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Awareness Related To Healthy Food Habits During Covid-19 Pandemic- A Cross-Sectional Survey

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ABSTRACT:

AIM: To assess the impact of COVID outbreak on food lifestyle among the general population.

BACKGROUND: Documentation of the changes in food habits and knowledge about healthy food options creates awareness about better ways of improving immunity during COVID-19 pandemic.

MATERIALS AND METHODS: A cross sectional study was conducted among the general population. Random sampling is used to minimize the sampling bias. The standard questionnaire is used and circulated through online mode. SPSS software was used to tabulate and analyze the collected data. The Pearson chi-square test was used to correlate the gender and questions relating to healthy food habits. **RESULTS:** A total of 103 people were involved in the study. 65% of the participants were males and 35% were females. Majority(90.36%) of the population was aware of a healthy lifestyle and diet; only 9.64% weren't aware. 48.19% of participants agreed that they had reduced their intake of fat or oil related foods and 46.99% to a decrease in intake of fat or oil related foods. On the other hand 46.99% responded to an increase in intake of fat or oil related foods.

CONCLUSION: The overall awareness of the study participants were good. It was found that intake of junk foods, stress was increased during covid pandemic which shows that covid pandemic had a negative effect on a healthy food lifestyle.

KEYWORDS: COVID-19, Junk foods, Lifestyle Awareness, Novel analysis.

INTRODUCTION:

COVID-19 is a disease caused by a new strain of coronavirus. 'CO' stands for corona, 'VI' for virus, and 'D' for disease. Formerly, this disease was referred to as '2019 novel coronavirus' or '2019-nCoV.' Many health researchers believe that covid originated from bats. The first transmission to humans was in Wuhan, China(1,2).

Change in healthy food, lifestyle may result in diseases. The COVID-19 have made a severe impact on human health which was as a result of change in food habits, isolation at home due to quarantine, increased stress and anxiety several fold(3). Due to the increase of anxiety, stress or boredom, people started consuming junk food at this point which resulted in an increase of weight and also low physical activities affected their health. Beside those negative parts, there was also a gradual reduction in smoking, increase in sleep hours.

It is necessary to maintain and attain good immunity status to fight against viruses. Nutritional status of individual is affected by several factors such as age, sex, health status, life style and medications. Optimal nutrition and dietary nutrient intake impact the immune system, therefore the only sustainable way to survive in the current context is to strengthen the immune system(4). Healthy diet is important in supporting the immune system as we know good nutrition reduces the likelihood of developing other health problems like obesity, heart diseases and diabetes. Our team has extensive knowledge and research experience that has translate into high quality publications(5)(6)(7)(8)(9)(10)(11) (11,12)(13)(13,14)(13–15)(16)(16–18)(19)(20)(21)(22)The aim of this study is to create awareness related to healthy food habits in wake of COVID-19.

MATERIALS AND METHODS:

This cross sectional study was conducted among the general public visiting a private dental college. Random sampling was used to minimize the sampling bias. A set of standardized, close-ended questionnaires was prepared and circulated through online mode. The collected data were tabulated and SPSS software was used to analyze the collected data. Pearson chi-square tests were used to correlate the gender and healthy food habits. P value of <0.05 was considered significant.

RESULTS:

A total of 103 respondents were included in the study. Majority(90.36%) of the population was aware of a healthy lifestyle and diet, only 9.64% wasn't aware(figure-1). 48.19% reacted to decrease of intake of fat or oil related foods on the other side 46.99% responded to intake of fat or oil related food increased (figure-2).49.which was common and well known due to decreased physical activity. 40.96% of the population reacted to the decrease of body weight. Weight remained unchanged at

9.64% of the population(figure-3). 56.63% responded to an increase of stress level during the pandemic which was due to isolation at home during quarantine. 32.53% reacted to the decrease in stress level and anxiety and remained unchanged in 10.84% of the population(figure-4). 56.63% reacted to an increase in the habit of having snacks during the pandemic due to stress and anxiety. 37.35% reacted to the decrease in this activity and no changes among 6.02%. The Majority (49.4%) of the population reacted to increased levels of having junk food during stress or bored situations and it decreased among 40.96% of the population. Habit of having sweets, chocolates and other related food items has increased. 56.63% reacted to the increase in this activity. Intake of nutritional supplement was increased among 56.63% of the population and decreased among 32.53%. Intake of carbonated sweet beverages and cool drinks decreased in 43.37% of the population and increased in 39.76% of the population. Majority reacted to skipping of meal during a pandemic was 48.58%. There was an increase in sleeping hours after lunch among 53.01% of the population and decreased in 37.35% of the population. Majority reacted to yes(85.54%) for increased intake of water during COVID pandemic.

