



RESTORE OUR INDIAN TRADITIONAL SNACKS AMONG SCHOOL GOING CHILDREN

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ABSTRACT

Snacks are considered as dietary supplements for many children who are affected with nutritional related disorders. Hence, the aim of this study was to monitor the snacks pattern of school going children during their break-time. This study was also proposed to provide them with the Indian traditional snacks and find the preferences of those snacks among the school going children. Case study was the most appropriate tool to find out the restoration of Indian traditional snacks among school going children and statistical calculation was carried out. Overall results from this study have shown that the Cookies / Cakes/ wafers were consumed by most of the school children during their break-time. On the contrary a vast percentage of the school children preferred our Indian traditional snacks. This study concludes that their parents are in urge to restore our Indian traditional snacks among the children.

KEY WORDS: Restore, Indian Traditional Snacks, School going Children, Health



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INTRODUCTION

Snacks are a part of healthy diet for children. Creating a meal and snack pattern can help them in providing nutritious food throughout the day.¹ Traditional snacks are prepared from ingredients commonly available at home. Nowadays, healthy nutritious snacks have been replaced by junk food. Junk foods are rich sources of trans fats, salt and sugar. Junk foods are quite popular among children owing to taste, appearance and hype created by mass media. However, increased incidence of lifestyle disorders, seen now-a-days at an early age could be attributed to fast foods. Children consuming more “junk food” are likely to have a lower intake of vitamins, minerals and essential fatty acids, particularly omega-3 and omega-6, which are vital building blocks for brain function², whilst the link between omega-3 fatty acids and mood is topical.³ Several Indian studies showed that, changing lifestyles, food habits, organized food retail market, and urbanization are the key factors for increasing the usage of highly processed and convenience food especially among children.⁴ Furthermore, there are more families in which both parents work, and time limitations have become an important factor in determining the types of foods consumed. The food industry responded to these new family issues by increasing the availability of convenience foods and prepared meals.⁵ Food habits learned in childhood tend to persist in adulthood also. It is essential to educate and encourage the children to consume healthy foods especially during their snack time as it supplements to overcome their nutritional deficiencies. Aim of the current study was to monitor the snacks pattern of school going children during their break-time. The children were provided with Indian traditional snacks and found the preferences of those children for Indian traditional snacks.

MATERIALS AND METHODS

Case study

The case study method often involves simply observing what happens or reconstructing ‘the case history’ of a single participant or group of individuals (such as a school class or a specific social group) i.e. the idiographic approach. Case studies allows a researcher, to investigate a topic in detail. Average will be taken in case study, if participants number is maximum.⁶ If the case study is about a group, it describes the behaviour of the group as a whole, not behaviour of each individual in the group.⁷ Case study is the most appropriate tool and the case sheet was constructed for each child and information regarding age, height, weight and employment status of the parents were collected. This case study was based on field work undertaken for a period of 3 months in a Central Board school located in Chennai, Tamil Nadu, India and the participants were 92 children aged 5-8 years. This field work was carried out between the months of September to November 2015. The children were permitted to eat the snacks they brought to school during the morning break time and a feedback was elicited from them pertaining to the choice of their snacks. In the weeks following the students were provided with an assortment of Indian traditional snacks such as Sundal varieties, Kolukatai, Puttu (Aval/Ragi), Urundai (Rice Puffed ball), Porivilanga urundai, Roasted Bengal gram ball, Sesame seed ball, Pea nut ball etc.), Paniyaram, Ukali, Ragi Jaggery adai. during their morning break The kids were invited to give us their feedback and a majority of the traditional snacks were preferred by the kids.

Statistical analysis

The data was gathered and found average mean and statistically it was dealt with standard deviation and chi square test.

RESULTS

Snack Pattern of the School Children

The present study is related with snack pattern of school children and the results are discussed here.

Table 1: Quarterly Case study report : Percentage of Snacks consumption pattern among school going children

SNACK PATTERN	COOKIES/CAKES/ WAFERS	CHIPS/CRISPS	CHOCOLATES	PIZZA/BURGER	FRUITS
5 DAYS	84.78	10.86	2.19	0	2.17
4 DAYS	64.32	9.51	18.47	0	7.08
3 DAYS	41.3	17.39	22.82	7.6	10.86
1 DAY	28.26	20.65	17.39	9.78	23.91

Table 2: Quarterly Case study report - Snacks consumption pattern among school going children

SNACK PATTERN	COOKIES/CAKES/ WAFERS Average ± SD	CHIPS/CRISPS Average ± SD	CHOCOLATES Average ± SD	PIZZA/BURGER Average ± SD	FRUITS Average ± SD
5 DAYS	77.6±2.4	10.3±0.44	1.66±0.5	0	2.3±3.2
4 DAYS	59±3	9.3±1.1	17±2.6	0	6.6±5.8
3 DAYS	38±2	16.3±0.5	21.3±3	7.3±1.1	9.6±5.1
1 DAY	25.3±1.1	19±1	16.3±1.5	9.3±0.5	22±2

Table 1 indicate the percentage of snacks pattern of school going children. On an average 85 % of the

children ate cookies / cake/ wafers on daily basis. Nearly 11% of them ate chips/crisps and chocolates and

2 % of them ate chocolates daily. Only 2% of the children consumed fruits in all the five working days in a week and none of them have a habit of consuming pizza or burger. Similarly a percentage of 64% of the children ate cookies/cake/wafers for 4 days in a week followed by 18 % and 9 % of children students who ate chocolates and chips / crisps respectively for 4 days in a week. Seven per cent of the children consumed fruits for 4 days in a week. A lesser than fifty per cent (i.e 41 %) of the children consumed Cookies / Cake/ wafers and 23 % of them ate chocolates for 3 days in a week. A percentage of 17 and 9 of them noted for chips/crisps and pizza/burger respectively for 3 days in a week. Only a very meagre percentage 11% of the children enjoyed

their snacks with fruits for 3 days in a week. When it was noted for snacks pattern of school children, 28 % of the children had cookies/cakes/wafers at least once in a week. A percentage of 21 of them loved to eat chips/crisps and 17 % of them enjoyed in eating chocolates whereas 10 % of children were noted for pizza/burger. It was observed that only 24 % of the children brought fruits at least once in a week.

