

Snacking Pattern and Physical Activity among Young Adults

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Abstract: Snacking is likely to play an important role in the development of overweight and obesity, yet little is known about the contexts of snacking how it influences other dietary habits, like meal skipping. Google questionnaire was developed to elicit information on socio demographic data, anthropometric data, physical activity and the snacking pattern of the respondents. Among the selected young adults 71% were females and only 29% were males. Around 46% were between the age group of 18-20 years, 49% were between 21-23 years and only 5% belongs 24-26 years. Only 38% of the subjects were normal, 28% overweight, six percent of the subjects were under grade I obesity. More than three hours onscreen usage was recorded by 15% on TV and 82% on mobile phones. Nearly 64% consumed snacks once in a day, 22% twice a day and 14% more than twice a day. Around 18% preferred to eat fast foods, 41% preferred to eat homemade items, 19% chosen to eat packed items and 21% preferred to eat bakery products. From the selected subjects nearly 92% included fruits in their menu and 8% not included fruits. It was found that 70% of the participants involved in regular physical activity and 40% not have done any type of physical activity. Nutritional education was provided for all the selected young adults by using e-poster to enhance the physical activity, enrich the dietary pattern and to improve healthy snacking pattern. The e-posters were posted to all the selected young adult subjects through e-mode. Faulty dietary behavior and snacking pattern with nil physical activity among the young adults were the reason for why they were much vulnerable to weight gain. Healthy snacking should be encouraged and consumption of high fat and sodium containing foods like packaged foods, fried foods should be replaced by the consumption of fruits and vegetables.

Key words: Anthropometric, physical activity, snacking pattern, nutrition education.

INTRODUCTION

Snacking is likely to play an important role in the development of overweight and obesity, yet little is known about the contexts of snacking in adolescents or how snacking may influence other dietary habits, like meal skipping. Dietary habits which influence health are generally developed over a period of time. The high rates of snacking and the consumption pattern of snacks and beverages in adolescence and young adulthood have been associated with the risk of malnutrition (Lobstein et al, 2004).

Young people form precious human resources in every country. However, there is considerable ambiguity in the definition of young people and terms like young, adolescents, adults; young adults are often used interchangeably. World Health Organization (WHO) defines 'adolescence' as age spanning 10 to 19 years, "youth" as those in 15-24 years age group and these two overlapping age groups as "young people" covering the age group of 10-24 years (WHO, 2013)

Irregular eating habits are attributed to various factors like peer influence, parental behaviour, and influence of western food. Irregular snacking may even lead to skipping of regular meals and increased frequencies of snacking in between. In developed countries, a high percentage of children and college students have reported skipping of meals and increased snacking behaviour. Skipping breakfast leads to adverse health outcomes and also increases the chances of poor snacking behavior (Birch and Davison 2001). Snacking is also commonly associated with undesirable health outcomes and dietary patterns. Since children and adolescents select snacks based on taste over nutrition, they more often choose salty, crunchy foods as snacks over healthier alternatives (Cross et al, 1994).

In a study done by Savige et al, (2007) they reported that the most common contexts for snacking among adolescents were after colleges (4.6 times per week), while watching TV (3.5 times per week) and while hanging out with friends (2.4 times per week). Young adults were least likely to snack all day long (0.8 times per week) or in the middle of the night (0.4 times per week). Snacking contexts were variously associated with gender, year level and region. In contrast, meal skipping was associated with gender and region of residence but not year level. Adolescents who reported more frequent snacking on the run, on the way to or from school, all day long, or in the middle of the night were more likely to skip meals.

Background studies on children and adolescents suggest a large increase in the role of snacking; however, little is known about changes in the snacking behaviour of young adults. India is also facing this transition, and more college students and adolescents are adopting western dietary styles along with the snacking behavior. Hence the present study was

conducted with the following objectives as to identify the socio demographic characteristics, to know the anthropometric measurements, to evaluate the snacking pattern, to assess the physical activity of and to provide nutrition education regarding the preference of snacks and importance of physical activity to all the selected young adults.

METHODOLOGY

The selection of area was in and around Coimbatore district. Samples were young adults in and around Coimbatore district. The sample size consisted of 202 young adults. Random sampling method was used to select the samples. Google questionnaire was prepared by the investigator and the link was posted through the Whatsapp groups and e-mail to collect the data from the selected subjects. The questionnaire was comprised with the socio demographic data, anthropometric data, physical activity and the snacking pattern of the selected subjects. The collected information was analyzed for the results. Based on the results, nutrition education was provided to all the selected subjects. Nutritional education was planned for college going young adults by using aids like e posters to enhance the physical activity, dietary pattern and awareness about the snacking pattern. The SPSS software was used for the management and statistical analysis of the collected data. The results were expressed in percentage. The chi-square test was used to compare the differences across the groups.

