetic and hypertension patients (J. Li *et al.*, 2020)(Ponnulakshmi *et al.*, 2019). This virus mostly affects Type 2 diabetic patients and patients with various types of cancer such as thyroid cancer, laryngeal cancer, cervical cancer and mammary gland cancer. This virus induces the process of metastasis which can be inhibited by the chitosan nano polymer that is loaded with the eugenol (Ma *et al.*, 2019). when the oral cancer patients are affected by this virus, the cytotoxic activity of the medicine is inhibited (Wang *et al.*, 2019).

After the incubation of this virus, it start to interrupt with the melanin secretion which helps the UV-B radiation to mediate inflammation and oxidative stress on the human epidermal keratinocytes and at the same time, obese child are also severely affected (Ke *et al.*, 2019). Currently, many researches are carried out on the treatment and medicine for the carcinoma such as hepatic carcinoma and oral epidermal carcinoma and also popular researches are done to find the medicine for the Non-alcoholic steatohepatitis (Gan *et al.*, 2019)(Z. Li *et al.*, 2020). The current research in cancer biology has taken the cancer care to reach a milestone (G *et al.*, 2018)(Rengasamy *et al.*, 2016), Nanotechnology (Chen *et al.*, 2019)(Shukri *et al.*, 2016) downstream processing (Jainu, Priya and Mohan, 2018) (Rengasamy *et al.*, 2018) and in silico works are the current trend in today's research (Mohan, Veeraraghavan and Jainu, 2015)(Wu *et al.*, 2019)(Menon, V and Gayathri, 2016).

But , the current situation globally is the alarmingly increasing levels of infection and that too now the global pandemic COVID 19 has made the scientific arena to search for a prevention or cure. Thus, even awareness is equivalent to prevention among the community we live in.

There is no proper research or survey that has been done previously on the awareness, knowledge and perception on the prevention and cure for COVID-19 among medical students. The main aim of this study is to assess the awareness and impart knowledge on the prevention and cure for COVID-19 among dental students. Our team has rich experience in research and we have collaborated with numerous authors over various topics in the past decade (Ariga *et al.*, 2018; Basha, Ganapathy and Venugopalan, 2018; Hannah *et al.*, 2018; Hussainy *et al.*, 2018; Jeevanandan and Govindaraju, 2018; Kannan and Venugopalan, 2018; Kumar and Antony, 2018; Manohar and Sharma, 2018; Menon *et al.*, 2018; Nandakumar and Nasim, 2018; Nandhini, Babu and Mohanraj, 2018; Ravinthar and Jayalakshmi, 2018; Seppan *et al.*, 2018; Teja, Ramesh and Priya, 2018; Duraisamy *et al.*, 2019; Gheena and Ezhilarasan, 2019; Hema Shree *et al.*, 2019; Rajakeerthi and Ms, 2019; Rajendran *et al.*, 2019; Sekar *et al.*, 2019; Sharma *et al.*, 2019; Siddique *et al.*, 2019; Janani, Palanivelu and Sandhya, 2020; Johnson *et al.*, 2020; Jose, Ajitha and Subbaiyan, 2020).

Materials and Methods

Self-administrated questionnaire was designed based on awareness. The questionnaire contained 10 questions which were distributed through an online Google forms link. The study population included 100 dental students belonging to the 17 – 22 age group. The participants were explained about the purpose of study in detail. The questions were carefully studied and the participants marked the corresponding answers. Sample method carried out was simple random sampling. Method of representation of each output variable was in pie chart and bar graph.. This survey was completed in the month of May 2020. The statistics was done using SPSS software, chi square test was done to check the association and a p value of 0.05 was said to be statistically significant.

