Original Research Article

Eating Pattern and Frequency of Eating Foods among School Children

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ABSTRACT

It is being realized globally that behavior problems among children are on rise, the occurrence vary from 3 to 30% in both developed and developing countries. Frequency of consuming different foods and eating pattern of children is a matter of concern for their health and wellbeing. However, children with behavior problems are of particular importance and their food behavior need to be studied to offer opportunity for correction. The present investigation was executed with these objectives. Our investigation revealed 39 and 34% girls and boys had behavior problems. Skipping breakfast was most common in all girls, wherein 26.2% normal and 32.0% with behavior problem consumed breakfast 0-2times in assessment week. 61and 63% girls (normal and behavior problem), 54 and 55% boys (normal and behavior problem) consumed lunch regularly. Majority of children with behavior problems consumed dinner regularly while less than 60% normal children ate dinner. Girls with and without behavior problems consumed packed lunch completely in higher proportion as compared to boys. Less than 50% boys with behavior problems completed packed lunch. Chi square analysis (Chi Sq=12.6; P ≤0.006) indicates significant association in the eating pattern of normal boys with those of behavior problems. Pattern of consuming different foods among the participants did not differ for most foods, except for sweets and fast foods, children with behavior problems consumed these in higher frequency. It is evident that differences in eating pattern occur in children with behavior problem especially among boys. Care should be exercised dealing with children with behavior problems

Keywords: Children, Behavior Problems, Eating pattern, Food Frequency, Skipping Breakfast

INTRODUCTION

School age and adolescence are the sensitive period for dietary changes, brought about by the peer pressure and environment. Advertisements, social mobility and scientific awareness influence food attitude and food behaviors of children including food preferences and eating style. [1] Literature points to the factors influencing food habits and eating patterns of children; wherein socio cultural and psychosocial factors are considered important variables triggering altered food behaviors. [2] Psycho-physiological factors are also being realized as crucial affecting food behaviors, the factors include low energy, irritability, hyperactivity, temper tantrums, inattention,

and mood swing. These are collectively referred to behavior problems. [3]

Statistics related to child health indicates a constant rise in behavior problems among children in both developed and developing countries. [4,5] Behavior problems bear multiple etiologies, environmental stress and psychological status are considered prime factors, and however, lifestyle, sleep pattern, type of food eaten and eating frequencies may also influence behaviors. [6]

Nutrient deficiencies or metabolic abnormalities are known to cause behavior problems, established are the effect of iron and B vitamin deficiencies. Studies about breakfast skipping in school going children have demonstrated association between altered behavior and breakfast skipping/ eating. [7,8] It is frequently explained that drop in blood glucose levels causes behavior change although it is timely and short lived. On the other hand it is also documented that children with irritability and temper tantrums have a great liking for sweets and starchy foods. [9]

Further, literature documents effect of certain food constituent's such as salicylic acid, artificial colors and flavors on neural stimulation affecting behaviors especially in children. Pharmacologic reactions of foods are known to occur where foods act like drugs in the brain and interfere with normal nerve activities (Bryan J et al, 2004). [10] These could lead to symptoms such as headaches, stomach complaints, irritability, agitation, mental confusion, hyperactivity, and abnormal behaviors among the affected individuals (Gibson E L and Green M W, 2002). [11] Hence, behavior problems may have constitutional and physiological based etiologies.

School age children are characterized by certain food habits such as missing meals, preferences for unconventional and fast food (Kim H Y et al, 2003). [12] Thus dietary habits acquired normally during childhood need to be assessed to tackle their health. Noticeably the database reveals 'cause and effect' of dietary behaviors on behavior performances among children. Food preferences and eating behaviors among children with behavior problem are rarely studied. Therefore, an attempt was made to study the differences in attitudes and eating pattern among children with behavior problems and those of normal children.

MATERIALS AND METHODS
Study Population
This was a cross sectional study carried out in one of the major cities of Karnataka from South India. 587 children both girls (N= 258; 44.0 %) and boys (N=329; 56.0%) aged between 9 to 14 years were selected from the mainstream schools. One each of private, government as well as government aided schools having English or the vernacular (Kannada) as medium of instruction cooperated in conducting this study. All children studying in 4th to 9th standard were the participants.