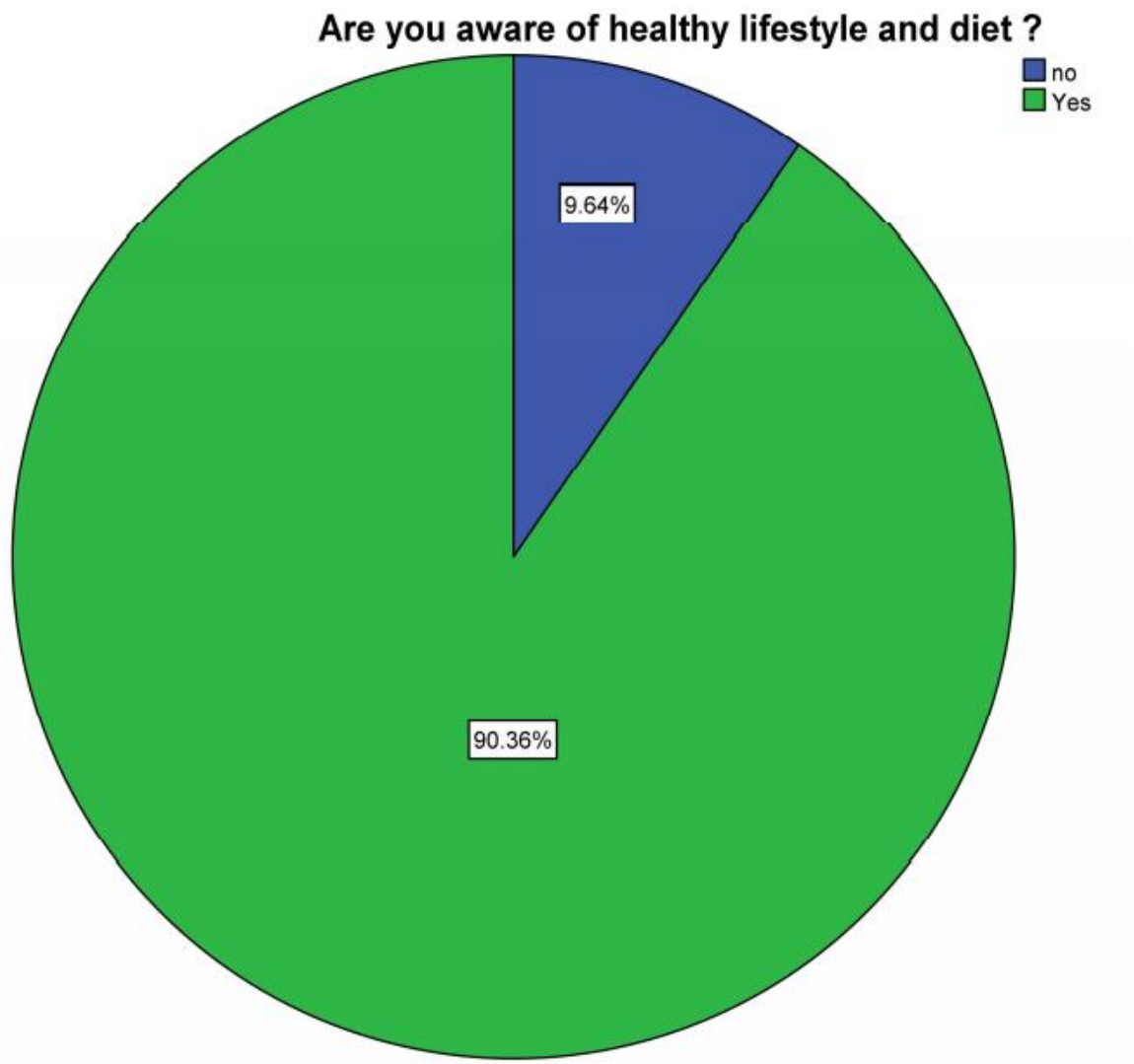


FIGURE-1 Pie chart showing awareness about healthy lifestyles. Green denotes yes, blue denotes no. Majority(90.36%) of the population were aware of a healthy lifestyle and diet, only few (9.64%) weren't aware of them.