Results

Survey on prevention and cure of COVID 19 was done. The study population included dental students. The survey results were collected and statistically analyzed as 84.3% were aware of the pandemic disease that prevails worldwide today [Figure 1]. When asked for opinion on whether there is any treatment available for the covid infection, 32 out of 41 females and 54 out of 61 males believe that there is treatment available for covid infection, though statistically not significant, Males have a stronger opinion on treatment that is available for the covid infection than female [Figure 2]. When asked for opinion on awareness on availability of vaccine for covid infection, 34 out of 41 females and 55 out of 61 male are aware that there is treatment available for covid infection, though statistically not significant, Male have a stronger opinion that there is no vaccine for covid infection than female [Figure 3]. When asked for opinion on whether the lockdown can prevent spread of covid infection, 30 out of 41 females and 51 out of 61 male strongly believe that lock down is the best preventive measure for covid infection, though statistically significant, Male have a stronger opinion on lock down is the best preventive measure for covid infection than female [Figure 4]. When asked for an opinion on whether soap

or hand sanitizer is preferred for hand wash, 33 out of 41 females and 56 out of 61 males said that soap is most preferable for the hand wash, though statistically significant, Male have a stronger opinion that soap is more preferable for hand wash to avoid spread of covid infection than female [Figure 5]. 72.5% feel their friends and neighbours strictly follow self isolation and 7.8% feel maybe [Figure 6]. 74.5% prefer eating natural food that boosts their immunity [Figure 7]. 77.45% were aware that washing hands periodically reduces infection [Figure 8]. 80.39% stopped ordering food online [Figure 9].

Discussion

In the research done previously, it was revealed that 87.2% accepted that washing hands with the soap can prevent COVID-19 infection (Bhagavathula *et al.*, 2020). The results were similar to this study, where 87.3% accepted that washing hands using soap prevents the COVID - 19 infection. Also it was revealed that 73.5% were aware that there are no vaccines for the infection of COVID- 19 (Mya *et al.*, 2020). Here, 87.3% of participants were aware that there are no vaccines for COVID -19. 91.7% think healthy food (well cooked food) can improve natural immunity (Farhana, no date). This result is more or less similar to our study where 74% accepted that eating healthy food can improve the natural immunity. Our institution is passionate about high quality evidence based research and has excelled in various fields ((Pc, Marimuthu and Devadoss, 2018; Ramesh *et al.*, 2018; Vijayashree Priyadharsini, Smiline Girija and Paramasivam, 2018; Ezhilarasan, Apoorva and Ashok Vardhan, 2019; Ramadurai *et al.*, 2019; Sridharan *et al.*, 2019; Vijayashree Priyadharsini, 2019; Chandrasekar *et al.*, 2020; Mathew *et al.*, 2020; R *et al.*, 2020; Samuel, 2021)

There is no proper research or survey that has been done previously on the awareness, knowledge and perception on the prevention and cure for COVID-19 among dental students. From the result, it is evident that there is proper awareness on the preventive measures prevail among dental students, though there is awareness about the treatment and cure about the pandemic, implementation of the knowledge is the need of the hour.

Conclusion

This survey proves that the majority of the participants were aware about the preventive measures to be taken to avoid COVID 19 that prevails worldwide , and also found that both male and female students were equally aware of the same. Male participants strongly believe that lockdown can be the best preventive measure for covid infection than females and it was statistically significant

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Author Contributions

Sundar R done literature search, data collection, analysis, manuscript writing. Dr. R Gayathri helped in data verification, manuscript drafting. Dr. V Vishnu Priya and Dr. S kavitha contributed to the title discussion.

Conflict of interest: None declared

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Figure legends

Figure 1 represents the distribution of participants based on awareness on the pandemic disease COVID-19, where 84.31% (blue) of the participants were aware and 12.75% (red) were not aware, 2.94% (green) are not sure.

Figure 2: Bar Chart representing association between gender and opinion on whether there is any treatment available for the covid infection. X axis represents gender and Y axis represents number of participants who responded 'yes' (blue) and 'no' (red). Males strongly believe that there is treatment available for covid infection than females, however, it is statistically not significant (Pearson's chi square value = 2.035, df = 1, p value = 0.154 (>0.05)).

Figure 3: Bar chart representing association between gender and their awareness that there is no vaccine available for covid infection till now. X axis represents gender and Y axis represents the number of participants who responded 'yes' (blue) and 'no' (red). Males are more aware that there is no vaccine for covid infection than females, however, it is statistically not significant. (Pearson's Chi square value = 1.155, df = 1, P value = 0.283 (>0.05)).

