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## Awareness on possible Ayurvedic treatment to prevent Covid-19 - A survey

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### ABSTRACT

COVID19 is pneumonia associated viral infection that originated from Wuhan city in December 2019. The virus appears to be spherical in appearance with proteins called spikes protruding from the surface. Ayurveda plays a vital role in boosting the immunity of our body against the pandemic outbreak COVID-19. The study aims to be aware of possible Ayurvedic treatment to prevent COVID-19. An online survey was conducted with a self-structured questionnaire using an online survey platform google forms. The link was shared through social media. A total of 100 responses were received. The responses recorded from the participants showed that the participants possess adequate knowledge about the covid19 infection, and they possess sufficient awareness of the possible role of Ayurveda on boosting immunity against COVID-19. Around 68% of the respondents showed positive responses towards ayurvedic treatment to prevent COVID-19. Showing responses for questions about diet patterns, plays a vital role in preventing COVID19 - positive responses is 41%. The study concluded that during this pandemic outbreak, most of the participants are aware of the origin, cause, mode of the spread, treatment options and the initiatives taken by the government to prevent this pandemic. So, therefore, it concludes that Ayurveda plays a significant role in the process of boosting immunity against covid19.



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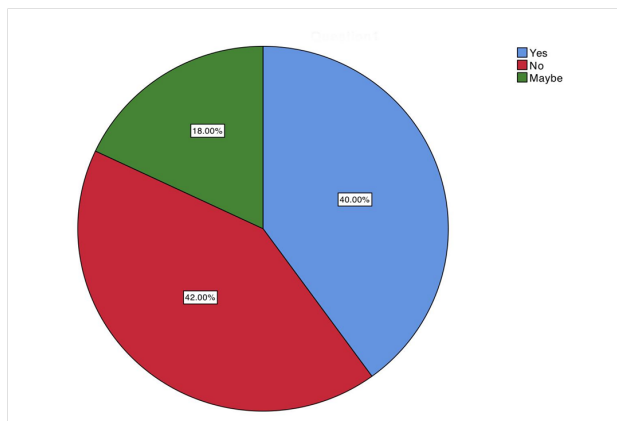
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### INTRODUCTION

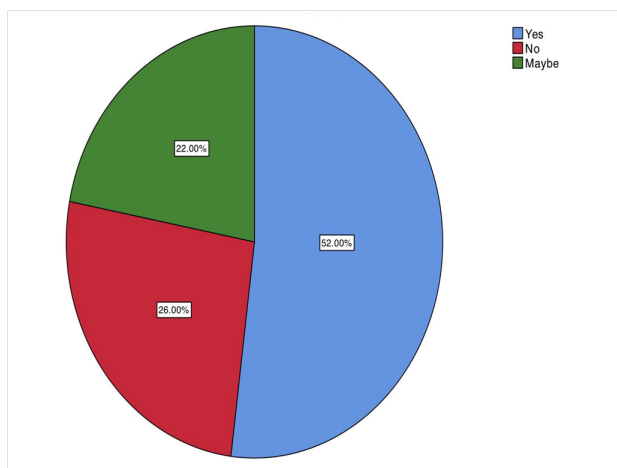
COVID19 is pneumonia associated viral infection that originated from Wuhan city in December 2019.

The virus appears to be spherical in appearance with proteins called spikes protruding from the surface. Ayurveda plays a vital role in boosting the immunity of our body against the pandemic outbreak covid19. COVID-19 becoming the greatest threat to humanity from the beginning of the Year 2020 (Panda, 2020; Ariga, 2018). Health Organisation across the globe are performing exhaustive teamwork and research to control its spread (World Health Organization, 2020; Jyothi, 2017). Ayurveda, a traditional system of medicine, originated in India more than 3000 years ago (Golechha, 2020; Duraisamy, 2019). Ayurveda which increases the immunity and also forms other factors in climate, temperature and body symmetry (Samhanana), appetite (Ahara Sakti) and physical

strength (Vyayama Sakti) (Balkrishna, 2020; Subasree et al., 2016; Jain et al., 2017). Although there is no direct evidence of Ayurvedic medicine for covid-19, some of the classical and herbal medications for covid-19 with proven immunomodulatory potential can be used as preventive medicines to counteract its symptoms (Vellingiri, 2020; Ganapathy, 2016). In this study, using Ayurvedic medicine for treating certain diseases can be cured, and it is fulfilled in this study (Malviya, 2020; Ashok and Suvitha, 2016; Selvan and Ganapathy, 2016).