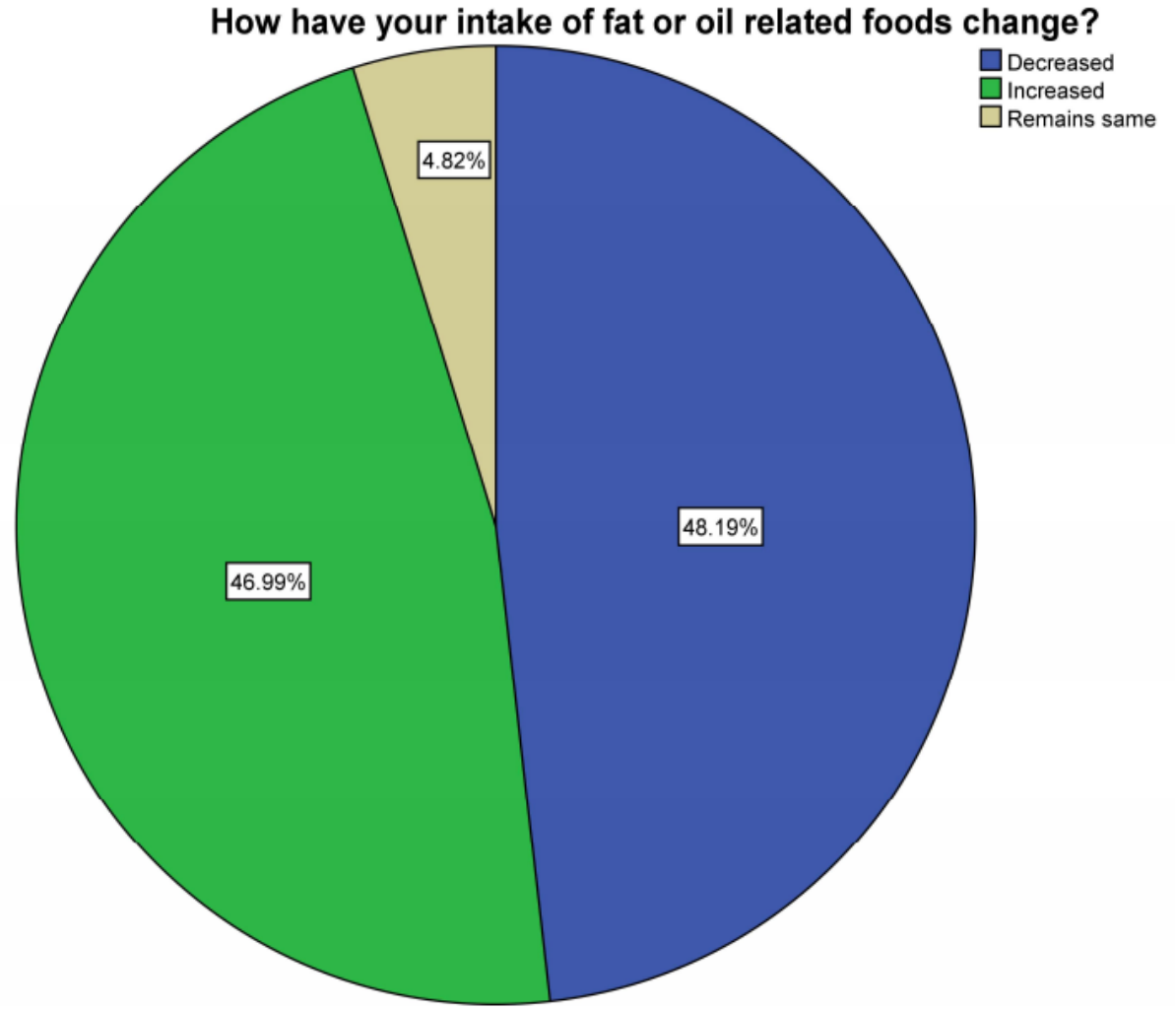


FIGURE-2 Pie chart representing change in intake of fats and oil. Blue colour represents decreased, green represents increased and sandal represents the same. 48.19% opined to a decrease of intake of fat or oil related foods whereas 46.99% responded that the intake of fat or oil related food has increased and it remained the same among 4.82%.

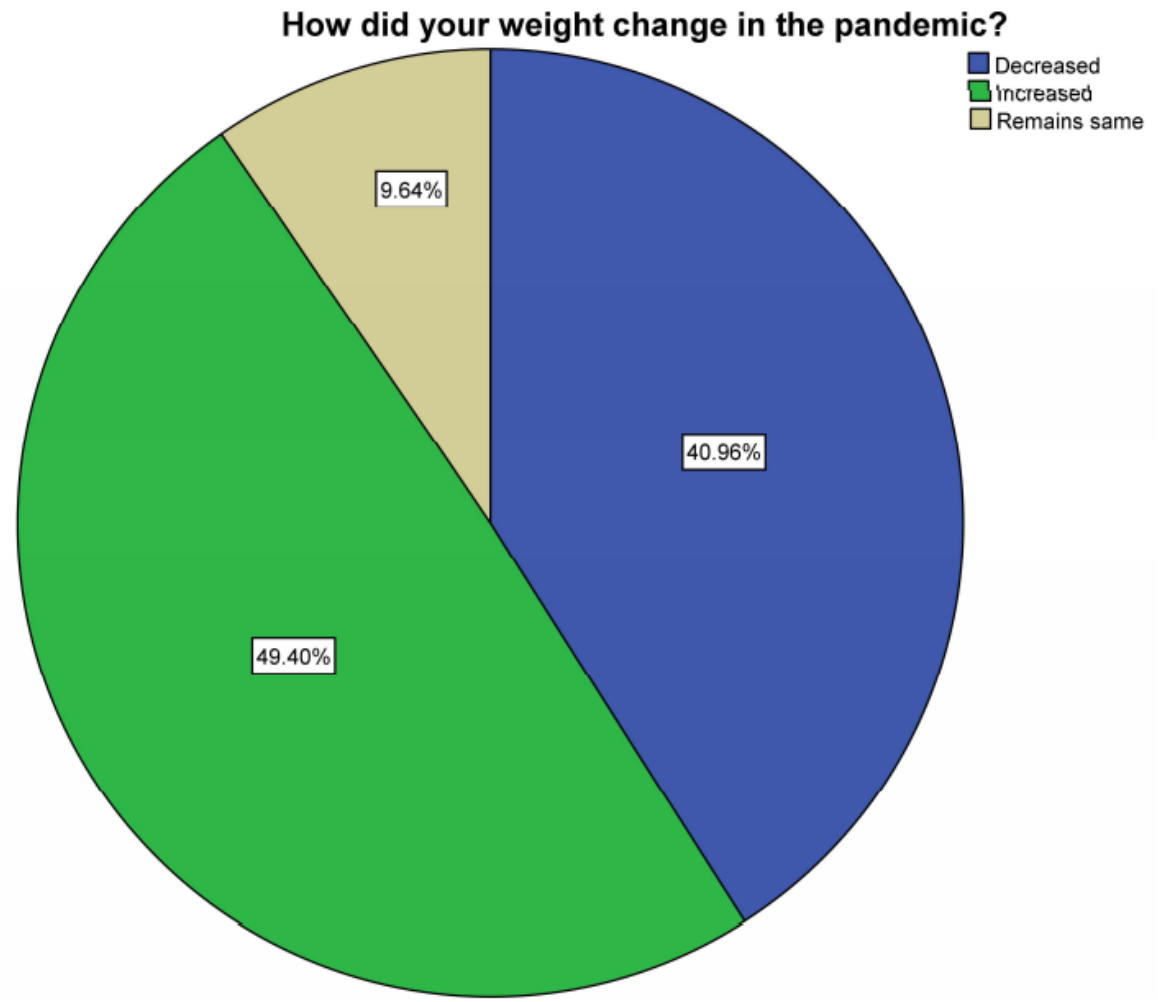


FIGURE-3 Pie chart representing weight change during the pandemic. Blue colour denotes decreased, green denotes increased and sandal denotes unchanged weight. 49.40% of the participants had gained weight, 40.96% of them had lost weight and 9.64% of them had remained the same during the COVID period .