Figure 4: Bar chart showing the association between gender and opinion on whether the lockdown can prevent the spread of covid infection. X axis represents Gender and Y axis represents the number of participants who responded 'yes' (blue), 'no' (red) and 'maybe' (green). Males strongly believe that lock down is the best preventive measure for covid infection than females and it is statistically significant (Pearson Chi square value = 6.294, df = 2, P value = 0.043 (<0.05)).

Figure 5: Bar chart represents the association between gender and opinion on whether soap or hand sanitizer was preferred for hand wash. X axis represents gender and Y axis represents the number of participants who responded to 'soap' (blue) and 'hand sanitizer' (red). Males prefer soap for the hand wash than females and it is statistically significant (Pearson's Chi square value = 2.823, df = 1, p value = 0.093(<0.05)).

Figure 6 represents the distribution of participants on their opinion on self isolation followed by their neighbours and friends, where 72.55% (blue) feel they follow properly, 19.61% (red) don't follow and 7.84% (green) have no opinion.

Figure 7 represents the distribution of participants who prefer eating healthy food that boosts immunity, where 74.51% (blue) prefer and 19.61% (red) don't prefer and 5.88% (green) have no opinion.

Figure 8 represents the distribution of participants based on the awareness that washing their hands periodically reduces spread of infection, where 77.45% (blue) were aware, 27.5% (red) were not aware and 0.98% (green) have no opinion.

Figure 9 represents the distribution of participants on their opinion on ordering food online, where 80.39% (blue) stopped ordering food online, 16.67% (red) still order food online and 2.94% (green) have no opinion.

