

Changes in snacking behaviour during lockdown and its impact on health in adolescents and adults

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Abstract: **Background :** Snacks are small amounts of food generally consumed between meals that gives us instant energy. This is now being consumed in large amounts by most of the individuals. Choosing the right type and amount of snacks is very important as selecting the wrong one can lead to various health complications. **Aim :** To evaluate the snacking patterns among adolescents and adults and its effect on health. **Objective :** To understand the snacking characteristics and patterns, To examine the snacking changes during lockdown among the selected population, To examine the effects of snacking on health and how it affects the BMI. **Materials and Methodology :** This study was conducted through online survey. A google form questionnaire was circulated via social media. Eligible participants were individuals aged 11-45 years. The target sample was 75 and the achieved sample was 176. **Results and Discussion :** The outcome of our study states that though the snacking behavior of individuals has not changed a lot, most of them are now health conscious and had changed their snacking pattern in a healthy manner. **Conclusion :** Snacking in between meals is considered good for our body. It is the frequency and the type of snack that determines the snacking effects on our health.

Key Words: Adolescents, Dietary Quality, Lockdown, Snacking, Weight Status.

1. INTRODUCTION:

Adolescence is a transitional period in the life cycle characterized by physical, social, and development changes that influence health and eating behaviour. During this period, rapid growth and dramatic physical changes create increased demand for nutrients and energy[1]. Adults are those who have completed the growth stage and come under the age category of 21-45. Snacking is often defined as consuming a food or drink between regular meals[2]. Healthy snacks are those that contain the recommended nutrients and are low in fats, sugars, and salt content. Unhealthy snacks are those that are high in energy, sugar, and salt and low in nutrients. The snacking time is also important and does have an impact on our health. Late-night snacking resulted in significantly reduced lipid oxidation compared to breakfast sessions[3]. Irregular snacking behaviour poses extreme risks to the health of children and adolescents including cardiovascular, neurological, and metabolic complications[4]. Children who are obese are at an increased risk of high blood pressure and other adverse cardiometabolic conditions and an increased risk of chronic diseases such as type 2 diabetes and cardiovascular disease during adulthood[5]. Most snacks consumed by children are highly-processed and high in salt, fat or sugar, and snacking on such foods is associated with increased energy intake, poor nutrient intake and weight gain[6]. Snacking behaviours may result in skipping of regular meals, especially with high frequency, increasing the risk of malnutrition and this in any form during adolescence can have permanent consequences on health[7]. Snacking is also commonly associated with undesirable health outcomes and dietary patterns. The increasing prevalence of snacking has been suggested as a potentially important influence on energy regulation in adolescents and adults[8]. Many of the snacks consumed by adolescents are high in energy density yet low in nutrient density, a pattern often associated with increased risk of obesity and cardiovascular disease[9]. Snacking behaviours are important to consider as a component of dietary counselling and public health strategies targeting the problems of[10]. Quarantine being mandatory resulted in a change in lifestyle of people all over the world including a change in eating habit. There has been a decrease in consumption of fresh fruits and vegetables owing to limited access to daily shopping, whereas on the other, stockpiling of non-perishable food items due to fear of unavailability may have resulted in consumption of high calorie foods[11].

2. MATERIALS AND METHODOLOGY:

A rapid assessment survey was conducted using Google forms. Google forms was distributed through various social media platforms such as Whatsapp and Instagram among residents of India. The study included participants under the age category of 11-45 years. The data collected from the 176 participants (96 adults and 80 adolescents; 58 males and 118 females) is presented in the study. Information regarding gender and age was collected using pre-structured questionnaire. The mean age of adults in the study was 25 and that of adolescents was 17.5. Snacking pattern before and after lockdown was assessed using pre-structured questionnaire. Data regarding change in snack

consumption, frequency of consumption of store-bought snacks and reasons for change in snacking behaviour during lockdown was assessed. The pre-structured list of beverages and snacking choices was used to assess intake during and after lockdown. Analysis was performed using the results from Google forms. The difference in number of meals and frequency of consumption of store-bought snacks before and after lockdown was assessed using the pie-charts from results in Google forms.

3. RESULT AND DISCUSSION:

This study mainly focused on the snacking behavior of adolescents and adults (11-45 yrs). Their snacking pattern was determined and then the changes that they brought during the Covid-19 lockdown was also studied. Among the 176 samples collected, 67% participants were female (118) and the rest 33% participants were male (58). Mean and standard deviation (std) of the age groups are given below

Table 3.1: Mean ± SD of Different Age Group :

Age Group (Yrs)	Participants	Mean	Std
11 – 15	3 (1.7%)	13	1.58
16 – 19	77 (43.8%)	17.5	1.29
20 – 30	91 (51.7%)	25	3.31
31 - 45	5 (2.8%)	38	4.47

3.1 SNACKING OPTIONS: Out of 176 participants, 74.4% of them included chips and cookies under their snack category while 14.8% of them considered fruits and peanut/sesame balls as their snacks. Among the rest, 9.1% participants mentioned dry fruits & nuts and 1.7% of them selected beverages as their snacks.

68.2% of the participants had switched to homemade snacks during the lockdown, while the rest 31.8% of the them remained unchanged.