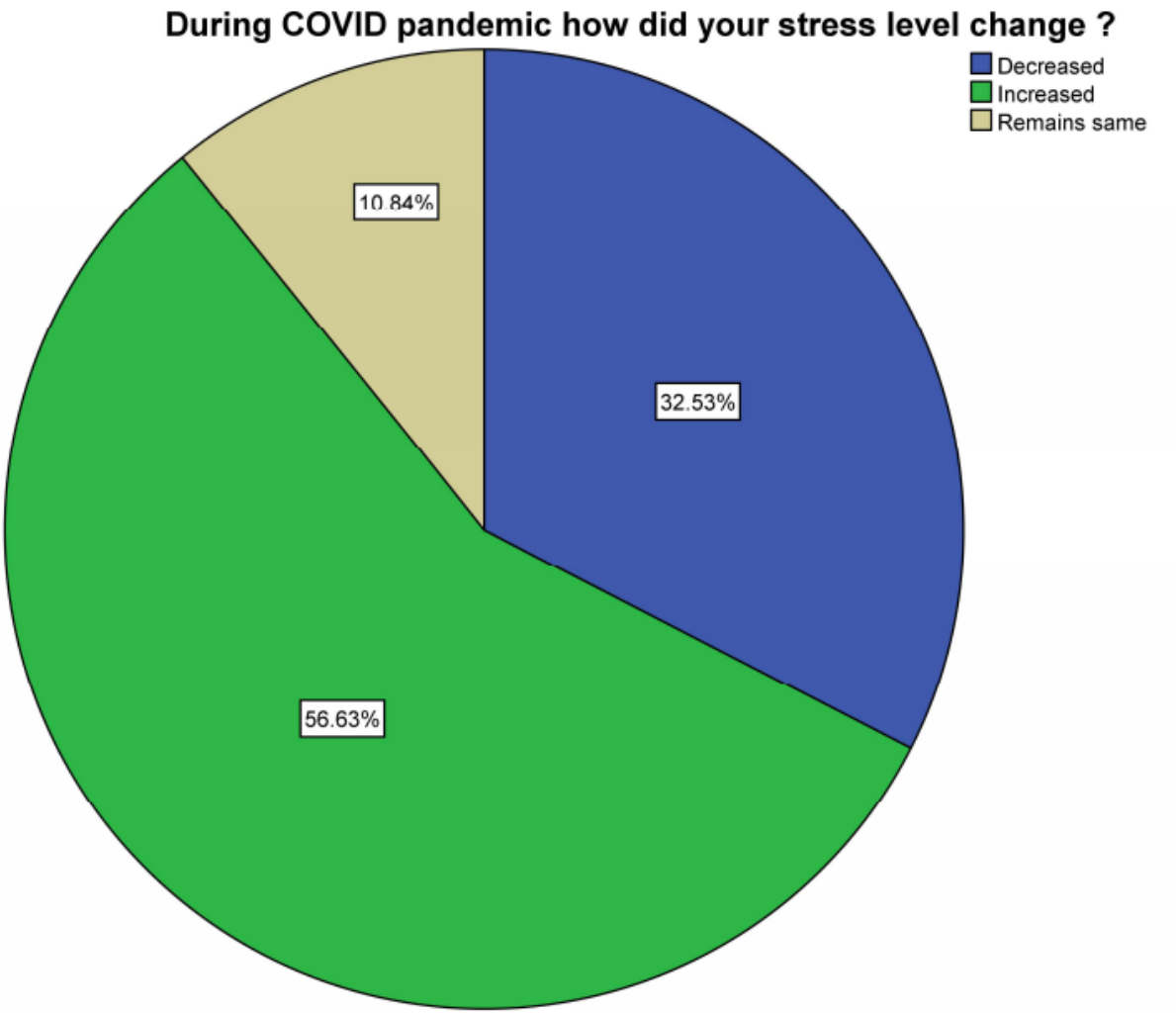


FIGURE-4 Pie chart showing change in stress level. Blue colour represents decreased, green denotes increased and sandal colour represents remains the same. 56.63% of the population responded to the increase in stress level, decreased stress levels were felt among 32.53% of the population and remained the same among 10.84%.