Tools Used
All the information obtained was through self reporting questionnaires prepared in simple English language for children to follow. They were translated into Kannada language, language expert from Kuvempu Institute of Kannada Studies; University of Mysore helped in translation. Questionnaires so prepared were standardized based on pilot study. Children were given choice to use questionnaire in language they were comfortable.

Demographic Assessment: Family information such as religion, family type, parents' education, occupation, selected house hold articles (two and four wheelers, TV, computer, fridge and washing machine) and type of diet practiced was elicited using appropriate questionnaire. This required

ticking the right option; children from 4th and 5th standards were assisted in making entries. Information obtained for parent's occupation was confirmed from school records.

Classification of occupation: the occupation of mothers and fathers were graded as low, lower middle, middle, upper middle and high according to Desai et al; 2010. [13]

SES classification: Socio economic status of the parents was computed based on parent's education, occupation, type of house and household articles. Each of these variables were scored, and the sum of total score which ranged between 5-28 was distributed into three equal ranges and labeled as low SES- scores < 9; while 10 -18 and > 19 were designated as middle and high SES respectively. The selected children were classified into the respective socio economic status.

Behavior Assessment: 'Abbaris Child and Adolescent Self Report' (ACASRQ) questionnaire modified by Sushma et al to assess children with non pathological behavior issues in Indian children was adopted. [5] Based on this children were grouped into those with behavior problems and normal children.

Assessment of Eating Behavior: Eating behavior was a detailed assessment of eating pattern. There were three components as follows:
i. Regularity of eating meals
ii. Completing packed lunch.
iii. Frequency of eating different foods.

The questionnaire for 'completing packed lunch' had four point assessment scales, i.e Always, Sometimes, Rarely, Never. Frequency of eating different foods was elicited as those consumed Daily, 1-2 times /Week, Monthly once/twice and Rarely/Never. Pattern of eating different meals and regularity of consuming meals was also elicited; the query was presented as a statement following three options i.e. 0-2, 3-5 and 6-7 times per week, the response was particularly obtained for previous week.

Statistical analysis:
Data obtained was analyzed using excel software -2007 version and X-STAT –752 package for descriptive analysis. Mean scores, standard deviation and percentage were calculated for interpreting eating pattern. Non parametric statistical analysis (chi Sq) was executed on Diet type practiced; regularity of consuming different meals; completing packed lunch at school by children. Statistical results are presented at significance level of 5% ($p \leq 0.05$)
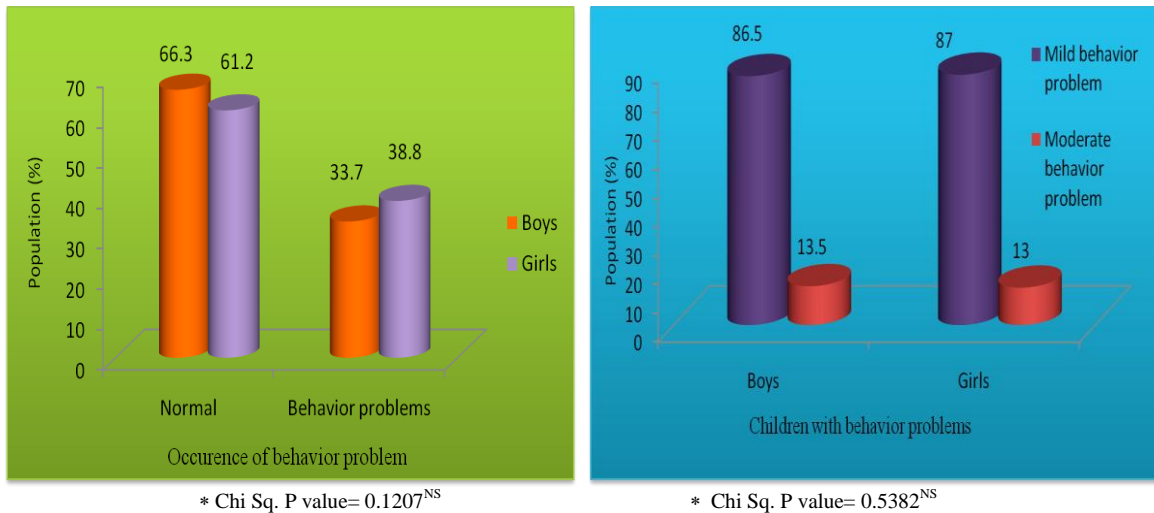
RESULTS

