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The effect of COVID waves on dietary transformation among college going girls

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Abstract

After the hit of COVID 19 the scenario of the world has been changed in all aspects. Mostly the students are affected, which is a major concern for the future of a nation. Whether it is study, education, areas like physical, motor, social, lifestyle or eating habits, they have gone through a vast transformation both physically and mentally during this period. All the three waves have created their own significance and panic among the people and students as well. The third wave was not that much fatal but there are many changes occur in terms of knowledge, attitude and practices of the students in dietary and food habits. So, the following study is about a comparative analysis based on Food and Dietary usuals of the students.

Objective: To find and compare the knowledge, attitude and practices of the students in terms of dietary and food habits during the COVID waves.

Methodology applied: Randomly 45 students between the age group 18-22 years were selected. A structured online questionnaire was given for the data collection on dietary habits during three COVID waves based on Knowledge, Attitude and Practices with a comparative analysis in the three waves. For the analysis statistical tools mean, regression has been used.

Result: Based on the study in the first wave students were bit not systematic in dietary terms but more inclined towards immunity, in the last wave were again lean towards the unhealthy junk foods. But during these three waves they learn about different nutrients, specifically immunity building foods and nutrients. They are now more interested in Nutrition related information, enjoying the outside food but still are regular and particular about health nutritional aspects of food.

Future implications: Above study encourages for different Nutrition education programs so that the young generation could be sensitized and also projects the development of easy and instant nutritious recipes for the target group for concentrated source of nutrients, specifically micronutrients.

Keywords: Food habits, dietary usuals, social media, immunity oriented food

Introduction

College going girls are the creative innovators and are as active citizens of a nation, they play major role in sustainable development. This section of the population needs to be motivated, harnessed and streamlined properly to bring rapid progress for a country (Youth in India, 2017). Their productivity depends on good nutritional and health status facilitating for continuous development of the nation. Through the transition from the dependence of childhood to adulthood's independence, college students are more fluid. But about 87 per cent of young women and men living in developing countries are deprived due to limited and unequal access to resources, healthcare, education, training, and employment as well as economic, social and political opportunities (UNDP Youth Strategy, 2014-17). The intergenerational cycle needs securing adequate nutrition of youth. Nutrient deficiencies leads to growth during adolescence and in women of reproductive age (20- 49 years), chronic energy deficiency increases the risk of infection, reduce activity, and lower the productivity.

Some dietary characteristics of college going students include

- They are independent in food choice.
- Due to free food choices they more often have poor collections like less fruits, vegetables and more fats, junk foods in their diet
- They are also particular in body image, so adopt dieting, binge eating.
- Their feeding practices are influenced by lack of in-depth knowledge about nutrition,

readily available foods in canteen, college environment, living conditions, lifestyle.

Significance of the study

College or University students in every country educational institutions constitute a large proportion of the total population. The students are usually within the age group of 17-25 years coming in late adolescent and adult category. Various aspects such as social and cultural pressure, peer group influences, religion, finance and adequacy of fund, diverting the food finance to the other activities have negative effect on the nutritional status of the students. Researches have also reported that college or university students consume a lot of high calorie foods that are devoid of fruits and vegetables. Consumption of processed 5 foods, which are highly refined, high in sugar, fats and salt that not only leads to many deficiency diseases but when coupled with less physical activity, greatly contribute to rising chronic diseases even among young adults (Den Hartog, *et al.* 2006) [9]. Female university students have increased nutrient (especially micronutrients) needs.

Educating girls to use their nutritional knowledge when preparing and handling food can also improve their health and that of their families. Educational institutions can play major role in helping young girls become healthy adults. Researches show that promoting nutrition education can improve their nutrition and encourage them to seek regular health care. Studying their health and nutritional status and creating awareness not only prevent them from nutritional deficiencies and infection, but also help them in maintaining good health. Demographic dividend in India depicts 62.5% of its population in the age group of 15-59 years, which will be at the peak around 2036, approximately 65% (Economic Survey 2018-19). In 2041, the share of working-age, i.e. 20-59 years of the total population is expected to hit 59%. Si there will be rise in women's workforce, increase in savings rate, rapid industrialization and urbanization, effective policy making etc.

