



SURVEY ON EFFECT OF LOCKDOWN ON DIETARY INTAKE AND NUTRITIONAL STATUS AMONG FEMALE COLLEGE STUDENTS

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ABSTRACT Situation of COVID 19 pandemic and its widespread resulted in the restriction of people's lifestyle to stay at home. Lockdown during COVID 19 has greatly impacted the life of the people physically as well as mentally. It immensely changed the lifestyle, dietary intake and nutritional status of the people. An online survey was conducted through Google forms to assess the effect of lockdown on dietary intake and nutritional status of the college going students. The sample size was 134 and the subjects were chosen from Lucknow, Uttar Pradesh. COVID 19 pandemic left a scar in almost everyone's life. Apart from the disease Lockdown was another drastic unexpected thing to happen during this period. From the study it was concluded that Lockdown has changed the life of the people. For some people it was in the positive side and for some it was negative. People's sleep time as well as duration both changed during lockdown. Very few were gym person and mainly focused on healthy balanced diet including fruits, vegetable, egg, cereals and pulses for their body. We have also noticed that their hygiene and sanitation condition improved with the awareness of COVID 19. People are focusing more on immune booster foods with proper meal timings and healthy diet. Still due to more of sedentary lifestyle and less physical exercise, people have experienced change in weight, out of which more people are observed with increased in their body weight.

KEYWORDS : COVID 19, Lockdown, SARS-CoV-2, Physical Activity and Diet

Introduction:

COVID-19 is recently identified infectious disease caused by corona virus. [1,2] The first episode of COVID-19 was discovered in late December 2019, prompting investigators to learn more about the virus. SARS-CoV-2 was found in samples collected from a commercial fish marketplace in Wuhan City, China. Maximum cases comprised of merchants, shopkeepers, or frequent visitors. On 1 January 2020, market was closed and fully cleaned, sanitized and disinfected. [3]

Previously, people who were infected with the Corona virus, developed ranges of respiratory problems and resolved without requiring any special treatment, but this was no longer the case with the COVID-19 outbreak's second wave. People over 65, and those with health issues like cardiovascular diseases, diabetes, lung problems, etc are more likely to develop serious illness. [4] Health Care workers are at a higher risk of acquiring Covid infection as they are working at the frontline of the pandemic by taking care of Covid patients. [5,6]

The COVID-19 virus is spread mostly by the nasal or salivary discharge resulting from cough or sneeze from an infected person. People can protect themselves and others against illness by handwashing or using alcohol-based sanitizer on a regular basis and without touching their faces. [7] For the prevention and treatment of COVID-19, anti-viral drug such as Ivermectin has also been introduced in Indian settings. [8,9]

EFFECTS OF PANDEMIC

As of July 9, 2021, there are reports of 185,291,530 verified COVID-19 cases, with around 4 million casualties. [10] Millions of people are at danger of going into severe poverty, and the population of malnourished people could climb to 132 million over the course of year. Approximately, from among 3.3 billion employed people around the globe, half of the employees are facing job losses. According to a WHO study dated October 13, 2020, the outbreak has claimed many lives around the world and poses an unprecedented risk to the public, food security and the occupational safety. [4] Additionally, many protocols and approaches for treating remote places have been developed throughout the last two years of the Covid-19 outbreak. [11]

These findings raise some concerns, especially because many respondents reported eating more food, gaining more weight, and

exercising less as a result of the lack of outside and gymnasium physical exercise. During the lockdown, however, the results showed a stronger commitment to the Mediterranean Diet (MedDiet), [12] which consist of fruits and vegetables, seeds, pulses and cereals and avoiding sweetened drinks, artificial sweeteners and other processed foods with little intake of Red meat, trans fat, refined grains and oil. [13] Many studies have revealed that aspects of the Mediterranean diet are linked to better long term health. Mediterranean dishes and foods can be paired to assist people meet their USDA-DRI caloric, macronutrient (fat, carbohydrate, protein, and fibre), and mineral requirements (iron, calcium, sodium, and potassium). [14]

The fight against Covid-19 also had a significant impact on healthcare professionals as well. More than 1500 modern medicine doctors and numerous other healthcare professionals gave their lives while performing their duties to care for Covid patients, and many experienced psychological stress as a result of the pandemic. [15,16]