Subjective details of the participants are presented in table.1, majority of the selected children both girls & boys belonged to Hindu religion (70.5, 68.7%), a small percentage practiced Christianity and Islam. Nuclear families predominated (56.2 and 61.4% girls and boys) followed by joint families (27.9 and 28.0%) only 15.9 and 10.6% girls and boys were from extended families. Ninety seven percent fathers and mothers were literates, among these 37 to 32 % were graduates and 30 to 25% respectively had completed diploma courses. Majority of (87 %) mothers and (98%) fathers were employed, 48 to 51% fathers and 36 to 38% mothers were engaged in 'upper and high' grade jobs. A small proportion of mothers were housewives. A greater proportion (49.6; 61.7 %) of girls & boys belonged to the middle SES, while those from low and high SES were 21.3 to 12.2 and 29 to 26% respectively.

Table 1: Demographic characteristics of the study population.

Variables	Total study population N=587	
	Girls (N =258) %(n)	Boys (N=329) %(n)
Age		
9 -11yrs	33.9(85)	42.6(140)
12-14yrs	67.1(173)	57.4 (189)
Total (%)	43.9	56.1
Religion		
Hindu	70.5(182)	68.7 (226)
Christian	12.4(32)	14.3 (47)
Muslim	17.1(44)	17.0 (56)
Family type		
Joint	27.9(72)	28.0 (92)
Nuclear	56.2(145)	61.4 (202)
Extended	15.9(41)	10.6 (35)
Father education		
Illiterates	1.2 (3)	-
School	2.7(7)	3.3(11)
SSLC	8.5(22)	8.8(29)
Diploma/ Puc	30.6 (79)	28.0(92)
Graduation	36.8 (95)	36.2(119)
Higher Education	20.2(52)	23.7(78)
Mother education		
Illiterates	1.9(5)	0.9(3)
School	7.4(19)	8.2(27)
SSLC	14.3(37)	14.9(49)
Diploma/ Puc	25.6(66)	31.0(102)
Graduation	33.7(87)	32.2(106)
Higher Education	17.1(44)	12.8(42)
Father occupation		
Home makers	2.3(6)	0.9(3)
Working		
Low grade	5.4(14)	6.3(21)
Lower Middle grade	13.6(35)	13.1(43)
Middle grade	29.8(77)	27.7(91)
Upper middle grade	32.2(83)	32.5(107)
High grade	16.7(43)	19.5(64)
Mother occupation		
Home makers	10.9(28)	7.6(25)
Working		
Low grade	12.031)	11.9(39)
Lower middle grade	16.3(42)	17.3(57)
Middle grade	22.2(58)	24.0(79)
Upper middle grade	25.5(66)	27.0(89)
High grade	12.8(33)	12.2(40)
Socio-economic status		
Low SES	21.3 (55)	12.2 (40)
Middle SES	49.6 (128)	61.7 (203)
High SES	29.1 (75)	26.1 (86)

Graph.1: Percent Occurrence of Behavior Problems among the Selected Children

∗ Chi Sq. P value= 0.1207^{NS} ∗ Chi Sq. P value= 0.5382^{NS}

Graph.1 presents the percent occurrence of behavior problems among the study population, 33.7 and 38.8 % boys and girls respectively had behavior problems. Although girls were more affected than boys, the differences were small and statistically not significant. In general practice, behavior problem is classified as mild, moderate and severe cases depending on

behavior characteristics, in the study population none of the children were in severe grade. 87 % of the affected participants were found to have mild form and others exhibited moderate form of behavior problems. The occurrence rate of mild and moderate form of behavior problems did not differ among boys and girls and therefore was statistically not significant.