Challenges associated with this is low human development parameters. India ranks 130 out of 189 countries in UNDP's Human Development Index, which is alarming. So, the main area to be considered is building human capital, i.e. investing in people through healthcare, quality education, jobs and skills keeping in mind the large young and working population.

Broad Objectives

- To assess dietary and food pattern of college students (18-22 years).
- To compare the differences in the food and dietary pattern in three waves of COVID.

Methodology

- Design
- Sample
- Instrument
- Data Collection
- Data Analysis

Design: For the research stratified Random sampling design of the university students was opted. Before starting the data

collection method students were well explained about the purpose of the study and questions involved in the questionnaire, also the confidentiality of the data was assured.

Sample: For the study 50 college students from 18-22 years were randomly selected, the selected subjects are university students are mostly from urban area of Bhubaneswar and Cuttack. Both the gender was included. The permission for the study was granted from the authority of the university.

Instrument

An online questionnaire was prepared for the survey. The online self-administered questionnaire in English language was created having a. General, b. Specific questions based on Anthropometric data like height, weight and BMI, food habits, life style in three COVID waves. There are in total 30 open and close ended questions in the format.

Questionnaire

The questions consist of knowledge, attitude, Practices about health, wellness, food habits, immunity rich foods and effect of COVID waves on above mentioned factors. So, the different food groups, frequency of food intake (daily, weekly, monthly), meal pattern are included. Some questions were close ended multiple choice, tick box type and some were open ended short types.

Data Collection

Then the questionnaire was circulated through mail. Students were encouraged to participate in the survey and fill the respective format, thorough follow up has been done for any queries.

After completion of the survey responses were automatically saved then data were electronically entered into an excel sheet.

Data Analysis

There after the coding of the data done and accordingly statistical analysis like Regression analysis was applied. The total number of responses received was 90. But for the validity and accuracy 50 samples were taken into account.

Statistical Analysis

Descriptive statistics (frequencies) described students' diet quality and food consumption patterns, as well as the percentages of students. Regression analysis was used to test the overall differences in three COVID waves based on Knowledge, Attitude and Practices regarding food intake and life style management. The associations between the importance of healthy eating and the actual self-reported food consumption habits for food items with respect to three waves of COVID were assessed. The BMI was also calculated by taking into account their height and weight.

Result and Discussion

The purpose of the current study was to assess eating habits, lifestyle and changes during three waves of COVID. So, the result which was obtained-

- In basic dietary habits about 72.2% students were non vegetarian rest were coming under vegetarian category.

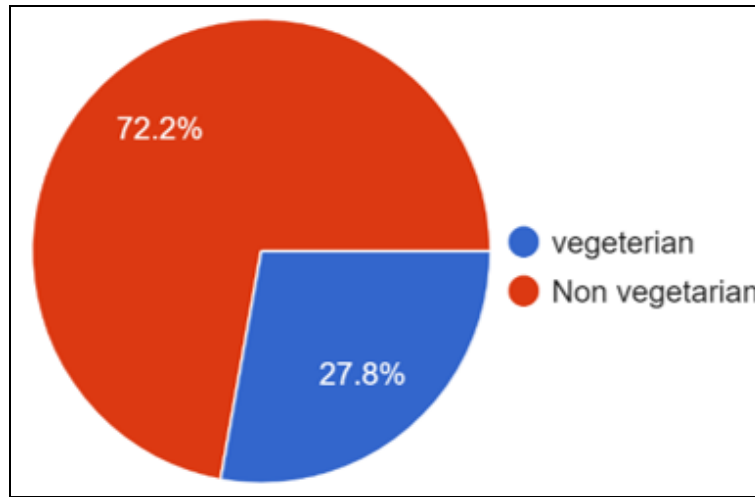


Fig 1: Basic Dietary Habits

- About meal intake per day maximum subjects have their Lunch regularly as compared to Breakfast.

