



**Research Article**

## **ASSESSMENT OF THE DIETARY PATTERN OF THE SCHOOL GOING ADOLESCENT IN A RURAL AREA. (M.P.)**

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### **ARTICLE INFO**

**Article History:**

Received 06<sup>th</sup> April, 2021

Received in revised form 14<sup>th</sup>

May, 2021

Accepted 23<sup>rd</sup> June, 2021

Published online 28<sup>th</sup> July, 2021

**Key Words:**

Diet, Dietary Pattern, Breakfast, Lunch, Milk, Vegetables.

### **ABSTRACT**

**Introduction-** Modern India is at nutritional and dietary crossroads. Although breakfast has been called the most important meal of the day, it is skipped most frequently. The importance of breakfast is underscored. Evidence shows that dietary quality declines from childhood to adolescence. The study was carried out in order to see the response of students regarding their food habits as well as to observe the same and also the practice of having breakfast according to their family.

**Methodology-** The study was done in Government School, which was selected by Lottery method. Total of 330 students were selected from class 9 to 12 with the help from table of random numbers. They were interviewed with the help of modified CDC's YRBS questionnaire.

**Result-** Out of 80% of the Hindu students, nearly 74% consumed vegetarian diet while 23% consumed mixed diet. Most of the students were from the Joint family who consumed Salad in their diet. On whole 75.7% students consumed milk, showing a better sign towards good health.

**Conclusion-** Practice of eating breakfast was found to be less than half in participants living either in nuclear or joint family though we know that both the things are mandatory in adolescent group.

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### **INTRODUCTION**

Modern India is at nutritional and dietary crossroads. Diet plays a very important role in growth and development of adolescents, during which the development of healthy eating habits is of supreme importance.<sup>1</sup>

Proper nutrition is commonly believed to be important for school performance. It is considered to be an essential prerequisite for the potential to learn in children.<sup>2</sup>

Although breakfast has been called the most important meal of the day, it is skipped most frequently<sup>3</sup>. The importance of breakfast is underscored<sup>4</sup>. According to the NFHS 4 data, the adolescent age group in girls showed 65% of milk consumption, 43.3% had fruits while fried food and Aerated drinks showed up 47% and 25.5% respectively, while as in adolescent age group of boys 75.5% consumed milk, 50% had fruits while 47.4% and 36.2% had fried fruits and aerated drinks respectively<sup>5</sup>.

Evidence shows that dietary quality declines from childhood to adolescence. The intake of fruits, vegetables, milk and fruit juices decreases, whereas the intake of soft drink increases during this time<sup>6,7</sup>.

The present study covers the rural aspect of Mangliya village, Indore, M.P. It was carried out with the purpose for the assessment of various health aspect in regard with the involvement of breakfast in their daily routine. The impact of the result might help in solving the common community problems such as malnourishment, anaemia, Vitamin Deficiency and so on.

### **AIMS & OBJECTIVES**

To study the response of students regarding their food habits. To observe the food habits and practice of having breakfast according to their family

### **METHODOLOGY**

The study was planned at Rural health and training Centre (RHTC) of Sri Aurobindo Medical College & P. G Institute Indore, under the department of Community Medicine in July 2018. There were 4 schools in the vicinity of RHTC, 1 international private school, 2 private and 1 Govt. school. Using lottery method Government school was selected for the study.

According to WHO an adolescent is an individual in 10-19 years age group<sup>8</sup>, so we decided to include students from 9<sup>th</sup> to 12<sup>th</sup> standard in our study. Prior to the study permission from

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the institutional ethical committee was obtained and then the permission from the school principal was also taken. Youth risk behaviour surveillance system [document on the Internet]: <https://www.cdc.gov/healthyyouth/policy/index.htm>; 2008 [cited 2020]. Available from: <https://www.cdc.gov/healthyyouth/policy/index.htm><sup>19</sup>. In the school there were two sections of each class. Every class had almost 60 - 65 students. Therefore, to achieve our sample we took approximately. 40 - 42 students per class. The students were chosen with the help from Table of Random Numbers. It took almost two weeks to complete the whole proforma. The questionnaire was administered in local language. Respondents less than 10 years and more than 19 years of age were excluded from the study.