Table.2: Eating Behavior Of The Selected Children: Regularity Of Eating Breakfast By Normal Children As Compared To Those With Behavior Problems

Frequency Of Eating Breakfast During The Past Week									
Normal children									
Girls (N=258) n (%)					Boys(N=329) n (%)				Chi Sq. Value
Type of diet	Total (n)	Eating breakfast/past week			Total (n)	Eating breakfast/past week			
		0-2	3-5	6-7		0-2	3-5	6-7	
Veg	56	14 (25.0)	9 (16.1)	33 (58.9)	85	15 (17.6)	9 (10.6)	61 (71.8)	
Non veg	102	25 (24.6)	18 (17.6)	59 (57.8)	133	20 (15.0)	11 (8.3)	102 (76.7)	
Total N (%)	158	39 (24.7)	27 (17.1)	92 (58.2)	218	35 (16.0)	20 (9.2)	163 (74.8)	Chi Sq=11.8; df: 2 P= 0.003
Children with Behavior problem									
Veg	42	11 (26.2)	9 (21.4)	22 (52.4)	43	8 (18.6)	6 (14.0)	29 (67.4)	
Non veg	58	21 (36.2)	10 (17.2)	27 (46.6)	68	9 (13.2)	7 (10.3)	52 (76.5)	Chi Sq. Value
Total N (%)	100	32 (32.0)	19 (19.0)	49 (49.0)	111	17 (15.3)	13 (11.7)	81 (73.0)	Chi Sq=13.1; df= 2 p= 0.001
Comparing between normal and behavior problem children Boys: Chi Sq = 0.530; df= 2; P= 0.767 NS Girls: Chi Sq = 2.27; df= 2; P= 0.321									

Table 2 and 3 presents information about the regularity of eating different meals by

normal children as compared to children with behavior problems. It is obvious that

boys in general were more regular in eating breakfast; while girls exhibited varied pattern of eating breakfast, 58.2 and 49%

normal girls and those with behavior problems ate breakfast regularly.

Table.3: Regularity Of Eating Lunch By Normal Children As Compared To Those With Behavior Problems

Frequency Of Eating Lunch During The Past Week							
Normal children							
Type of diet	Girls n (%)			Boys n (%)			
	0-2/week	3-5/week	6-7/week	0-2/week	3-5/week	6-7/week	Chi Sq. Value
Veg	9(16.1)	14(25.0)	33(58.9)	8(9.4)	19(22.4)	58(68.2)	
Non veg	14(13.7)	24(23.5)	64(62.8)	18(13.5)	46(34.6)	69(51.9)	
Total N (%)	23(14.6)	38(24.0)	97(61.4)	26(12.8)	65(32.1)	127(55.1)	Chi Sq=1.75; df: 2 P= 0.417
Children with Behavior problem							
Veg	5(12.0)	9(21.4)	28(66.6)	7(16.3)	10(23.3)	26(60.4)	Chi Sq Value
Non veg	7(12.1)	16(27.6)	35(60.3)	11(16.2)	20(29.4)	37(54.4)	
Total N (%)	12.0	25.0	63.0	19(17.1)	32(28.8)	60(54.1)	Chi Sq=1.95;df:2 P: 0.378
Comparison between normal and behavior problem children Boys: Chi Sq =1.70; df= 2; P= 0.427 〕 NS Girls: Chi Sq = 0.343; df= 2; P= 0.842							

Markedly higher percentage of girls (26.2 normal, 32.0 behavior problem) consumed breakfast 0-2 times while 17 and 19% consumed 3-5 times during the reporting week. Chi square analysis was performed to analyze the association of breakfast eating among normal children to those with behavior problems as well as across gender, however, within gender differences had no significant association in breakfast eating behavior (P<0.05). Hence it is obvious that

behavior problems did not influence breakfast eating behaviors in both boys and girls. On the other hand, gender associated differences in breakfast eating was found to be significant, both boys with and without behavior problems consumed breakfast regularly as compared to their girls counterparts (P< 0.003 normal, P< 0.001 behavior problem). This observation was similar to the study reported by Fu M et al. (2007). [14]

