

## Dietary Habits of School going Children in Lahore, Pakistan

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### ABSTRACT

**Background:** Diet and nutrition plays a vital part in a child's life and has lifelong impact on the physical, mental and emotional wellbeing of the children. Most of the eating habits and food preferences are acquired very early in the childhood. School atmosphere and the peer pressure has a significant impact upon these likings and disliking's. This study was carried out in Lahore, Pakistan.

**Method:** Qualitative diet survey was carried out and an oral questionnaire method was utilized. The data included demographics, educational status of both the parents and the food preferences of various dietary groups. Data was analyzed with SPSS 24.

**Results:** 32% of the students preferred pizza whereas only 6% of the students chose traditional food like Daal. Conversely 62% of the students picked milk as a non-preferred food item. Chicken was the most liked meat while fish was the least preferred choice in this category.

**Conclusions:** There is a need to teach healthy nutrition from an early age via mass educational campaign. Parents and teachers need to be involved because if the current trend continues then significant morbidity and mortality effects on health of our future generations will ensue.

**Keywords:** Dietary habit, pizza, daal, food

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### INTRODUCTION

Children form an integral part of any society. Indeed a quarter of our population comprises of young children. The dietary habit that the child acquires has a significant impact on his adolescent life as well as the future health along with physical emotional and mental development<sup>1</sup>. Quality of his/her nutrition will determine the physical and scholastic development<sup>2</sup>. Indeed this is a time to develop habits that will last a lifetime<sup>3</sup>. The malnutrition whether over nutrition or under nutrition can affect the development, growth whether physical or mental as well as the scholastic performance of the kids. The regional customs, traditions, and socioeconomic factors along with the availability of food items determine the overall dietary preferences of any society. There are many surveys and questionnaire regarding the qualitative and quantitative assessment of food intake in different segments of the population. However this sub segment is difficult to assess because children tend to have a limited span of attention and are either not good at recall of the facts and have not yet developed efficient cognitive abilities for self-reporting and thus are generally not able to provide accurate responses<sup>4</sup>. Therefore the researchers usually have to collect information from the parents /caregivers and while this seems to be a satisfactory alternative when the population of interest is smaller children, however with the advent of school canteens/tuck-shops and thelax outside the schools parents may at times be unaware actually of what is going on with the kids out of sight<sup>5</sup>.

The objective of the present study is to determine the eating habits and preferences of school going children in the community.

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### METHODS

A cross sectional study was carried out in a public school in Lahore. School had an enrollment of 1000 kids. Admission into the school was open to general public. Study was done from ages 5 to 11 years.

There were 550 students in the selected age group. A qualitative dietary assessment was carried out for the selected students. Subjective eating routine review was completed by oral poll technique. The polls were disseminated to all guardians, informed consent was taken and they were detailed verbally the motivation behind the study. The technique for filling the survey was clarified in detail and guardians were guaranteed about secrecy of the substance.

### RESULTS

Table one depicts the results obtained from a sample size of 650 people. Out of these 650 people, 350 were boys; making it approximately 53.85% and 300 were girls making it 46.15% of the total. The mean height amongst the boys was 151cm, as compared to the mean height of girls which was 143cm. The weight amongst both the groups also varied with the boys having a mean weight of 28.6 kg and girls having a mean weight of 27.4kg. The BMI was calculated using the average heights and weights of the participants making it 12.5 for the boys and 13.4 for the girls.

The second part of the table shows the average number of siblings each boy/girl had within their families. The majority of Girls had 3-4 siblings within their families making it the most prevalent.

In table 2 the children were distributed based on their parent's educational status. A significant number of

children had mothers who were educated from middle to high school, a few have completed their education from intermediate to bachelors while approx. 24% had an education below primary level. Most of the fathers either had done their bachelors or had an intermediate level of education. A few had completed their masters while a minute number had a below primary level of education.

Tables 3 show the food preferences among the children. The first table shows the frequency of preferred foods with fast food items, especially Pizza and burgers being on the top of the list. Most of the children showed their dislikes as well, with milk and vegetables being the least preferred items.