Preferences of Indian Traditional Snacks

The children percentage table clearly shows the preferences of Indian traditional healthy snacks among children.

Table 3
Case study report- Preferences of Indian Traditional Healthy Snacks among School going children

Traditional Snacks	Preferred (n=92)	Percentage	Not Preferred (n=92)	Percentage
Sundal varieties	76	83	16	17
Kolukatai	90	98	2	2
Puttu (Aval/Ragi)	80	87	12	13
Urundai (Rice Puffed ball, Porivilanga urundai, Roasted bengal gram ball, Sesame seed ball, Pea nut ball etc.,)	84	91	8	9
Paniyaram	70	76	22	24
Ukali	88	96	04	4
RagiJaggery adai	76	83	16	17

Interestingly some observations were noted when the school children were distributed with few varieties of Indian traditional snacks such as Sundal varieties, Kolukatai, Puttu (Aval/Ragi), Urundai (Rice Puffed ball, Porivilanga urundai, Roasted bengal gram ball, Sesame seed ball, Pea nut ball etc.), Paniyaram, Ukali, RagiJaggery adai and their preferences were discussed with the help of percentile distribution as mentioned in Table 3. Most of the children (98 %) preferred kolukatai whereas 96 % of them preferred ukali and 91 % of the children preferred urundai. Puttu was preferred by 87% of them. Sundal varieties and ragi Jaggery adai were preferred by 83% of the children. Only 76 % students preferred moong dhal payasam. It was also noted that over all a meagre percentage of the students only were

not preferred our Indian traditional snacks. The preferences of Indian traditional snacks among children were found for its level of significance using Chi-square. The chi-square statistic is 12.5601. The p -value is .005691. The result is significant at $p < .05$.

Nutritional Value of Indian Traditional Snacks

This research article suggests that nutritious snacks that fit for school children to control weight and improve overall health. Calculating nutrition information for standard recipes are very important. Our results show that our system could match all of the ingredients and generated nutritional values within a 10% error bound from human assessors for calorie, protein and carbohydrate values.

Table 4
Nutritional Value of Indian Traditional Snacks

Snacks	Moisture g	Protein g	Fat g	Minerals g	Crude Fibre g	Carbohydrates g	Energy k.cal	Calcium mg	Phosphorous mg	Iron mg
Channa Sundal	11.725	11.46	16.91	2.231	2.715	37.83	351.98	172.9	236.96	3.65
Kolukattai	22.58	6.84	22.94	1.03	1.83	82.86	566.07	30.41	205.17	3.16
Ragi Puttu	8.61	3.85	5.7	2.35	1.8	52.7	277	508.6	153.9	1.95
Peanut Urundai	4.14	12.91	25.07	1.35	1.57	32.94	4.9.45	61.9	192.3	1.8
Kuzhi Paniyaram	32.72	9.555	15.105	1.47	1.805	54.435	391.8	85.85	199.35	2.56
Ukkali	9.665	13.944	50.879	1.918	0.902	59.692	752.63	90.1	239.7	2.429
Ragi Jaggery Adai	5.958	2.302	7.461	0.905	1.482	30.892	199.74	98.7	90.75	1.486

DISCUSSION

The case study is evident that change in junk and fast food into Indian traditional snacks is highly preferred by many students even though they are exposed to intertwining factors- such as food advertisements, both parents employed, taste, and peer group influence.

Generally, snack is vital for nutritional development of the children. Adequate amount of proteins, vitamins and minerals should characterize the snack of school going children to for activeness, energy, normal metabolism, regular activities and stay fit. Because of change in trends and life style, our Indian children often nag their parents for snacks - include chips, crisps, chocolate

bars, pizza, and many other junks. It is obvious in this research article that the children preferred junk snacks at most which has high sources of fats, sugar, salt and lack of essential nutrients which will develop nutrition related diseases in future. However parents are in urge to restore our Indian traditional snacks among their children. This study confirms that traditional snacks are preferred by children and these snacks are providing good amount of nutrients.

CONCLUSION

The overall result from this study that was conducted over a period of 3 months involving school children between the ages of 5 and 8 years is that the majority of them consumed readymade snacks which include cookies, cakes, and wafers purchased from local shops for their snack break in the morning. On the contrary, a vast percentage of the school children preferred the Indian traditional snacks which we had provided them with. Parents are the most important influence in their children's lives and play an important role in their children's choice of snacks. Children can be picky eaters, liking only foods that are easy on the palate. However when a wide variety of nutritious homemade traditional snacks choosing food from all the food groups

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are made available for the children it would lead to healthy eating for kids.

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AUTHOR CONTRIBUTIONS

S. Vijayalakshmi, T. Kanchana and S. Vasantha . Designed the study and prepared the manuscript. Devi N conducted the case study and tabulated the results. A. Arun performed the statistical analysis, proof reading and editing. All authors have read and approved the final version of this manuscript.

CONFLICTS OF INTEREST

Conflict of interest declared none.

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