**Sample size calculation-** done by the formula  $4pq/l^2$ .

$P=31.3\%$ ,  $q=1-p=68.9\%$  and  $l(\text{allowable error})=5\%$ , Therefore, the sample size came out to be 343, but due to non-response error of 13 students the actual sample size was reduced to 330. Further, with the help of Microsoft Office the appropriate statistics tools were used in the study for analysis.

## RESULTS

It was observed that out of 330 participant's majority of them were Hindus by religion (80.6%), out of which 74.4% consumed vegetarian diet and 23.3% consumed mixed diet. Whereas it was also observed that Muslims constituted a very low percentage (6.6%), out of which 36.3% were non vegetarian and 63.6% consumed both diets.

It was found that 24.8% and 9.7% participants were found not to drink any fruit juice or ate any fruit in past 7 days respectively whereas 72.1% and 87.3% participants were found to consume fruit juice and fruits in past 7 days respectively. On the other hand, it was observed that 17.6% and 14.5% participants were not found to consume salad or potatoes in past 7 days whereas 78.8% and 82.3% participants were found to consume salad and potatoes in past 7 days respectively. It was also observed that 61.8% and 6.7% participants did not consume carrot or any other vegetable in past 7 days respectively, whereas 34.5% and 90.3% consume carrots or any vegetables respectively in past 7 days. It was also found that 26% and 72.7% were found to consume soft drink and milk respectively in past 7 days. And 71.5% of the participants were found to eat breakfast at some occasion in past 7 days.

Out of the total students 87.2% were involved in eating fruits, of which 33.03% belong to nuclear family and 54.2% belongs to joint family. Out of the 78.7% participants eating salad, 29.3% belong to nuclear family and 49.3% belong to joint family. It was observed out of 38.7% students of nuclear family, 30.3% of them consumed milk, also 45.4% out of 61.2% students of joint family consumed the same. On whole 75.7% students consumed the milk which is a better sign towards the good health. It was also found that 71.5% students consumed breakfast, of which 10.6% and 17.8% of students belong to nuclear and joint family respectively.

## DISCUSSION

In a study done by Harika Yadav in Karnataka in 2015, found that most of the participants were Hindus (84.4%), while Muslims and Christians constituted 10% and 0.8% respectively. They also found that 53.5% consumed vegetarian diet 46.5% followed a non-vegetarian along with vegetarian

diet<sup>10</sup>. In another study done by P.V. Kotecha in Baroda in 2013 it was found that 93% of respondents were Hindus.<sup>1</sup>

It was also observed by Kotecha *et al* in Baroda, that nearly half of the participants consumed chocolates, one fourth consumed fast foods while 50% consumed bakery items.

In another study done by Neha rathi *et al* in Kolkata, it was observed that 52% participants refrained from eating non-vegetarian food products and a similar proportion did not consume any fruit (45%). Vegetables (30%) and milk and milk products (36%) were not consumed by many students.<sup>11</sup>

In a study done in South India by Shabnam Omidvar *et al* it was observed 77.6% consumed vegetables daily, 58% consumed fruits daily, 45.9% using bakery items daily and 68.7% consumed fats foods daily or frequently.<sup>12</sup>

In another study done in U.P by Dr.Nirpal Kaur Shukla *et al* observed that consumption of milk was found only in 32.7% adolescent girls, and 22.6% girls stated they never take breakfast before coming to school<sup>13</sup>. Another study done by Baser Md *et al* in Raichur stated that 88% participants reported to use fruits and vegetables occasionally in their diet<sup>14</sup>.