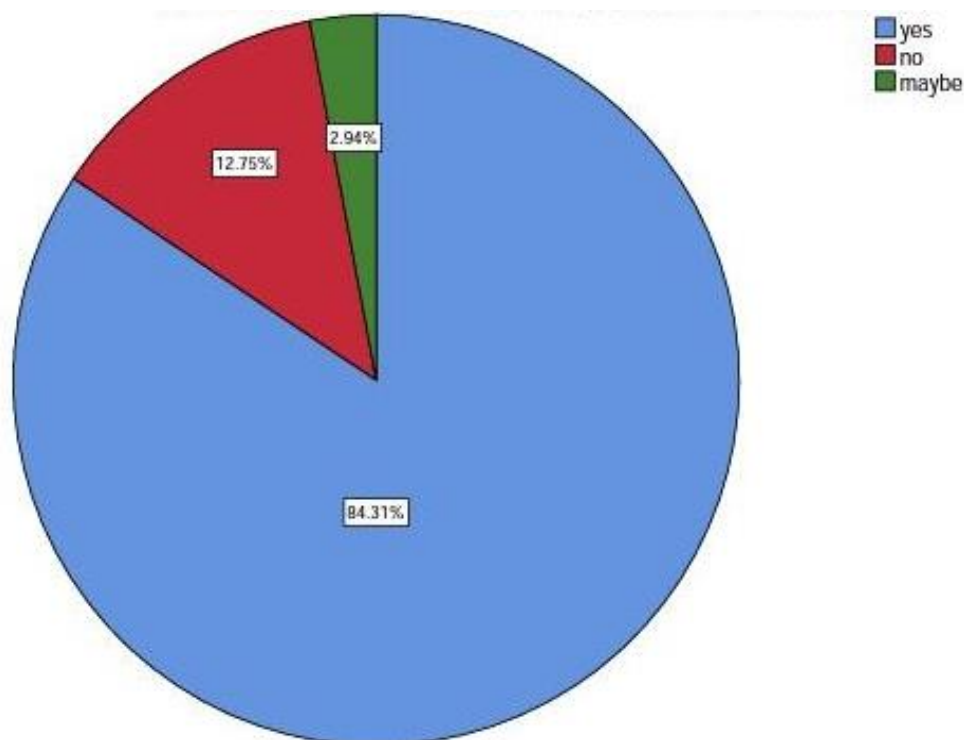


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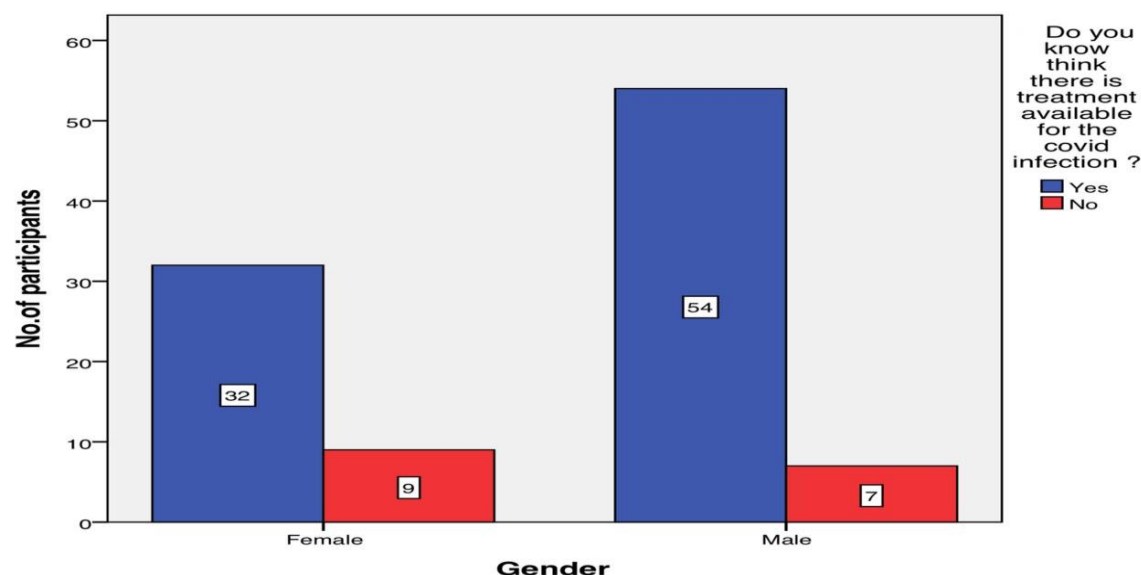


Figure 2: Bar Chart representing association between gender and their opinion on whether there is any treatment available for the covid infection . X axis represents gender and Y axis represents number of participants who responded ‘yes’ (blue) and ‘no’ (red). Males strongly believe that there is treatment available for covid infection than females, however, it is statistically not significant (Pearson’s chi square value = 2.035, df = 1, p value = 0.154 (>0.05)).