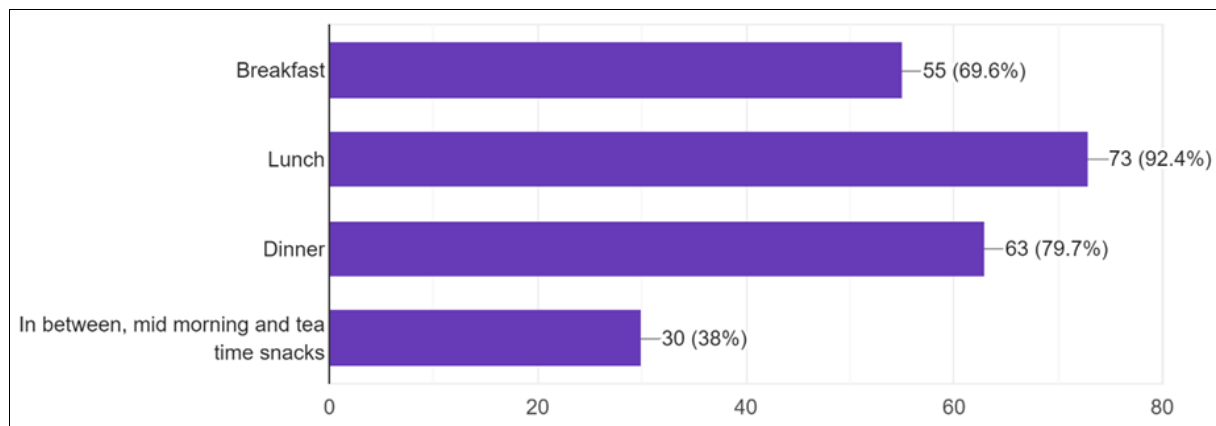


Fig 2: Daily Meal Intake

Figure 1

- Most important fact is that Cereal intake is found on daily basis, Pulses also mostly consumed daily. Vegetables (roots and tubers, green veggies) are consumed daily. Green leafy vegetables are limited in consumption that is

on weekly basis, Fruit intake was recorded very less. Some students take milk and milk products on daily basis but numbers are few. Egg, meat, fish intake is also very less in number and weekly basis consumption is high among respondents.

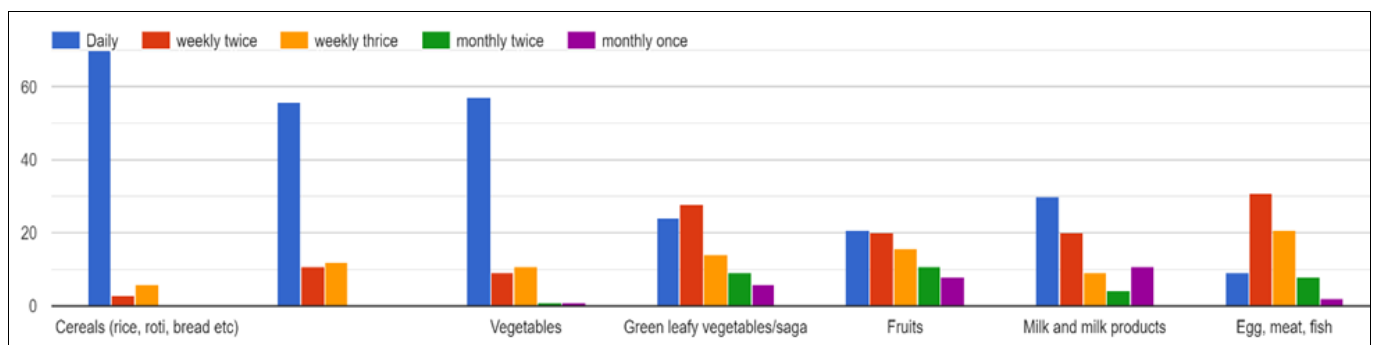


Fig 3: Food Group Frequency

- If discussion about outside food maximum students is adhered to daily intake of fast foods.