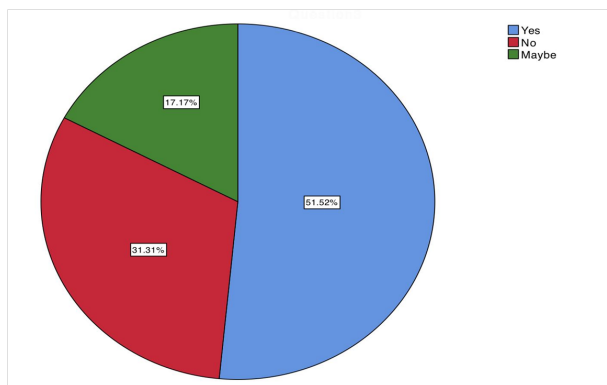


**Figure 1: Pie chart shows awareness about the fact that diet patterns play an important role in preventing COVID-19**

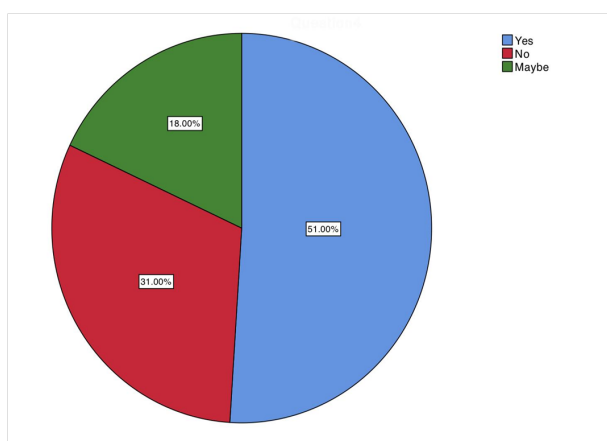


**Figure 2: Pie chart shows awareness about the fact that an increase in immunity of our body prevents COVID-19**

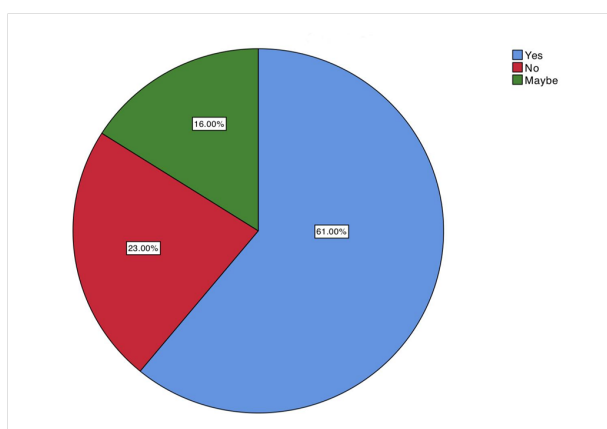
In comparison with previous works of literature it says about the prevention and treatment of covid-19 using Ayurvedic medicine among Ayurvedic practitioners (Ali and Alharbi, 2020; Venugopalan, 2014; Kannan and Venugopalan, 2018). Immunity is a balanced state in multicellular organisms possessing adequate amounts of capabilities to fight against any infection, disease or any other allergies. Immunity possesses a complicated system in multicellu-



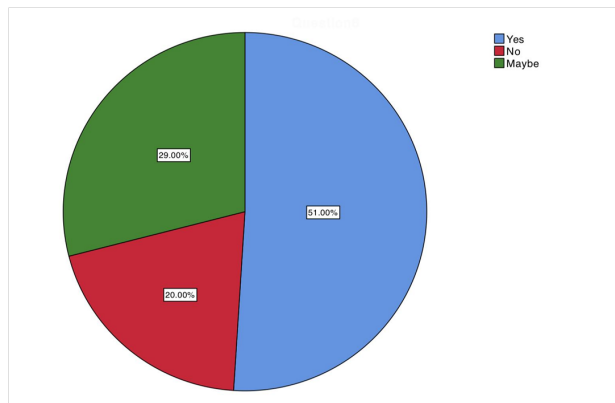
**Figure 3: Pie chart shows awareness about the fact that there has been no solid research that can prove the effectiveness as of now Ayurveda for treating or preventing COVID-19**