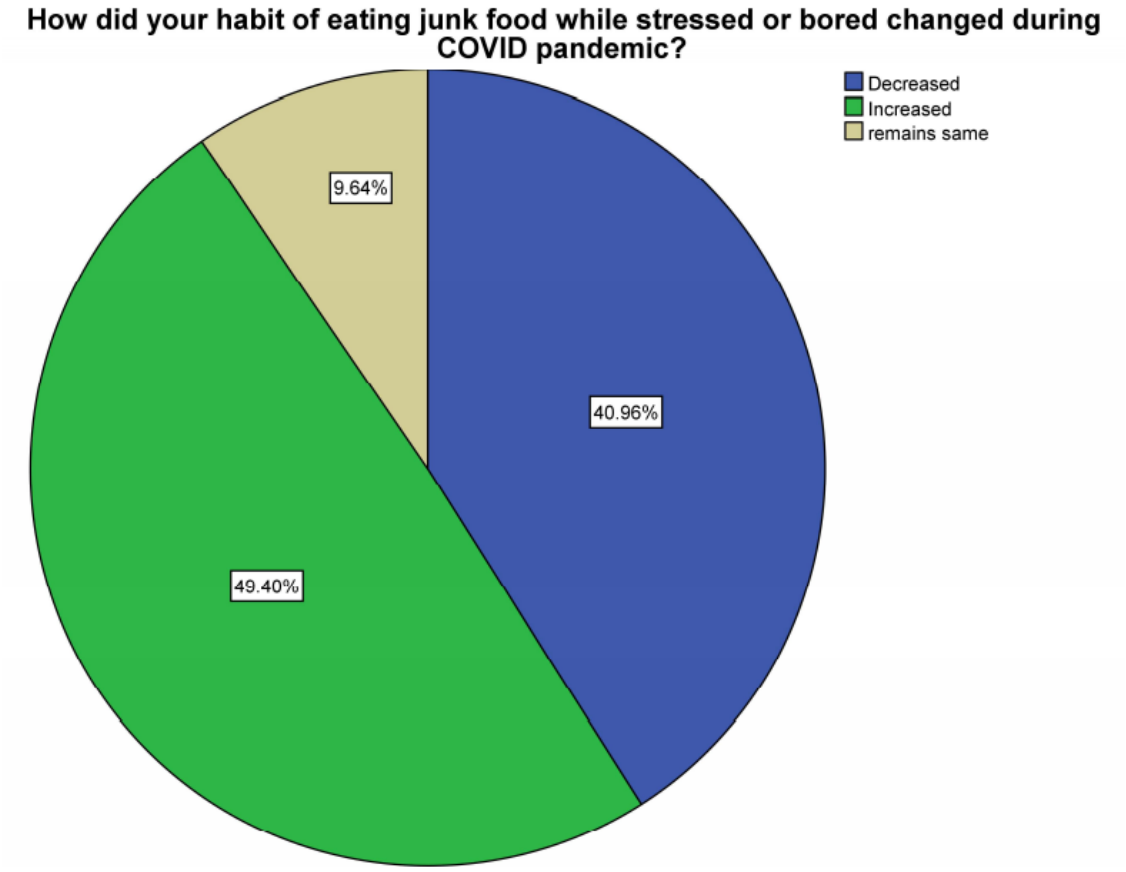


FIGURE-5 Pie chart representing intake of junk food during bored or stressful conditions. Green colour denotes increase, blue denotes decrease and sandal denotes remains the same. More participants responded to stressful or bored conditions with an increase(49.40%) in intake of junk food, while in 40.96% of the population it was decreased and remained the same in 9.64% of the population.

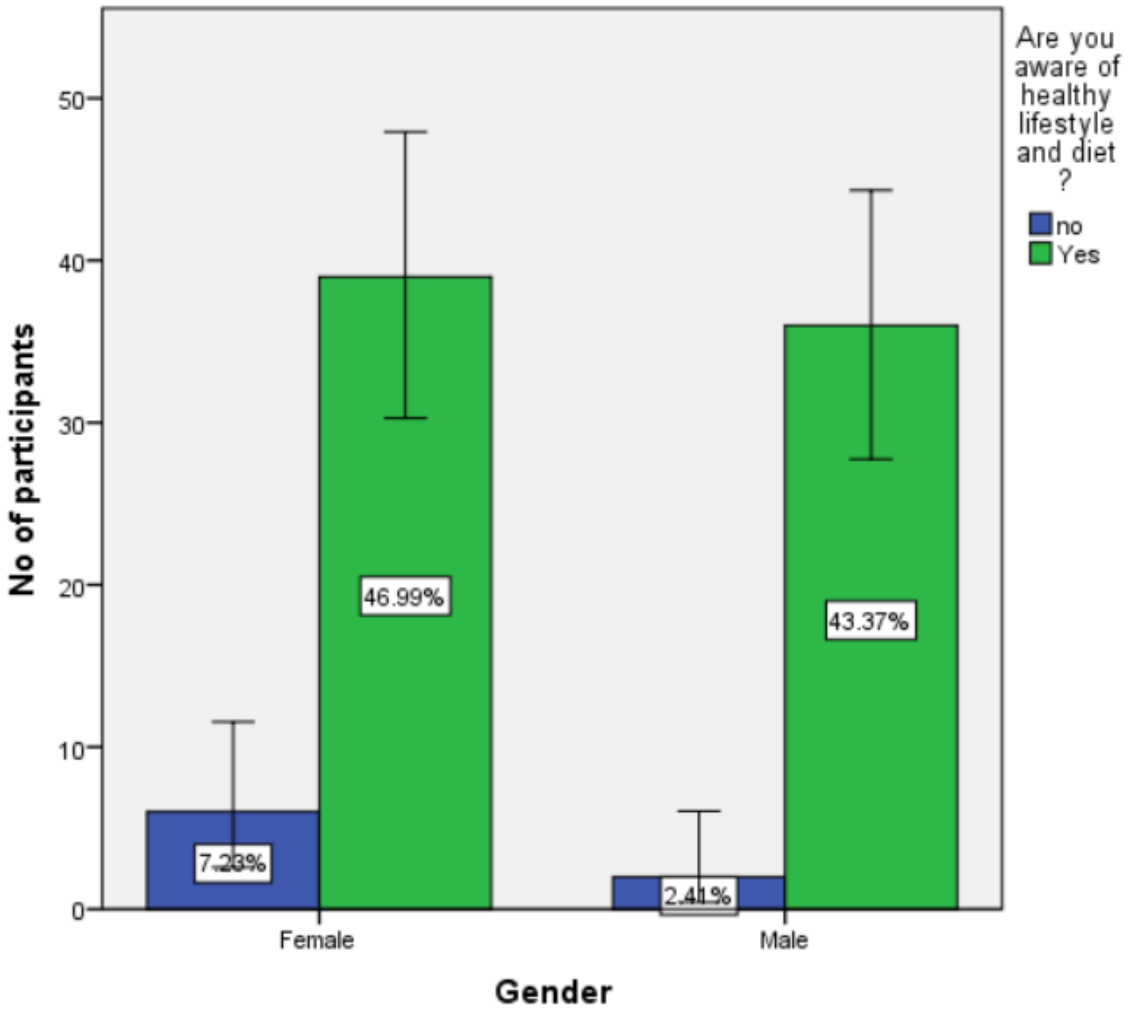


FIGURE-6 Bar graph represents the comparison between awareness levels of male and female participants about healthy lifestyle and diet; X axis represents the gender population and y axis represents the mean percentage value of their awareness. Green denotes absence and blue denotes presence. Males (45%) and females (45%) were aware of healthy lifestyle and diet. Females (3%) and males (7%) were not aware of a healthy food lifestyle. The difference between the groups was not statistically significant (Chi- square, P value = 0.194).