Table.4: Regularity Of Eating Dinner By Normal Children As Compared To Those With Behavior Problems

Frequency Of Eating Dinner During The Past Week							
Normal children							
Girls n (%)				Boys n (%)			Chi Sq Value
Type of diet	0-2/week	3-5/week	6-7/week	0-2/week	3-5/week	6-7/week	
Veg	10(17.8)	19(34.0)	27(48.2)	12(14.1)	30(35.3)	43(50.6)	
Non veg	17(16.7)	36(35.3)	49(48.0)	22(16.6)	47(35.3)	64(48.1)	
Total N (%)	28(17.7)	54(34.2)	76(48.1)	34(15.5)	76(35.0)	108(49.5)	Chi Sq=0.302; df: 2 P:0.860
Children with Behavior problem							
Veg	7(16.6)	12(28.6)	23(54.8)	6(14.0)	10(23.3)	27(62.7)	
Non veg	9(15.5)	14(24.1)	35(60.4)	9(13.2)	18(26.5)	41(60.3)	Chi Sq Value
Total N (%)	16.0	26.0	58.0	15(13.5)	30(27.0)	66(59.5)	Chi Sq=0.261; df: 2 P : 0.878
Comparing between normal and behavior problem children Boys: Chi Sq =2.98; df= 2; P= 0.225 〕 NS Girls: Chi Sq = 2.58; df= 2; P= 0.275							

Pattern of eating other major meals of the day is presented in Table 3 and 4, varied patterns were noted, type of diet i.e., the

vegetarian or the non-vegetarian diet practices did not appear to affect the pattern of eating meals in participating children. 61-

63% girls consumed lunch regularly while 54-55% boys had regular lunch.

Dinner was consumed regularly by 48 to 59.5% of the participating children wherein, higher percentages of children with behavior problems had regular dinner as against the normal children. Chi square analysis revealed no significant association in pattern of eating lunch and dinner among the boys and girls as well as those normal and with behavior problems.

Table .5: Attitude Towards Eating Packed Lunch At School By Normal Children As Compared To Those With Behavior Problems

Eat Packed Lunch Completely								
Normal children	N (%)							
	Girls				Boys			Chi Sq. Value
Type of Diet	Always	Sometimes	Rarely	Never	Always	Sometimes	Rarely	Never	
Veg	39(69.6)	8(14.3)	5(9.0)	4(7.1)	63(74.1)	10(11.8)	8(9.4)	4(4.7)	
Non veg	64(62.8)	20(19.6)	10(9.8)	8(7.8)	83(62.4)	29(21.8)	15(11.3)	6(4.5)	
Total N(%)	103 (65.2)	26(16.5)	17(10.8)	12(7.5)	146(68.3)	39(17.4)	23 (9.6)	10(4.6)	Chi Sq=1.57;df: 3 P:0.666
Children with Behavior Problems								
Veg	26(61.9)	10(23.8)	4(9.5)	2(4.8)	21(48.8)	11(25.6)	7(16.3)	4(9.3)	Chi Sq. Value
Non veg	37(63.8)	12(20.7)	4(6.9)	5(8.6)	32(47.0)	17(25.0)	11(16.2)	8(11.8)	
Total N(%)	63 (63.0)	22 (20.0)	8 (10.0)	7 (7.0)	53(47.7)	28(25.2)	18(16.2)	12(10.8)	Chi Sq=5.24;df: 3 P:0.155
Comparing between normal and behavior problem children Boys: Chi Sq =12.6; df= 3; P=0.006 - significant Girls: Chi Sq = 0.540; df= 3; P= 0.910 - NS								

Eating lunch at school has been an important aspect in child nutrition and health issues, it is a matter of discussion at various platforms concerned with improving child nutrition. [15] Hence this study attempted to explore the attitude of children in eating packed lunch. A perusal of Table 5 indicates the manner in which children consumed packed lunch. Noticeably a higher proportion of normal children participants consumed packed lunch completely (65-68% girls and boys respectively), 16.5 and 17.4% girls and boys consumed sometimes. A similar pattern of eating packed lunch was noted among girls with behavior problems. Hence there was no statistically significant association in the attitude of normal boys and girls with and without behavior problems. Nevertheless, boys with behavior problems exhibited markedly different attitude towards eating packed lunch. Less than 50% of boys with behavior problems consumed packed lunch completely, while 25 and 16% completed packed lunch sometimes and rarely.