HYPOTHESIS

H0: There is no relationship between the weight and snacking pattern of the selected subjects H1: There is relationship between the weight and snacking pattern of the selected subjects
H0: There is no relationship between the weight and snacking pattern of the selected subjects H1: There is relationship between the weight and snacking pattern of the selected subjects
H0: There is no association between the frequency of snacking pattern and the snack preference H1: There is association between the frequency of snacking pattern and the snack preference
H0: There is no relationship between the activity preference and frequency in physical activity H1: There is relationship between the activity preference and frequency in physical activity
H0: There is no relationship between frequency of taking fruits and the type of fruits preferred H1: There is no relationship between frequency of taking fruits and the type of fruits preferred

RESULTS AND DISCUSSION

1. Socio-demographic characteristics of all the selected subjects

From the selected 202 subjects of young adults in Coimbatore 144 (71%) were females and only 58 (29%) were males. Among the selected young adults 93 members (46%) were between the age group of 18-20 years, 99 members (49%) were between the age group of 21-23 years and only 10 members (5%) belongs to the age group of 24-26 years. Thirty one members (15%) recorded that they read books during their leisure time, 32 members (16%) played mobile games, 122 members (60%) heard music and 17 members (9%) chosen their hobby as drawing.

2. Duration of onscreen time spent among the selected subjects

Table-1
Duration of onscreen time spent among the selected subjects

Criteria	Television		Smart phone	
	No of subjects		No of subjects	
	No	Percentage	No	Percentage
30 minutes to 1 hour	110	55	0	0
1 hour to 2 hours	29	15	7	3
2 hours to 3 hours	34	17	29	15
>3 hours	29	15	166	82
Total	202	100	202	100

Above table shows that 30 minutes to one hour per day was used to watch TV by 110 members (55%), one hour to two

hours per day was utilized to watch TV by 29 members (14%) and seven members (3%) used mobile phones. It was observed that 34 members (17%) watched TV and 29 members (15%) used mobile phones for two hours to three hours per day. More than three hours onscreen usage was recorded by 29 members (15%) on TV and 166 members (82%) on mobile phones.

3. Anthropometric measures of all the selected working women

The mean height was 163.24 ± 7.02 cm, weight was 62.33 ± 12.11 kg, BMI was 23.66 ± 3.55 kg/ m², waist circumference was 87.19 ± 13.07 cm, hip circumference was 97.91 ± 8.03 cm and waist hip ratio was 0.88 ± 0.11 . It was clear that six percentage of the subjects were underweight, 38% of the subjects were normal, 28% overweight, 22% pre-obese and six percent of the subjects were under grade I obesity.

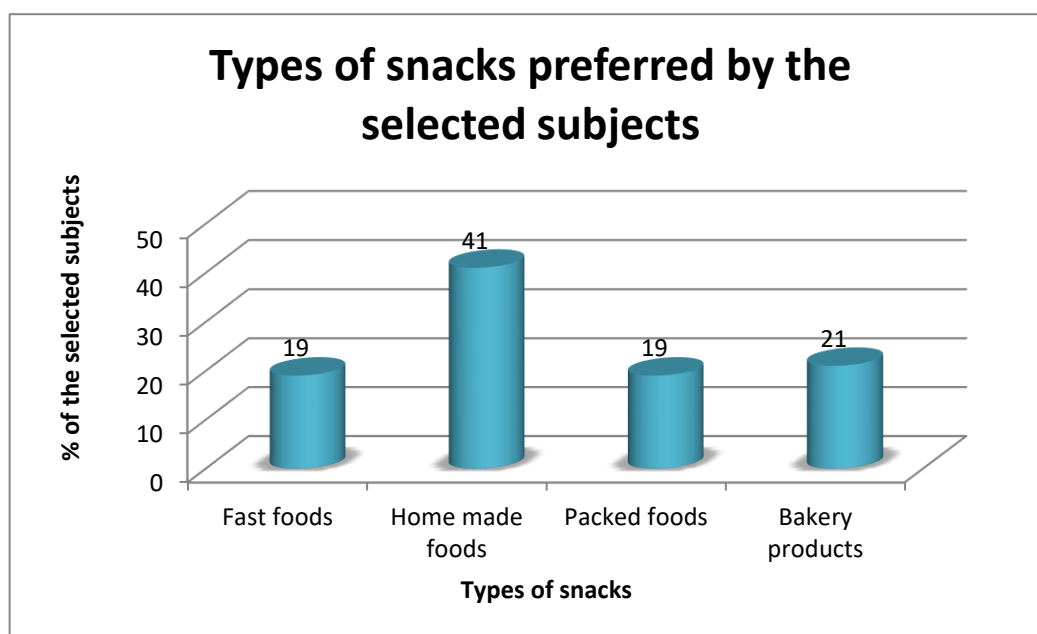
4. Physical activity of all the selected subjects