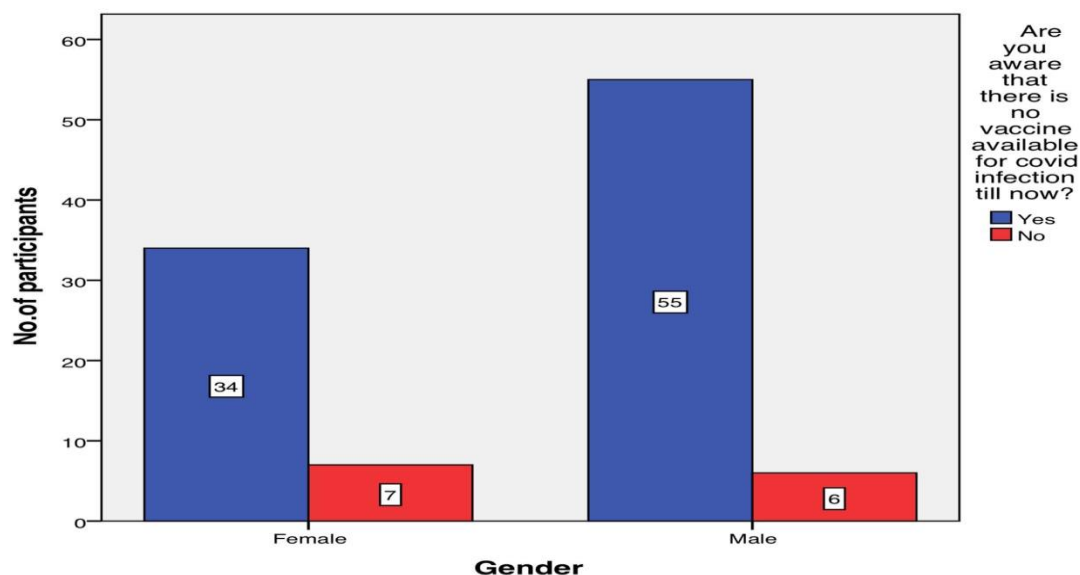


Figure 3: Bar chart representing association between gender and their awareness that there is no vaccine available for covid infection . X axis represents gender and Y axis represents the number of participants who were aware (blue) and not aware (red). Males were more aware that there is no vaccine for covid infection than females, however it is statistically not significant. (Pearson’s Chi square value = 1.155, df = 1, p value = 0.283 (>0.05)).

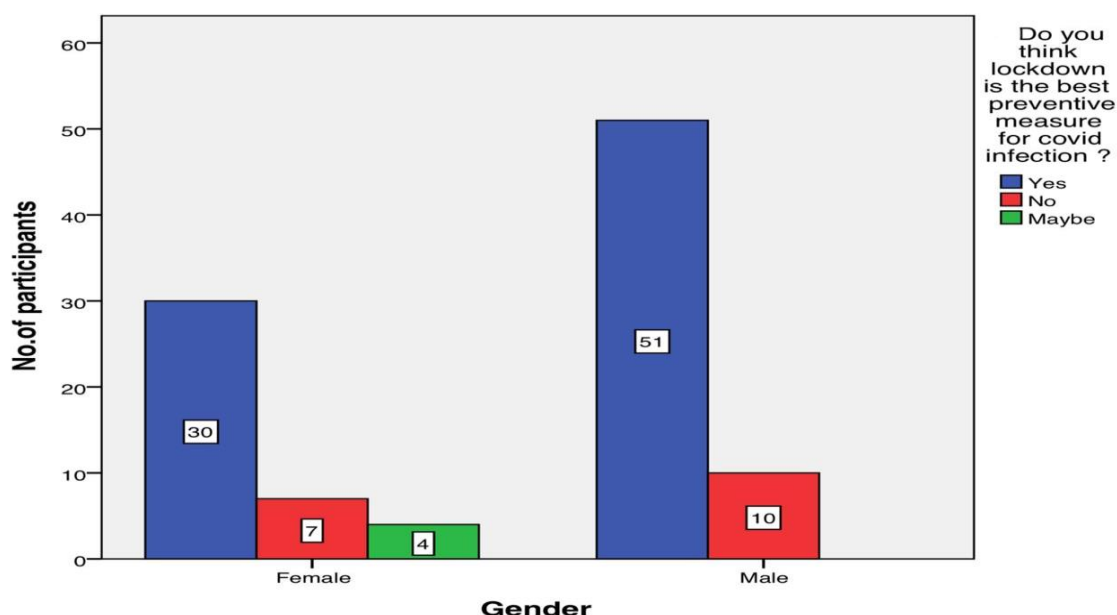


Figure 4: Bar chart representing the association between gender and opinion on whether the lockdown can prevent the spread of covid infection. X axis represents Gender and Y axis represents the number of participants who responded 'yes' (blue), 'no' (red) and 'maybe' (green). Males strongly believe that lock down can be the best preventive measure for covid infection than females and it is statistically significant (Pearson Chi square value = 6.294, df = 2, P value = 0.043 (<0.05)).