Chi square analysis indicates significant association in the eating pattern of normal boys with those of behavior problems. This suggests that boys with behavior problems could be at nutritional risk as they do not complete packed lunch. It could be that boys may be interested in lunch served at home as against eating the lunch packed.

Frequency of eating different foods by participating children is given in Tables 6 and 7. The tables provide inference for two different aspects; they are pattern of intake and frequency of consumption. It is obvious from the tables that the pattern of intakes of different foods remained essentially similar for children with and without behavior problems as well as across gender, however the frequency differed considerably. Rice was staple food for all the children. Marked differences were found in the frequency among girls with and without behavior problems for cereals and millets, other vegetables and milk products, wherein girls with behavior problems consumed these in less percentage. Legume consumption was also less; on the other hand sweets and

beverages were consumed by higher percentage of girls with behavior problems as compared to their counter parts. Markedly higher percentage of girls with behavior problems consumed fast foods.

Table .6: Frequency Of Consuming Different Foods By Normal Girls As Compared To Those With Behavior Problems

Food items	Girls with Normal Behavior N= 71(%)				Girls with Behavior problems N= 43 (%)			
	Daily	1-2times/ week	Monthly once/twice	Rarely/ Never	Daily	1-2times/ week	Monthly once/twice	Rarely/ Never
Rice	100	-	-	-	100	-	-	-
Cereals/ millets	21.3	61.4	17.3	-	12.4	35.6	52.0	-
Pulse/legumes	24.0	49.3	21.6	5.1	17.9	39.5	24.0	18.6
Leafy vegetables	42.3	57.7	-	-	39.5	60.5	-	-
Other vegetables	21.6	53.0	25.4	-	13.4	40.4	46.2	-
Fruits	10.9	28.2	36.4	24.5	8.2	31.1	30.8	29.9
Flesh foods	-	33.3	14.6	52.1	-	32.6	18.6	48.8
Milk	100	-	-		100	-	-	
Milk products: Curds/buttermilk/cheese/ paneer/ butter/ghee	32.4	23.2	26.4	18.0	21.5	32.0	25.5	21.0
Bakery products Biscuits/bread/cake	14.3	40.8	21.5	23.4	15.2	44.2	26.6	14.0
Sweets	-	9.9	43.7	46.4	-	13.9	44.2	41.9
Beverages (Tea/ coffee)	14.8	-	-	-	17.5	-	-	82.5
Fast foods- (Churimuri/gobimanchurian/ panipuri/masalapuri Aerated drinks)	-	44.0	34.4	22.6	-	52.3	31.4	16.3

Table .7: Frequency Of Consuming Different Foods By Normal Boys As Compared To Those With Behavior Problems

Food items	Boys with Normal Behavior N=133(%)				Boys with Behavior problems N=65(%)			
	Daily	1-2times/ week	Monthly once/twice	Rarely/ Never	Daily	1-2times/ week	Monthly once/twice	Rarely/ Never
Rice	100	-	-	-	100	-	-	-
Cereals/ millets	21.3	61.4	17.3	-	21.0	52.9	26.1	-
Pulse/legumes	15.8	52.9	31.3	-	20.2	52.4	11.2	16.2
Leafy vegetables	42.8	57.2	-	-	44.6	55.4	-	-
Other vegetables	17.5	49.4	33.1	-	17.1	57.9	25.0	-
Fruits	5.3	28.3	35.8	30.6	6.5	22.3	39.6	29.6
Flesh foods	-	20.0	16.5	63.5	-	25.7	19.4	59.9
Milk	100	-	-	-	100	-	-	-
Milk products: Curds/buttermilk/cheese/ paneer/ butter/ghee	19.9	30.1	22.7	27.3	23.4	26.6	19.2	30.8
Bakery products Biscuits/bread/cake	14.5	46.8	29.3	9.4	15.0	44.3	33.4	7.3
Sweets	-	20.7	45.1	34.2	-	43.9	42.3	13.8
Beverages (Tea/ coffee)	10.5	-	-	89.5	10.0	-	-	90.0
Fast foods Churimuri/gobimanchurian/panipuri/ masalapuri Aerated drinks)	-	40.2	38.5	20.3	-	56.5	28.9	14.6