HEALTHAND COVID PANDEMIC

Lockdown was imposed around the world to control the spread of the COVID -19 pandemic, marked by restricted movement and social distance with the "Stay Home" policy. People who are concerned about their mental health may be persuaded to use social networking sites or video conferencing to communicate with family and loved ones they cannot meet in person right now. People's access to healthcare and everyday life routines have been drastically altered as a result of the COVID-19 lockout & social isolation, [17] and since due to the Covid-19 pandemic, the government struggled to control the virus from spreading leading to lockdown in phases. [18] While there has been evidence of the pandemic's negative influence on mental wellbeing, healthy practices, physical activity, and food, much of this research has focused on the general public. [19]

Lockdown diets have been linked to an increased chance of acquiring obesity and cardiovascular illnesses, as well as an increased incidence of COVID-19 related catastrophic consequences. Although the lockdown limits help to 'flatten the curve,' they also have drawbacks like increased stress, decreased physical activity, and lack of availability and access to healthful foods and services. People who consume a well-balanced diet are healthier and have a lesser risk of obesity and its problems. Furthermore, lockdown-related tension and

anxiety have the potential to promote compensatory hyperphagia, in which increased calorie intake results from carbohydrate cravings, creating a deadly vicious cycle. [20]

Staying and working from home might have an impact on one's nutrition, food choices, food availability, limiting one's ability to engage in physical exercise. The physical activity of the Sicilian population, was shown to be severely influenced by quarantine, particularly in men, obese people, adults and geriatrics. Obesity along with insufficient physical activity paired with increased screen timing of around 3-4 hours was recognized as major health concerns prior to the pandemic. Plant based foods like fruits, vegetables and legumes, good fats and diet rich in protein & low in unhealthy fat combined with appropriate exercise, can help in fighting the infectious disease such as COVID [21]. In addition to this, adding a pinch of taste and flavour in the form of spices such as cinnamon, oregano, bay leaf, parsley, etc not only boost immunity but also play vital role against viral infections including COVID-19. [22]

There has been few research on the impact of lockdown on people's lifestyle and dietary choices. Lockdown during Covid 19 had both positive as well as negative effect on the health and nutritional status of people. It completely changed the lifestyle of people specially the college going young girls. Following the COVID-19 pandemic lockdown, it has become very important to maintain good health and dietary habit along with the sanitation practices. Thus, the purpose of this study was to see how the lockdown affected the dietary intake as well as nutritional status among female college students and how does it changed their lifestyle and eating habit and its effect on their health in Lucknow.

Materials and Methods:

An online survey was conducted on effect of lockdown on dietary intake and nutritional status. It was made on Google form platform and link was shared through Whatsapp, Facebook and Email account to the selected sample group. The sample size was 134 and the subjects were chosen from Uttar Pradesh. People who volunteered were sent a self administered questionnaire which contained a set of questions related to dietary intake and change in nutritional status during lockdown in COVID 19 pandemic.

Questionnaire was chosen as the tool for survey and questions in the questionnaire were both of open as well as close ended type and the students were expected to mark the point which they felt was the right answer to the best of their knowledge and experiences. The results are given as percentage and frequency. Questions were related to the changes in their lifestyle like sleep, meal timing and dietary habit prior and post lockdown period including gym concept, and changes in sanitation and hygiene practices

Result and Discussion:

The survey was for college going girls who were experiencing the lockdown. Out of all participants, maximum (81%) were from Middle income group, 12% from lower income and the least 7% were from High income group.

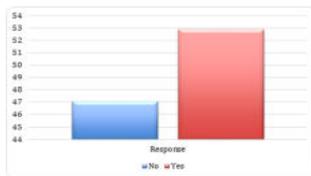


Figure 1: Satisfied with Lockdown Life

The present study, in figure 1 shows that the majority of participants (52.9%) were satisfied with the lockdown and 47.1% were not satisfied with lockdown life. Maximum number of people experienced change in their sleep time as well as sleep duration, which increased from normal time. Continuing exercise during lockdown was big issue and necessity during lockdown.