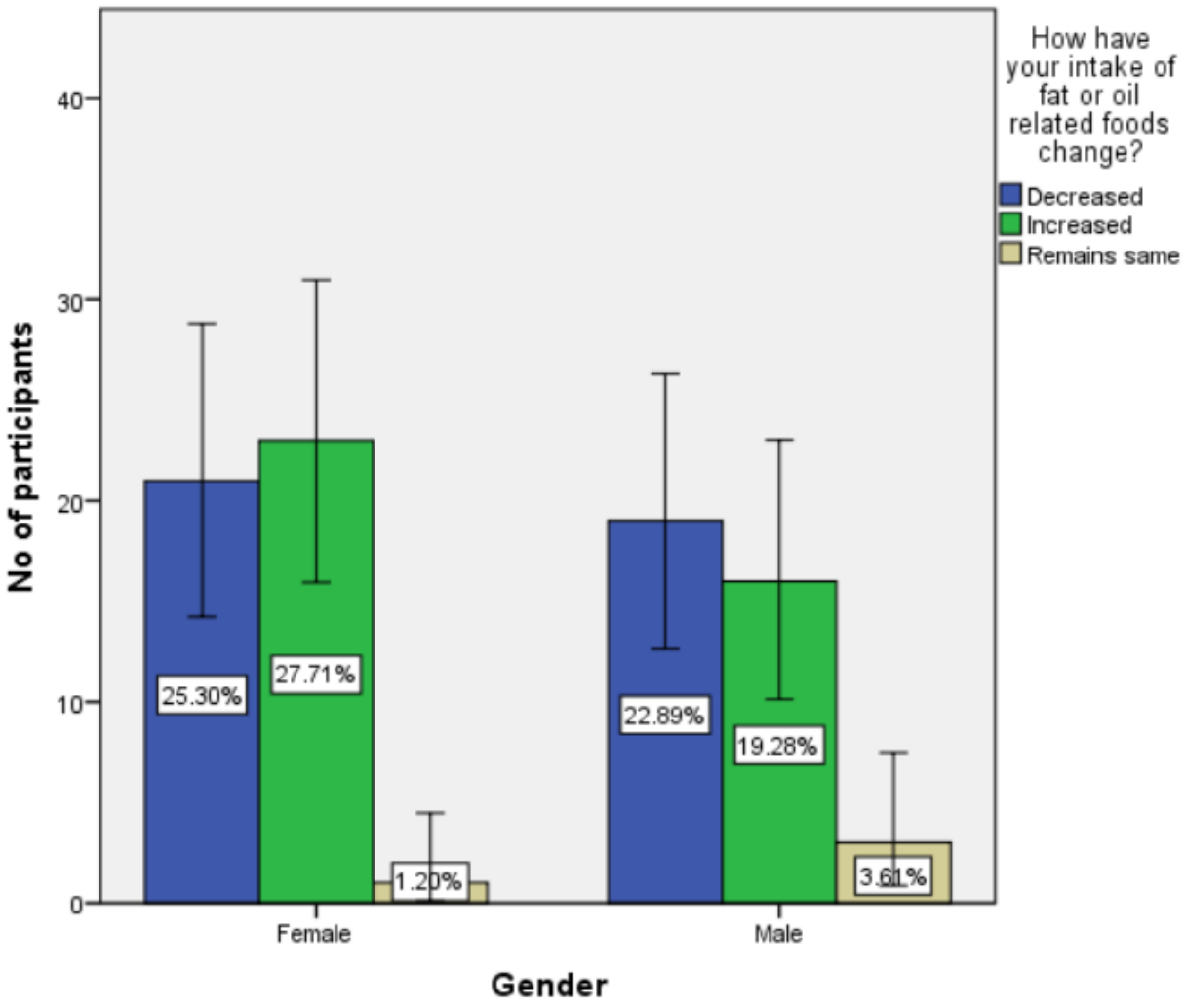


FIGURE-7 Bar graph represents the comparison between intake of oil and fat containing foods among male and females; X axis represents the gender population and Y axis represents the mean percentage value. Green denotes increase, blue denotes decrease and sandal denotes remain the same. Intake of oils and fats related to food was increased in females(27.71%) more than males (19.28%). 25.30% of the study population (females) had decreased intake of fat or oil related foods compared to males which is 22.89%. The P value is 0.378 which is greater than 0.05, hence not significant.