Consumption pattern of different food by boys is presented in Table 7. The frequency of consuming certain foods was essentially similar for most foods except for flesh foods (20.0 Vs 25.7%) and milk products (19.9 Vs 23.4%), where in boys with behavior

problems consumed in a higher percentage. Further marked differences in consumption were noted in sweets (20.7 Vs 43.9%) and fast foods (40.2 Vs 56.5%). Shafiee S et al (2010) working with normal adolescent boys reported that boys had higher preference for sweet and fast foods. [16]

DISCUSSION

It has been recognized that poor dietary habits, food behavior, eating practices influence behavior outcomes, and this in turn is the major contributor for nutritional problem, behavior problems, and long term health risks in children. [17] The behaviors developed during adolescence continue to exist in adult hood if not corrected can lead to various health problems such as obesity, chronic disease and psychological problems. [18] Thus it is argued that, since adult dietary habits are extremely resistant to change, the optimum time to target change in dietary behavior is the childhood and adolescence. Personal attitudes, beliefs towards food, preferences and also biological changes have been reported the cause for changes in the regularity of eating daily meals in children. Busy schedules and lack of time at meal times are the major reasons for skipping meals. [19] Skipping meals in general was common in all children; breakfast was skipped in higher frequency among girls, while boys skipped lunch and dinner. Our results reveal that, the participating children being 9-14 years and belong to preadolescence and adolescence, hence have exhibited eating practices typical to their age. Skipping meals was found common among both boys and girls, wherein girls frequently skip breakfast. This behavior exemplifies the faulty habits. Children are particularly vulnerable to the nutritional effects of breakfast on brain activity and associated cognitive, behavioral, and academic outcomes. Cerebral metabolic rate

of glucose utilization is approximately twice as high in children aged 4–10 years compared with other age groups. This together with longer overnight fasting period can deplete glycogen stores overnight. Hence breakfast consumption is vital in providing adequate energy for the morning. Consequence to skipping breakfast, children have poor scholastic performance. [20] Other than breakfast, lunch and dinner skipping was more practiced by boys, children with behavior problems were found to skip dinner in higher frequency. Eating packed lunch at school also exhibited vast differences. Children with behavior problems had irregularity in completing packed lunch. Our results point toward eating practices that needs correction, because especially during adolescence and school age, every meal is important and influence health.

Frequency of eating different foods indicates that children in our study consumed greens in higher proportion in comparison with other studies reported from India. [21] Further, other vegetables, fruits and milk were less frequently consumed and bakery foods, fast foods and sweets were frequently consumed. Children with behavior problems exhibited marked differences in frequency of eating certain foods as compared to their normal counterparts, such as legume consumption was less frequent and sweet was more frequently consumed. There are limited studies reporting food behaviors among children with behavior problems.

To enhance nutritional quality of children's diet, an understanding of the factors that influence children's food preferences has often been emphasized. Children eat what they like and leave the rest, and are ignorant of the consequence of faulty eating. [22] Correcting eating behaviors during younger age provides a range of advantages; most primarily better growth and development of children, better

scholastic performance as well as reduces occurrences of unacceptable behaviors like hyperactivity, irritability, and secondly recompenses health problems during adulthood. [23] It has also been established that the dietary habits that emerge during adolescent period remain as a part in adulthood and throughout the individual life process (Kleinman R E, et al 2002). [24]

CONCLUSION

Our findings indicated irregular eating practices among the participant children often which were typical to the adolescent age. However, the important inference in our study is about the eating patterns of children with behavior problems. Although small differences were noted in eating patterns of children with behavior problems as compared to the normal children, low intakes of vegetables and fruits and milk products and higher intake of sweets and fast foods are indicative of nutritional risks.

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