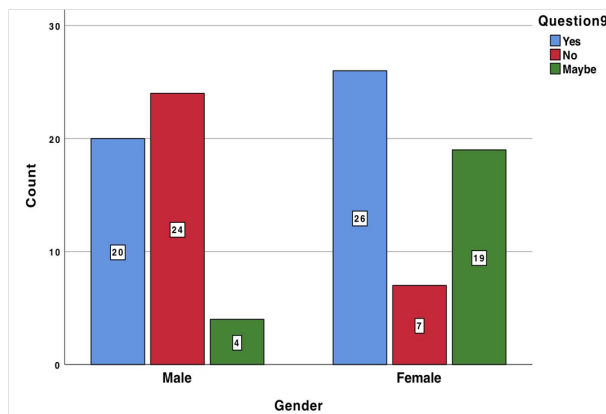
**Figure 4: Pie chart shows awareness about the fact that cinnamon, black pepper in our diet improves Immunity against the pandemic outbreak**



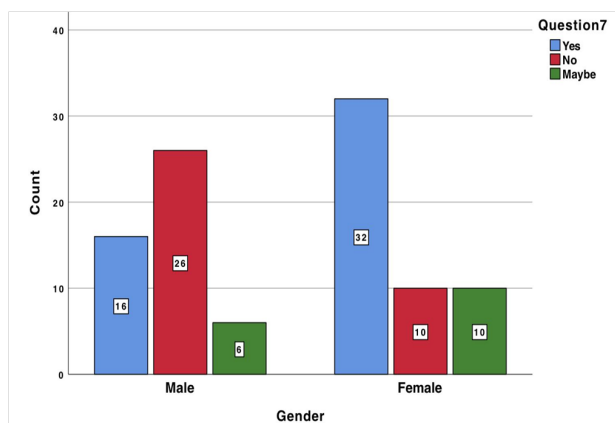
**Figure 5: Pie chart shows awareness about the fact that immunity increases the number of natural killer cells there by increasing phagocytosis against the virus**



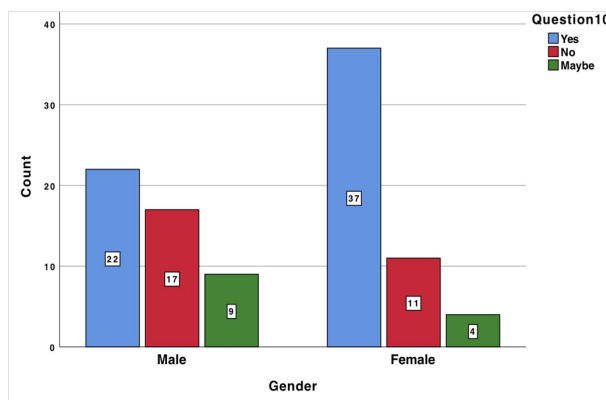
**Figure 6:** Pie chart shows awareness about the fact that the water content of the body has a role to prevent COVID-19



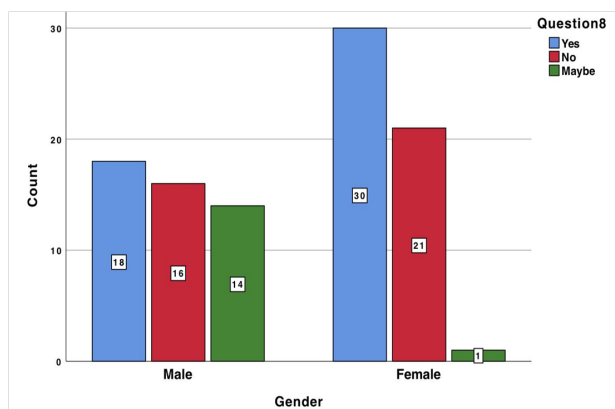
**Figure 9:** Bar chart representing association between gender and awareness regarding ayurvedic practices to increase the body's immunity against harmful viruses



**Figure 7:** Bar chart representing association between gender and awareness about eating nuts increases our body immunity



**Figure 10:** Bar chart representing association between gender and awareness about the fact that herbs are good at boosting immunity



**Figure 8:** Bar chart representing association between gender and awareness about the fact that the immune system will help in recovery from the coronavirus infection

lar organisms which require all nutrients for proper functioning (Cordain *et al.*, 2005; Jackson and Ahs, 2020; Khan *et al.*, 2020).