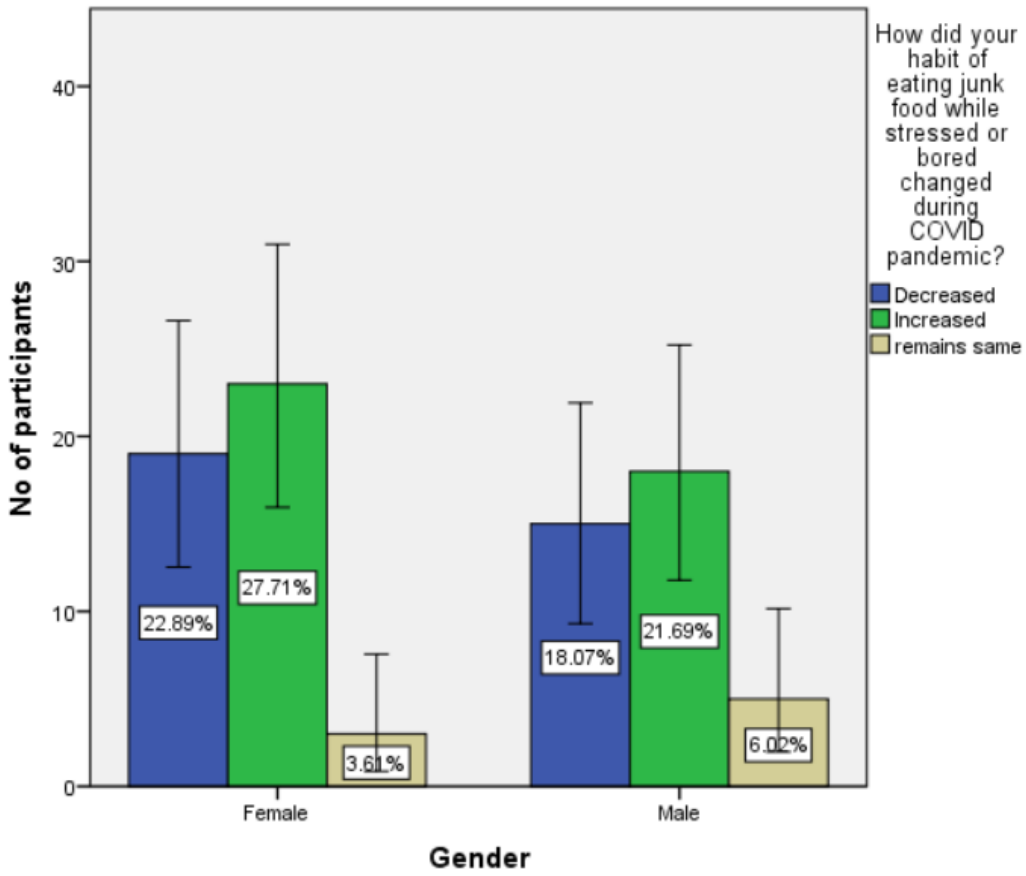
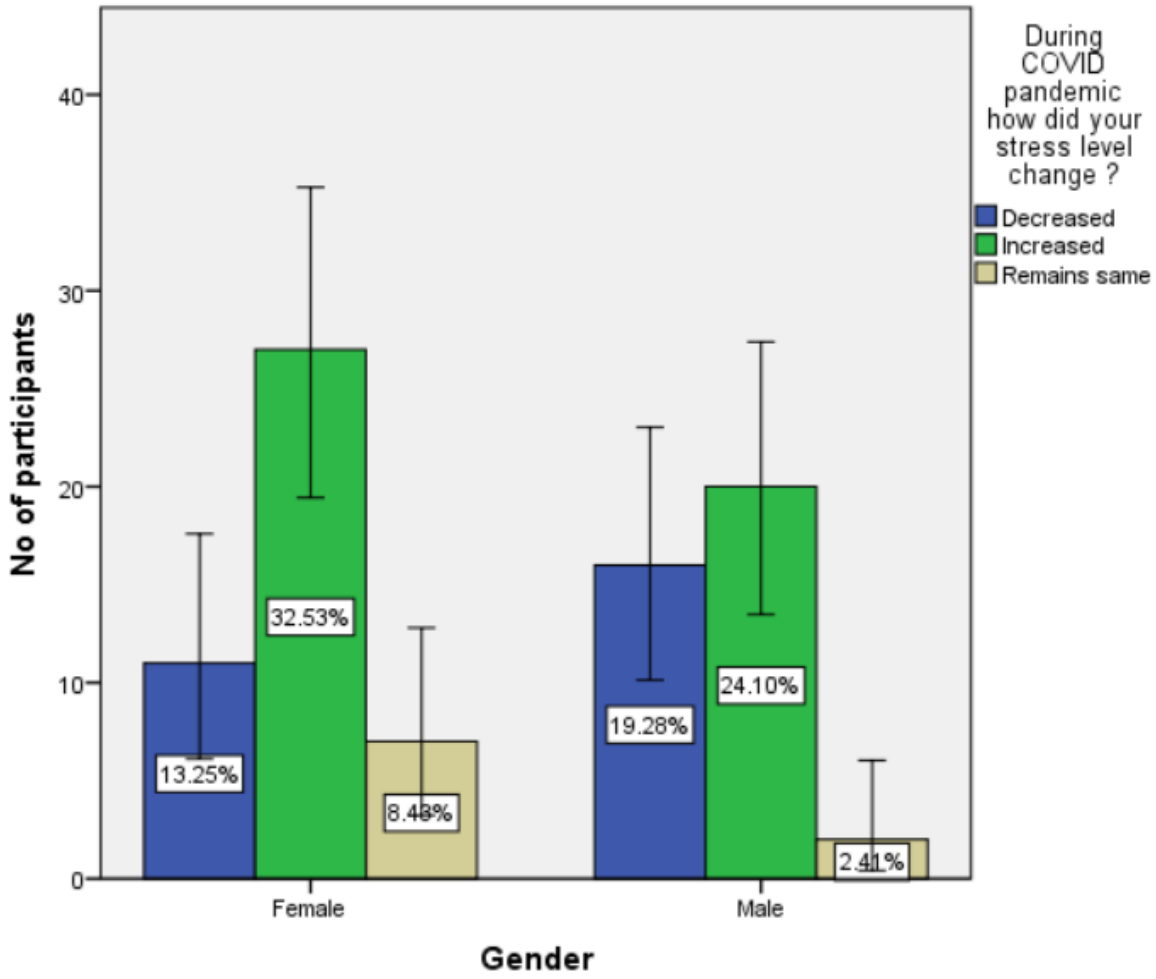


FIGURE-8 Bar graph represents the comparison between habit of eating junk foods among male and females ;X axis represents the gender population and Y axis represents the mean percentage value of habit of eating junk foods .Green colour denotes increase, blue denotes decrease and sandal denotes remains the same. Intake of junk foods during stressed conditions was increased more in females(27.71%) than males (21.69%). The P valve is 0.932 which is greater than 0.05, hence its not significant.



GRAPH-9 Bar graph represents the comparison between change in stress level among male and females;green colour denotes increase, blue denotes decrease and sandal denotes remain the same. X axis represents the gender population and Y axis represents the mean percentage value of change in stress level. Stress level was increased more in females (32.53%) and less in males(24.10%). 13.25% of the females and 19.28% of the males responded with decreased stress

level during covid period. The chi square, P value =0.005, thus statistically significant.