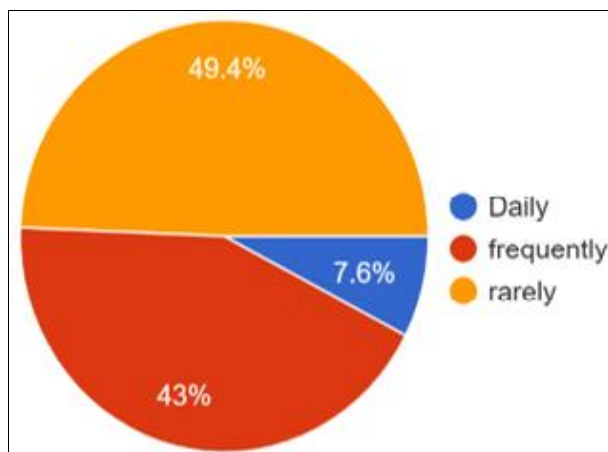


Fig 4: Frequency of Fast-Food Consumption

- Then most important part of the study was the food habits in three COVID waves, Regular meal intake was mostly found in third wave, Balanced diet was focused in second

wave, Immunity concern was observed in the Second wave mostly, Irregular food habits found in the third wave.

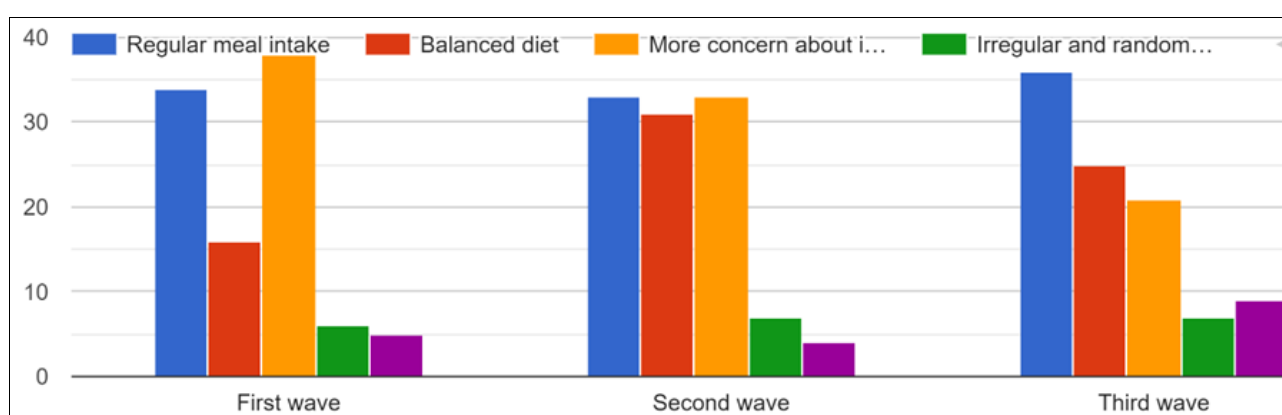


Fig 2: Fast food

Conclusion

According to the study the percentage of vegetarians is 25% and non-vegetarian is 75%, 92% of the students take lunch daily, about 80.3% take daily dinner and comparatively less students that is 69.7% takes breakfast daily. Among food groups, daily intake pattern is followed in case of cereals, pulses and vegetables. Green leafy vegetables are consumed weekly twice, fruit intake response was very less, there was low response on daily intake of milk and meat products and are consumed twice a week. Outside eating was found on rarely basis is 51.3%, 40.8% were under frequently basis. About 90.7% of students go for information on packaging while purchasing. Maximum students depend on social media for health, nutrition related information. In Comparative study of the three waves at 95% confidence level regular meal and immunity building food intake was mostly followed in First wave, in third wave unhealthy food intake increased which was lower in first wave. Second wave still shows fixing on immunity-oriented food intake. All of these changes were significant ($p < 0.000$). By taking into account BMI 78% students are coming under normal BMI, 16% are coming under obese category and rest 6% under underweight category.

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