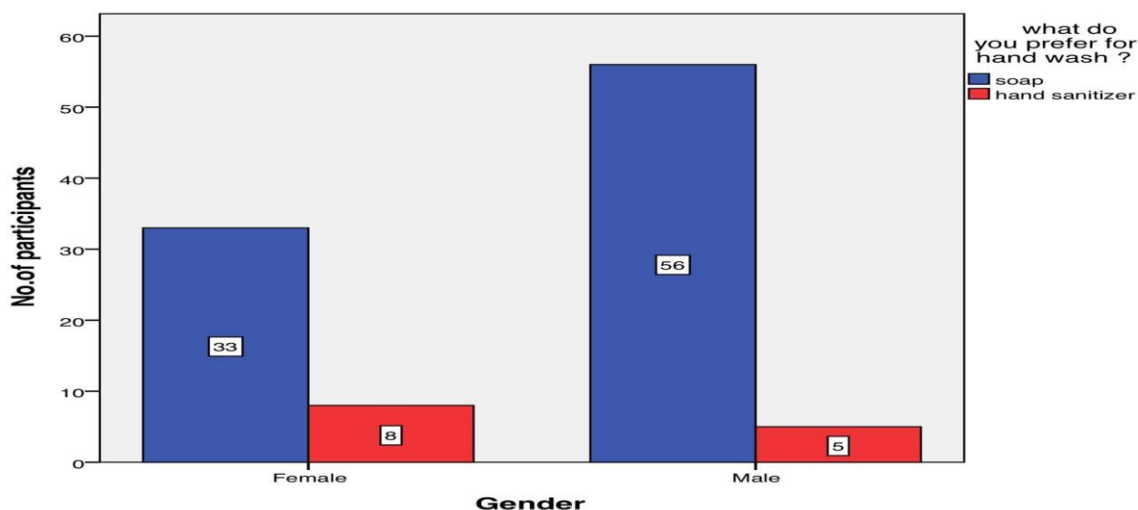


Figure 5: Bar chart represents the association between gender and opinion on whether soap or hand sanitizer was preferred for hand wash. X axis represents gender and Y axis represents the number of participants who preferred 'soap' (blue) and who preferred 'hand sanitizer' (red). Majority of males preferred soap for hand wash than females, however it is statistically not significant (Pearson's Chi square value = 2.823, df = 1, p value = 0.093(>0.05)).

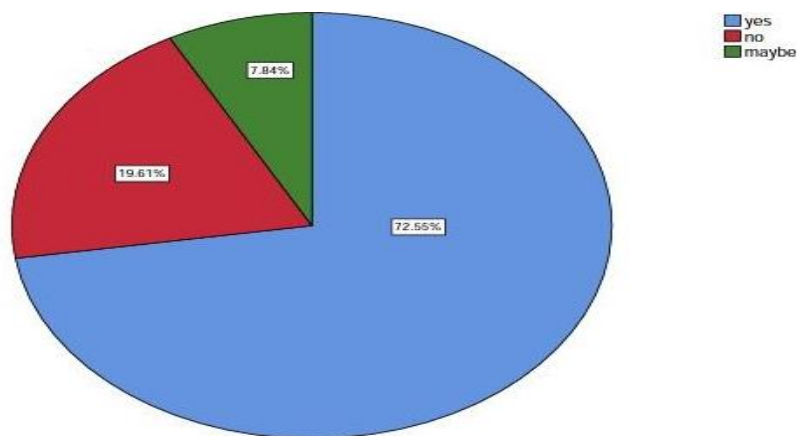


Figure 6 represents the distribution of participants on their opinion on self isolation followed by their neighbours and friends, where 72.55% (blue) feel they follow properly, 19.61% (red) don't follow and 7.84% (green) have no opinion.