The primary aim of this study is to stimulate awareness on the possible role of Ayurveda in boosting the immunity of our body to fight against pandemic outbreak covid-19. This survey helps the general population to understand the awareness, knowledge of Ayurveda to fight against covid-19.

## MATERIALS AND METHODS

This online survey was conducted with a self-administered questionnaire which is used to record the responses from the participants. The questionnaire consisted of a set of 12 questions, out of which ten questions were multiple-choice questions, aimed at knowing the level of awareness about a possible ayurvedic medicine to prevent Covid-19 among the participants. The questionnaire was constructed and circulated in an online platform

“Google forms”. The sample size for the study consisted of 100 people. The survey was validated in a usual manner, including internal and external validations. Measures such as the random selection of participants and, the prevention of asking irrelevant questions to the participants’ group are taken to minimize the bias occurring in sampling. The data collecting software SPSS VERSION 20 was used to analyze descriptive statistics, and the result of the survey was represented in the form of pie charts.

## RESULTS AND DISCUSSION

The results of the survey were collected and analyzed. Around 60% of the respondents show positive responses towards ayurvedic treatment to prevent COVID-19. Figure 1 Shows responses for questions about diet patterns plays an important role in preventing COVID19 - positive responses (40%) are in blue colour, negative responses (42%) are in red colour and responses (18%) for sometimes are in green colour and showing responses for questions about diet patterns plays an essential role in preventing COVID19 - positive responses 41%, negative responses 42% and 17% response which is partially aware of it. Figure 2 Shows responses for questions about increases in immunity of our body prevents COVID19 - positive responses (52%) are in blue colour, negative responses (26%) are in red colour and responses (22%) for sometimes are in green colour and showing responses for questions about increases in immunity of our body prevents COVID19 - positive responses 50%, negative responses 29% and 21% response which is partially aware of it. Figure 3 Shows responses for questions that there has been no solid research that can prove the effectiveness as of now Ayurveda for treating or preventing COVID-19 - positive responses (52%) are in blue colour, negative responses (31%) are in red colour and response (17%) for sometimes are in green colour and showing responses for questions that there has been no substantial research that can prove the effectiveness as of now Ayurveda for treating or preventing COVID-19 - positive responses 51%, negative responses 32% and 17% response which is partially aware of it. Figure 4 Shows responses for questions that cinnamon, black pepper in our diet improves Immunity against the pandemic outbreak - positive responses (51%) are in blue colour, negative responses (31%) are in red colour and response (18%) for sometimes are in green colour and showing responses for questions that cinnamon, black pepper in our diet improves Immunity against the pandemic outbreak - positive responses 51%, negative responses 32% and 17% response which is partially aware of it. Figure 5

Shows responses for the question that immunity increases the number of natural killer cells thereby increasing phagocytosis against the virus - positive responses (61%) are in blue colour, negative responses (23%) are in red colour and response (16%) for sometimes are in green colour and shows responses for the question that increasing immunity increases the number of natural killer cells thereby increasing phagocytosis against the virus-positive responses 60%, negative responses 25% and 15% responses which are partially aware of it.