Among the selected 202 subjects of young adults in Coimbatore; 142 members (70%) involved in regular physical activity and 60 members (30%) not have done any type of physical activity. Among the 142 members of young adults; 51 members (36%) involved 15 minutes to do physical activity, 30 members (21%) have the time limit of 20 minutes, 30 members (21%) do the physical activity for 30 minutes and 31 members (22%) involved them for one hour to do physical activity.

5. Snacking pattern among the selected subjects

- Among the selected 202 subjects of young adults in Coimbatore 170 members (84%) preferred snacks and 26 members (13%) were not fond of snacks. From the selected subjects 129 members (64%) had snacks once in a day, 44 members (22%) had snacks twice a day and 29 members (14%) had snacks more than twice a day. Around 38 members (19%) preferred to eat fast foods, 82 members (41%) preferred to eat homemade items, 39 members (19%) had chosen to eat packed items and 43 members (21%) preferred to eat bakery products.

Figure 1: Types of snacks preferred by the selected subjects



- Nearly 152 members (75%) had the habit of snacking while watching TV whereas 50 members (25%) not have the above habit. Around 186 members (92%) include fruits in their menu and 16 members (8%) not included fruits. Among the 186 young adults who preferred fruits, 80 members (40%) included daily fruits in their menu, 60 members (30%) included fruits twice a week and 46 members (30%) took fruits rarely. From the selected 186 subjects 48 members (26%) preferred to eat apple, 45 members (24%) preferred to eat orange, 23 members (12%) preferred grapes and 70 members (38%) preferred pomegranate.

➤ It was found that 185 members (92%) preferred to drink fresh juice and 17 members (8%) preferred to drink packed beverages. Among the selected young adults around 134 members (66%) were fond of chocolates whereas 68 members (34%) were not fond of chocolates. From the 134 young adults who were fond of chocolates nearly 20 members (15%) had chocolate daily, 33 members (25%) took chocolate twice a week, 22 members (16%) took chocolate thrice a week

and 59 members (44%) had chocolate rarely.

6. Association between anthropometric status and snacking pattern of the selected subjects

Table-2

Association between anthropometry and snacking pattern

Relationship	P Value
Weight and the snacking pattern	0.024
Height and weight	0.000
Snacking pattern and Snacking preference	0.008
Activity preference and engagement in physical activity	0.697
Frequency of taking fruits and types of fruits preferred	0.201

The above table shows that, the sig (2-tailed) p-value is 0.024 which is lesser than the level of significance 0.05. Thus, we reject our null hypothesis H_0 ; therefore, there is relationship between the weight and snacking pattern of the selected subjects. We reject the null hypothesis H_0 , as there is relationship between the height and weight of the selected subjects as the sig (2-tailed) p-value is 0.000 which is lesser than the level of significance 0.05. There is association between the frequency of snacking pattern and the snack preference as the chi-square table shows that, the Pearson chi-square value 0.008 is less than the level of significance 0.05 and thus we reject the null hypothesis H_0 . There is no relationship between the activity preference and the frequency in physical activity as the correlation table shows that, the sig (2-tailed) p-value is 0.697 which is greater than the level of significance 0.05. Thus, we accept the null hypothesis H_0 . There is no relationship between the frequency of taking fruits and the type of fruits preferred as the correlation table shows that, the sig (2-tailed) p-value is 0.201 which is greater than the level of significance 0.05, thus, we accept the null hypothesis H_0 .

7. Provision Of Nutrition Education To All The Selected Subjects

Nutrition education is widely used for a range of population groups as a medium to deliver healthy diet and nutrition information; however, this type of intervention is still rarely implemented for college students. Effective education is making nutrition information digestible and usable in an everyday setting. Nutritional education was provided for all the selected young adults by using e-poster to enhance the physical activity, enrich the dietary pattern and to improve healthy snacking pattern. The e-posters were posted to all the selected young adult subjects through e-mail and WhatsApp.

CONCLUSION

Unhealthy snacking behavior contributes to chronic conditions such as obesity, heart disease. Healthy snacking should be encouraged and consumption of high fat and sodium containing foods like packaged foods, fried foods should be replaced by the consumption of fruits and vegetables. Nutrition education is an essential component in improving dietary habits and food choices, in order to reverse the under nutrition and improve the nutritional diagnosis. Poor dietary habits and lack of physical activity can be the main reason for poor nutritional status among young adults.

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