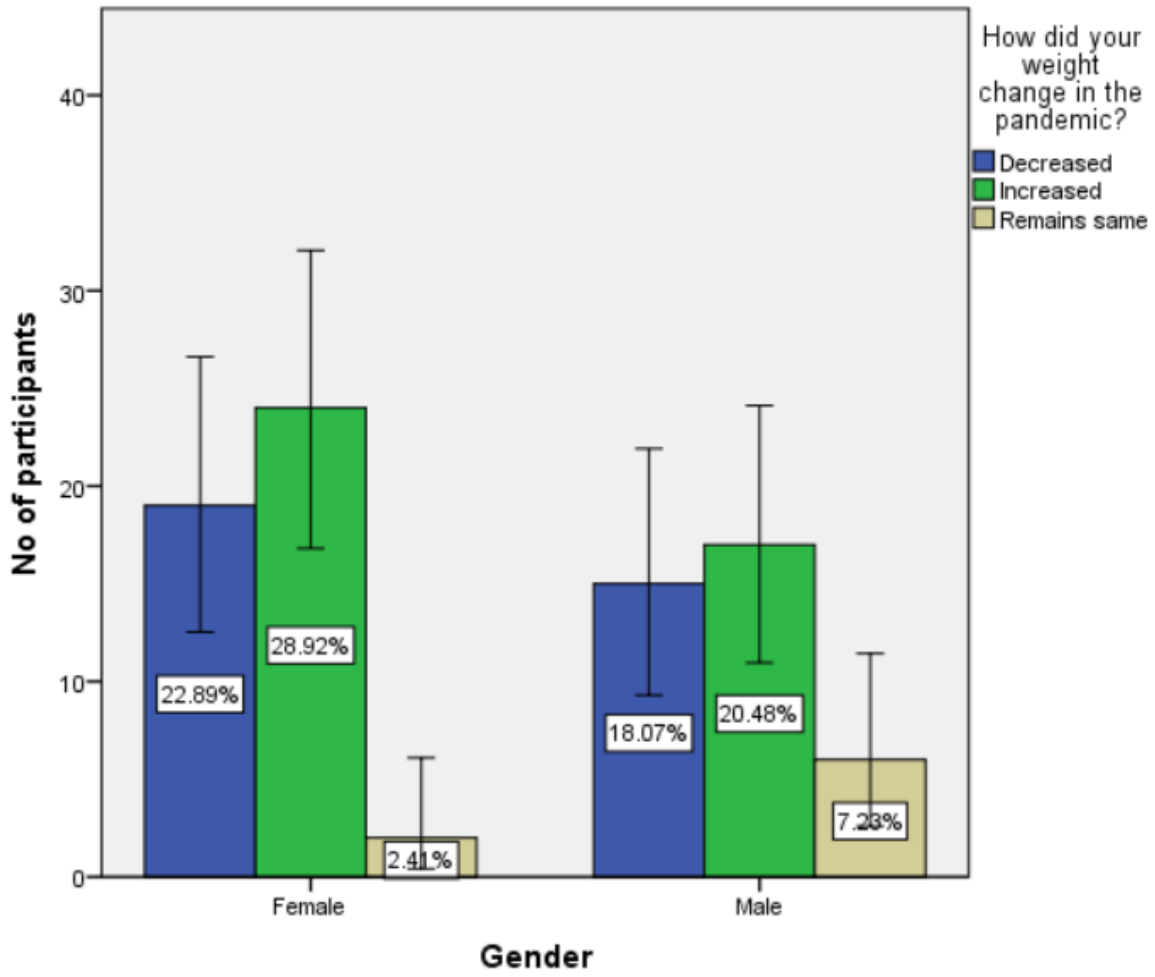


FIGURE-10 Bar graph represents the comparison between weight change among male and females;green colour denotes increase, blue denotes decrease and sandal denotes remain the same. X axis represents the gender population and Y axis represents the mean percentage value of change in weight; Weight was increased more in (28.92%) females than males (20.48%). Females (22.89%) and males (18.07%) responded with a decrease in weight. The P value is 0.169 which is greater than 0.005 hence its not significant.

DISCUSSION:

Maintaining a healthy diet is very important during the COVID-19 pandemic ,while no foods or dietary supplements can prevent COVID-19 infection, maintaining a healthy diet is an important part of supporting a strong immune system. This study produces information about dietary habits and healthy food lifestyle behaviours in the general population during the period of COVID-19. This critical period resulted in not only serious public health consequences, but also severe economic and

social consequences globally. Maintaining a healthy and balanced diet and being physically active are recommended in these difficult times to support the immune system.

More females were aware of healthy food habits than males. Weight was increased more in females. Stress level was increased more in females than in males. In this research it was seen that there was more intake of junk foods(2). Also another survey done on this topic found that increased intake of foods and dietary habits being affected and also an increase of anxiety and stress levels(1). The same was also observed in this research. The survey found an increase in take of snacks and intake of foods during stressful conditions which was also documented in this study(23).

In another research adults were reported with gain in weight, also lacking sleep, eating in response to stress was seen. In another research, people who have suspended their usual jobs had a greater perception of increased weight(24). Intake of food between meals was increased more during this covid pandemic as found by many researchers(25). Stress level was increased which is documented in this study. Due to an increase in stress level, more intake of junk food was seen. As was seen in figure-4 it shows the increase of stress level and figure-5 shows an increase in intake of junk foods during stressed conditions which is an unfortunate aftermath of Covid 19 pandemic situation(23). In another research, a perception of weight gain was observed in 48.6% of the population; 3.3% of smokers decided to quit smoking; a slight increased physical activity has been reported, especially for bodyweight training, in 38.3% of respondents; the population group aged 18-30 years resulted in having a higher adherence to the Mediterranean diet when compared to the younger and the elderly population(26).

FUTURE SCOPE:

This study was done on a small scale population, hence should be repeated at periodic intervals to confirm a trend in the population. Also covid-19 has still not abated; therefore any such trend which is confirmed or considered probable needs investigation and preventive measures for the better health of the general population .

CONCLUSION:

The overall awareness of the study participants was good. It was found that intake of junk foods, stress was increased especially in females during covid pandemic which shows that covid pandemic had a negative effect on a healthy diet and lifestyle. It also had ill effects on the mental health of the people.This needs further investigation at a larger scale in a prospective manner.

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CONFLICT OF INTEREST:

All the authors declare that there was no conflict of interest in present study.

AUTHORS CONTRIBUTION:

S.Jeswin Immanuel: literature search, data collection, analysis, manuscript drafting.

Dr. Gheena S, Dr. Sandhya :Data verification, manuscript drafting.

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