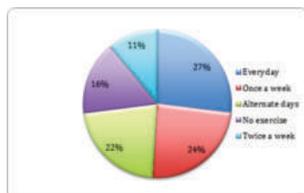


Figure 2: Exercise per week

In the study, wide variety in the frequency of exercising per week can be seen by the people during lockdown. It was observed that 27% people were exercising everyday, 22% on alternate days, 11% twice a week, 24% once a week and 16% were doing no exercise at all. It was found that out of total number of people, maximum participants (96%) were not gym people while only 4% were gym person [as shown in figure 2]. It was found that those who were gym person, it was difficult for them to manage gym diet at home. Maximum numbers of people were going for normal healthy and nutritious diet with increased intake of protein at home. Few of them prefer yoga and exercise over gym. Some people just try to avoid high sugar diet and oily foods and prefer some affordable protein supplements. During lockdown, maximum numbers of people were concerned about change in their weight. One person said that she was working out with her trainer online but it was tough to follow the diet. Problems encountered that sometimes ingredients were not available and other times due to staying at home she consumed more calories. All classes of people faced this issue may it be a labor class people, field worker or an office going person.

A study was conducted to know the impact of the lockdown on people's weight. Through this research, in figure 3, it was found that 47% of people observed no change in their weight, 41% people gained weight, 11% even observed the weight loss and 1% people were there who were unknown about any changes. Hence, we can clearly see the changes in weight of the people and hence the impact of the lockdown on people.

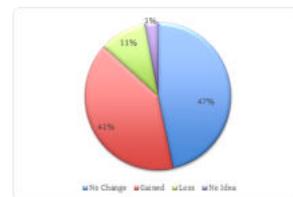


Figure 3: Change in weight during lockdown

During lockdown, school, childcare centers, markets and malls were all closed and many people faced difficulty in getting access to basic necessities. It was found that 71% people experienced change in their eating habit, while in 29% people no change was found. 65% people increased their food variation as spare time gave them opportunity to cook varieties of food and pass their time in home. Nutrition and food quality during lockdown was improved for 84% of people as they developed more concern about their health and 16% people deteriorated their food quality. 76% people voted for feeling much healthier during the lockdown because of their improved habits and concern for their health. 24% people were feeling weak and depressed during the same time period.



Figure 4: Increased hygiene practices

During lockdown people brought many changes within themselves in their lifestyle. Some developed habit of frequent handwashing, sanitizing hand, wearing masks and many others. People were asked whether focusing more on hygiene than before and as expected, result was 93% people were following the good hygiene practices [as shown in figure 4]. Before the pandemic, people were not in the habit of sanitizing the food packages bought from the market but after this pandemic 68% people developed habit of sanitizing food packages after lockdown, 31% were having this habit from before and 6% people felt there was no need for that. Even before lockdown 76% people used to wash vegetable and fruits bought from market before consuming it. 22% people developed this habit later seeing the increasing cases of the covid-19 and its mode of spreading and 2% were on the favour of no need of such practices. Only 31% were in habit of sanitizing hands before lockdown which they continued and rest developed this habit later.

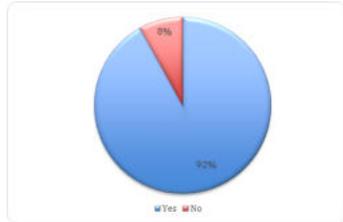


Figure 5: Preference of Immunity Boosters

Good immune system protects person from pathogenic organisms like bacteria, fungi, virus and so on [23]. Hence, it was suggested worldwide to improve the immunity of an individual by taking immune booster food items, minerals and vitamins and specially the vitamin C. On surveying about how people are reacting towards this, it was observed that 92% people were including immune booster items in their diet and 8% were ignorant towards this fact [as shown in figure 5]. Along with exercise, diet was another factor which became necessity for healthy living during the pandemic. On asking people about diet intake and proper meal timing, maximum population i.e. 79% people said that they follow correct diet and 21% people said that as such no diet or meal timing was followed during lockdown. It was asked from people that during this pandemic where one of the vulnerable group was old aged people, did people took good care of old age member of their family or provided with some extra care and their response was very positive. It was observed that, seeing the situation 93% people took good care of elder members of their family.

Conclusion:

COVID 19 pandemic left a scar in almost everyone's life. Apart from the disease Lockdown was another drastic unexpected thing to happen during this period. From the study it was concluded that Lockdown has changed the life of the people. For some people it was in the positive side and for some it was negative. People sleep time as well as duration both changed during lockdown. Very few were gym person and mainly focused on healthy balanced diet including fruits, vegetable, egg, cereals and pulses for their body. We have also noticed that their hygiene and sanitation condition improved with the awareness of COVID 19. People are focusing more on immune booster food with proper meal timing and healthy diet. Still due to more of sedentary lifestyle and less physical exercise, people have experienced change in weight, out of which more people are observed with increase in their body weight.

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