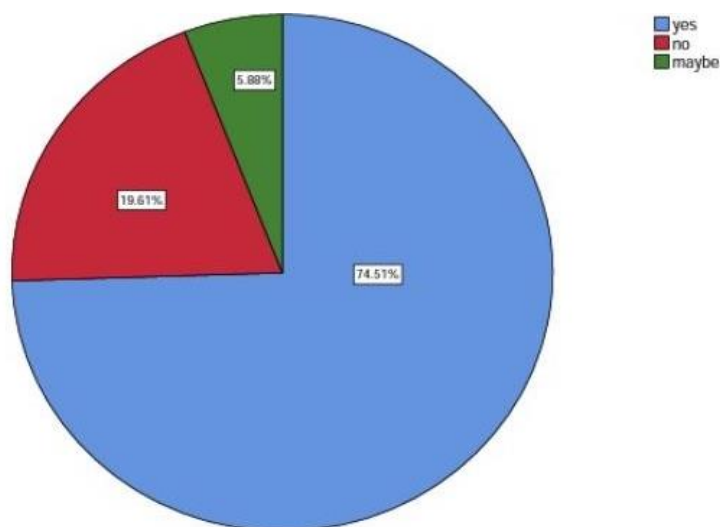


Figure 7 represents the distribution of participants who prefer eating healthy food that boosts immunity, where 74.51% (blue) prefer ,19.61% (red) don't prefer and 5.88% (green) have no opinion.

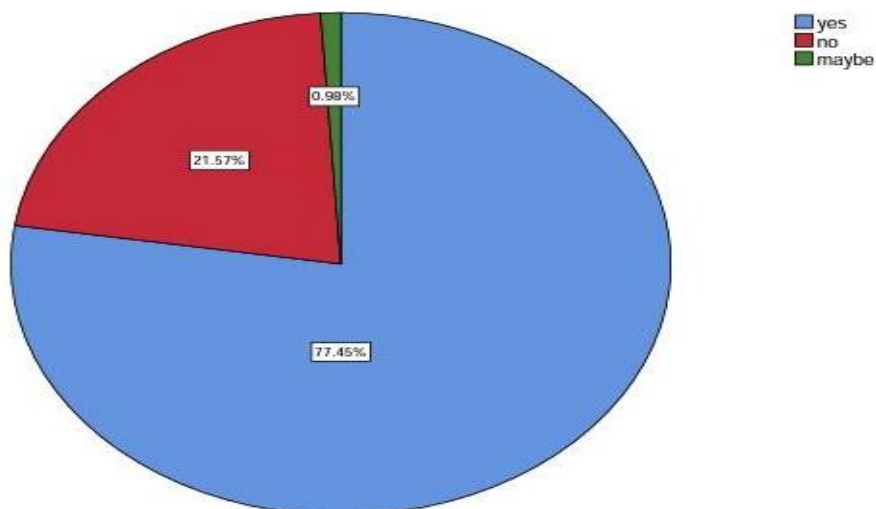


Figure 8 represents the distribution of participants based on the awareness that washing their hands periodically reduces spread of infection, where 77.45% (blue) were aware, 27.5% (red) were not aware and 0.98% (green) have no opinion.

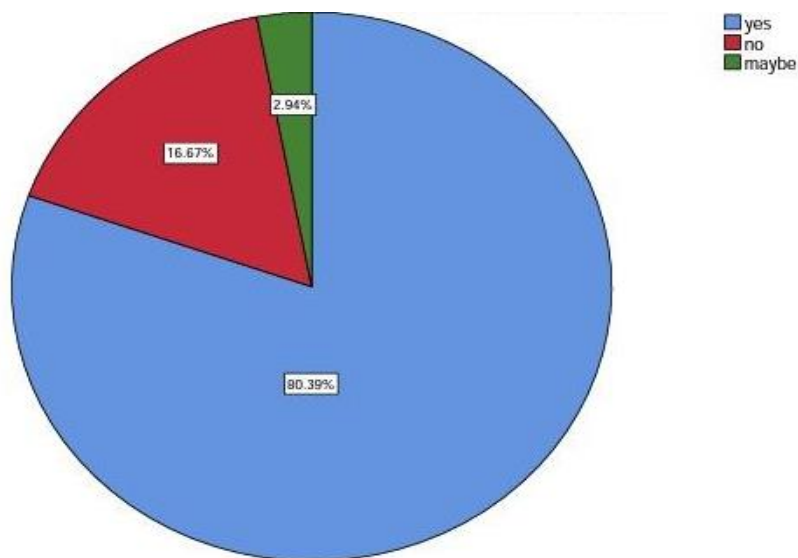


Figure 9 represents the distribution of participants on their opinion on ordering food online, where 80.39% (blue) stopped ordering food online, 16.67% (red) still order food online and 2.94% (green) have no opinion.