Figure 6 Shows responses for questions that the water content of the body has a role to prevent COVID19- positive responses (51%) are in blue colour, negative responses (20%) are in red colour and response (29%) for sometimes are in green colour and showing responses for questions that the water content of the body has a role in preventing COVID19 - positive responses 53%, negative responses 20% and 27% responses which are partially aware of it. Figure 7 shows X-axis represents the gender of the participants and Y-axis represents the number of participants who are not aware. Association between gender and awareness about eating nuts increases our body immunity was done using chi square test. Pearson Chi square value - 13.306, p value - 0.001 (>0.05) hence significant. Out of 48% of the participants who are aware, 16% constitutes male and 32% constitutes female. Hence females are more aware that eating nuts increases our body immunity than males and shows responses for the question that eating nuts increase our body immunity - positive responses 48%, negative responses 37% and 15% responses which are partially aware of it. Figure 8 shows X-axis represents the gender of the participants and Y-axis represents the number of participants who are and not aware. Out of 48% of the participants who are aware, 18% constitutes male and 30% constitutes female. Hence females are more aware that the immune system will help in recovery from the coronavirus infection than males. Association between gender and awareness about the fact that the immune system will help in recovery from the coronavirus infection was done using chi square test. Pearson Chi square value - 14.806, p value - 0.001 (>0.05) hence significant and shows responses for questions that the immune system will help in recovery from the coronavirus infection - positive responses 47%, negative responses 30% and 23% response which is partially aware of it. Figure 9 shows X-axis represents the gender of the participants and Y-axis represents the number of participants who are and not aware. Association between gender and awareness about the fact tulsi, cinnamon, black pepper, shunthi (dry ginger) and

raisins and regular yoga are potent aids to increase the body's immunity against harmful viruses was done using chi square test. Pearson Chi square value - 19.759, p value - 0 (>0.05) hence significant. Out of 46% of the participants who are aware, 20% constitutes male and 26% constitutes female. Hence females are more aware that tulsi, cinnamon, black pepper, shunthi (dry ginger) and raisins and regular yoga are potent aids to increase the body's immunity against harmful viruses than males and showing responses for questions that tulsi, cinnamon, black pepper, shunthi (dry ginger) and raisins and regular yoga are potent aids to increase the body's immunity against harmful viruses - positive responses 48%, negative responses 37% and 15% response which is partially aware of it. Figure 10 shows X-axis represents the gender of the participants and Y-axis represents the number of participants who are and not aware. Association between gender and awareness about the fact that herbs are good at boosting immunity was done using chi square test. p value - 0.032 (>0.05) hence significant. Out of 59% of the participants who are aware, 22% constitutes males and 37% constitutes females. Hence females are more aware that herbs are good at boosting immunity than males and showing responses for questions -positive responses 59%, negative responses 29% and 12% response which is partially aware of it.

In the present study, 68 per cent of participants are aware and know the ayurvedic treatment to prevent covid-19. From this Figures 1, 4, 7 and 8, it explains about regular yoga for 10th 8 to increase the body's immunity against harmful viruses (Rastogi et al., 2020; Ashok, 2014; Venugopalan, 2014; Tillu et al., 2020). Figures 2, 5, 6 and 9, explains that increased immunity in our body can prevent covid-19. Figure 1 depicts the fact that diet patterns play an essential role in avoiding covid-19. About 68% of participants are aware of ayurvedic treatment to prevent covid-19 (Basha et al., 2018; Ajay, 2017; Nikhat and Fazil, 2020).

Other researchers from different regions did similar studies. According to Cascella M, there is no specific antiviral treatment recommended for covid-19 (Ganapathy, 2016; Vijayalakshmi and Ganapathy, 2016; Cascella, 2020). Developing immunity and incubation and protective mechanical ventilation could prevent a patient from covid-19. Developing immunity can dress covid-19. According to Girish Tillu, "prevention is better than cure", by developing immunity and doing yoga could resist COVID-19 (Ganapathy et al., 2017; Tillu et al., 2020; Prompetchara et al., 2020).

The limitations of the study is the minimum sample size chosen for this topic and should increase the relative criterion. In future, education should be done to improve the students' knowledge and awareness on Ayurvedic treatment to prevent Covid-19 among college students.

From the above survey, around 68% of college students are aware of the Ayurvedic treatment to prevent COVID-19. This shows that respondents were aware of Ayurvedic medicine to avoid COVID-19.

## CONCLUSIONS

The study conducted concludes that during this pandemic outbreak most of the participants are aware of the origin, cause, mode of the spread, treatment options and the initiatives taken by the government to prevent this pandemic and one among the actions taken by the government is the application of herbs used in Ayurveda such as neem, turmeric, cinnamon for the prevention of covid19 by boosting the immunity level of the body. So, therefore, it concludes that Ayurveda plays a significant role in the process of boosting immunity against covid-19.

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The authors declare that they have no funding support for this study.

## Conflict of Interest

The authors declare that they have no conflict of interest for this study.

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