It was observed by Dayana M *et al* in Thiruvananthapuram in 2018-19 that 89% participants consumed milk giving preference to milk with reduced fat and 70% consumed carbonated soft drinks or energy drinks.<sup>15</sup> It was observed by Kalpana Agrahari in Sultanpur city 55% participants were vegetarian by diet and 45% were non-vegetarians and they also found that 63% respondents consumed daily breakfast and 37% did not consume breakfast daily<sup>16</sup>.

In a study done in New Delhi in 2009 by Harrell *et al* found that most of the teenagers understood the importance of eating breakfast and we're aware of its value<sup>17</sup>.

In another study done by Dr.Sithars Balan V in Kerala it was observed that 96.3% samples were non vegetarian and only 3.7% samples were pure vegetarians<sup>18</sup>.

In another study done by Abdul Rehman in Bahrain found that skipping of breakfast was greater in females (62.8%) compared to males (37.2%). Fruits were not consumed by about 27.7% of the respondents and 24.4% preferred potato chips more often<sup>7</sup>.

**Table 1** Distribution of students according to their religion and dietary pattern

Dietary pattern	Hindu	Muslim	Others	Total	%
Veg	198(74.4%)	00	36(85.7%)	234	71
Non-veg	6(2.2%)	8 (36.3%)	2(47.6%)	16	4.8
Both	62(23.3%)	14(63.6%)	4(9.5%)	80	24.2
Total	266	22	42	330	100

**Table 2** Distribution of different food items according to their consumption in past 7 days

Food items	Not consumed within 7 days	Consumed within 7 days	No response
Fruit juice	82(24.8%)	238(72.1%)	10(3%)
Fruits	32(9.7%)	288(87.3%)	10(3%)
Salad	58(17.6%)	260(78.8%)	12(3.6%)
Potatoes	48(14.5%)	272(82.3%)	10(3%)
Carrot	204(61.8%)	114(34.5%)	12(3.6%)
Any other vegetables	22(6.7%)	298(90.3%)	10(3%)
Soft drink	120(36.4%)	196(26%)	14(4.2%)
Milk	62(18.8%)	250(72.7%)	18(5.5%)
Breakfast	76(23%)	236(71.5%)	18(5.5%)

**Table 3** Habit of eating fruits in participants according to the type of family

Family	Yes (%)	No (%)	Total (%)	P value
Nuclear	109(33.03%)	19(5.7%)	128(38.7%)	0.35
Joint	179(54.2%)	23(6.9%)	202(61.2%)	
Total	288(87.2%)	42(12.7)	330(100)	

**Table 4** Habit of eating green salad in students according to the type of family

Family	Yes (%)	No (%)	Total (%)	P value
Nuclear	97(27.3%)	31(9.3%)	128(38.7%)	0.28
Joint	163(49.3%)	39(11.8%)	202(61.2%)	
Total	260(78.7%)	70(21.2%)	330(100)	

**Table 5** Habit of drinking milk in students according to the type of family

Family	Yes (%)	No (%)	Total (%)	P value
Nuclear	100(30.3%)	28(8.4%)	128(38.7%)	0.42
Joint	150(45.4%)	52(15.7%)	202(61.2%)	
Total	250(75.7%)	80(24.2%)	330(100)	

**Table 6** Practice of eating breakfast according to the type of family

Family	Yes (%)	No (%)	Total (%)	P value
Nuclear	93(28.1%)	35(10.6%)	128(38.7%)	0.71
Joint	143(43.3%)	59(17.8%)	202(61.2%)	
Total	236(71.5%)	94(28.4%)	330(100)	

## CONCLUSION

Practice of eating breakfast and consumption of milk was found to be less than half in participants living either in nuclear family or joint family though we know that both the things are mandatory in adolescent age group. Therefore, in order to improve the dietary practices in adolescents, we need to emphasize on new health promotional strategies and timely monitoring of the implemented strategies.

## Recommendations

Emphasize adolescents in adopting healthy eating habits along with healthy life style. Educating and motivating the adolescents. Skipping breakfast should be a matter of serious concern, not only for adolescents but for people of all ages. Parents and teachers should also be made aware for adopting healthy eating habits at home as well as in school.

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