3.2. SNACK TIMING: About 77.8% of the participants preferred to have their snacks in the evening (5-6pm). Out of the total participants, 22 of them i.e., 12.5% of them had opted Mid – afternoon (2-4pm) as their snacking time and 5.1% of them had selected late night (11pm-12am). The rest 4.5% participants had selected their snacking time as afternoon (11am-12pm). Nearly 54% of the participants consumed snacks while watching television and 27.8% of them consumed snacks while hanging out with their friends. Consumption of snacks by 13.6% of the participants were during binge-watching and the remaining 4.5% participants consumed their snacks during get-together or family functions.

3.3. FREQUENCY OF SNACKING: 42% of the participants consumed 1 cup of snacks nearly on a regular basis and 31.8% of them consumed ½ cup of snacks. The remaining 26.1% participants consumed only 100g of snacks regularly.

3.4. SNACKING PREFERENCES: Almost 80.7% of the participants’ choice of snacks was taste. 15.3% of them chose their snacks based on its health effects/nutritional value and 2.8% participants went with the tradition to choose their snacks. Only 1.1% of participants had opted cost as a base for selecting their snacks. There was a change in the snacking frequency before and after lockdown among the participants. Percentage of participants who always consumed snacks changed from 11.4% to 19.3%, while people who consumed snacks often changed from 24.4% to 32.4%. There was a reduction from 51.7% to 39.2% among the participants who consumed snacks sometimes and also from 12.5% to 9.1% among the participants who rarely consumed snacks.

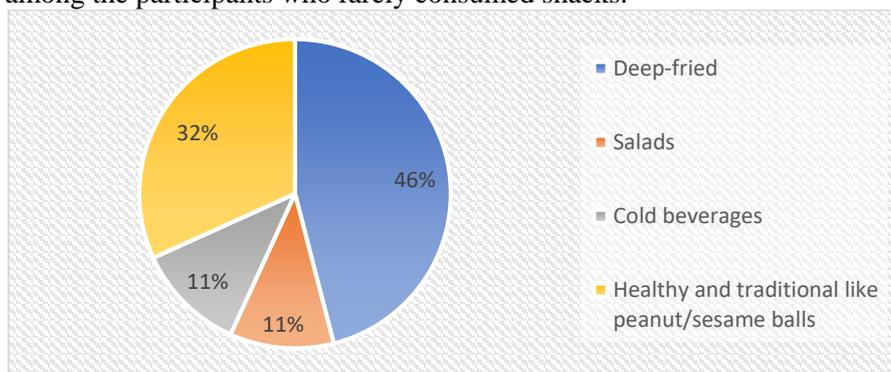


Figure 3.1 : HOMEMADE SNACKS PREFERRED (N = 176) :

Under homemade snacks, 46% of the participants opted for deep-fried, 32% of them opted healthy and traditional snacks, 11% of them opted salads and the rest 11% opted for cold beverages. In the case of beverages, 62.5% of the total participants considered it as a snack while the remaining 37.5% was not ready to accept beverage as a snack.

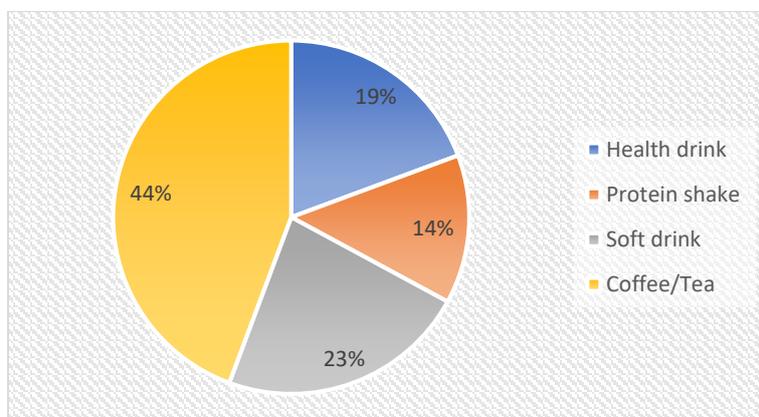


Figure 3.2 : DIFFERENT KIND OF BEVERAGES (N = 176) :

Among the different kind of beverages, 44% of the participants selected coffee/tea, 23% of them opted soft drinks, 19% of them opted health drink and the rest 14% of them went with protein shake. When the participants were questioned about skipping a meal, 57.4% of them answered sometimes while 34.1% of participants had never skipped their meal. The rest 8.5% of the participants had skipped their meal most of the time because of snacking. For the question based on snacking and body weight relation, 77.3% of the participants believed that snacks do have an effect on body weight while the rest 22.7% of them did not think so. At last, when the participants were asked about compromising on snacks for a healthy body, 83% of them said they can compromise while the other 17% of the participants refused to do so. On the other hand, when the question was reversed and asked whether participants can compromise on health to have tasty snacks, 37.5% of them said that they would compromise. The rest 62.5%, who were health conscious said that they would not compromise on health for the sake of tasty snacks.

4. CONCLUSION:

The aim of our study was to evaluate the snacking patterns among children and adolescents and its effects on health. It also helped us to understand the changes in the snacking patterns of individuals, especially, during the lockdown. This helped us in understanding people's mind towards health. The outcome of our study states that snacking habit do come under a balanced diet. When a person plans his balanced diet, intake of snacks should be noted for sure. When it comes to snacking after lockdown, there is an evident change in the snacking pattern. People have become more conscious and started the practice of including fruits and other healthier snack options in their daily lifestyle. Snacking do have an effect on our health but the type and frequency are the deciding factors of it being positive or negative.

5. ACKNOWLEDGEMENT:

Sincere thanks to professor S.P. Abirami and the department of Food Science for helping out in this research and there was no sponsorship involved.

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