Majority of the children consumed some sort of meat with chicken and mutton being the most commonly consumed. 53% and 23% respectively. Fish and beef were not in the preferred list. The survey continued with asking the boys and girls about their drink preferences (table 6). Majority of the participants preferred carbonated drinks over any other drinks. (56.5%) and Lassi were the least liked drinks making canned and fresh juices an average option among the boys and girls.

Table 1:

	Boys	Girls
Sample Size	350 (53.85%)	300 (46.15%)
Mean Height	151 cm	143 cm
Mean weight	28.6 kg	27.4 kg
BMI	12.5	13.4
<b>Number of family members</b>		
1-2	165 (47%)	77 (38.5%)
3-4	135 (38.6%)	93 (46.5%)
4+	50 (14.3%)	30 (15%)

Table 2:

Description	Boys	Girls
<b>Father's educational status</b>		
< Primary	8 (2.2%)	5 (1.6%)
Middle to High school	117 (33.3)	130(43.3%)
Intermediate to bachelors	198 (56.6%)	145(48.3%)
Masters	27 (7.7%)	20 (6.7%)
<b>Mothers Educational Status</b>		
< Primary	84 (24%)	47 (23.5%)
Middle to High school	146 (41.7%)	99 (49.5%)
Intermediate to bachelors	112 (32.5%)	50 (25%)
Masters +	8 (2.2%)	4 (2%)

Table 3:

Preferred foods		Non Preferred Foods		Meat Preferences		Drink Preferences	
Item	%	Item	%	Item	%	Item	%
Pizza	202 (31%)	Egg	230 (35%)	Chicken	296(53.8%)	Carbonate	311(56.55%)
Burgers	180 (28%)	Vegetables	389 (60 %)	Mutton	130(23.6%)	Canned Juices	140(25.45%)
Pasta	40 (6%)	Milk	403 (62%)	Beef	79 (14.4%)	Fresh Juices	60 (10.9%)
Shawarma	20 (3%)			Fish	45 (8.2%)	Lassi	04 (0.73%)
Rice	20 (3%)					Milk	35 (6.4%)
Daal	38 (6%)						

## DISCUSSION

Good nutrition is the foundation of lifelong health, and generally it begins in infancy. Health problems that are associated with nutrition often start in childhood, and are the reason of significant mortality and morbidity all over the world. The improper feeding of children and adolescents as well as problems of unhealthy diets has been reported in the literature since the early 1960s<sup>6</sup>.

In the course of conducting the present study we have reached similar conclusions. In a study conducted in Bahrain, dairy and milk intake was seen in half of the kids while one fourth of the school youngsters had an everyday utilization of healthy fruits and vegetables<sup>7</sup>. In contrast our study showed that 62% of the children viewed mild as a non-preferred food item.

Just like in other high-income countries, in Poland the major dietary problem is the high energy intake. Yet the problems of imbalanced diet, under-nutrition and unhealthy pattern of daily meals, which are important quantitative issues, seem to be underestimated<sup>8</sup>.

In a comparative study done school kids in Malaysia 31% milk and dairy items were consumed every day while around 30% consumed vegetables daily and 20% of the kids expended organic products like fruits daily. Nearly 60% of them favored burgers and fries without realizing that these were unfortunate nourishment inclinations<sup>9</sup>. Nearly 31% of the population in our study viewed Pizza as the preferred food while 28% had Burgers in their priority list.

In a study completed in India, school youngsters between the ages of 10-19 years were inquired about their food intake in the first 24 hours and their dietary inclinations. Strangely a vast majority did not prefer to take fruits or vegetables and had inclination towards consuming fast food. Indeed 30% admitted to have eaten fast food in the preceding 24 hour period<sup>10</sup>. This was in line with the findings in our study.

A comparable finding was additionally detailed from an investigation completed in Korea where it was noticed that school kids in both urban and rural territories favored quick nourishments like pizzas<sup>11</sup>. In agreement our study population also viewed Pizza as the most preferred food.

In a survey carried out in Ghana among youths, natural products were infrequently eaten by 56% and vegetables were once in a while eaten by 48% of the investigation subjects surveyed<sup>12</sup>. Similarly 59% of the students in our present study did not prefer vegetables as a preferred food.

The dislike of certain foods by school children has also been elsewhere. Devadas *et al* have reported that 28% school going children of Coimbatore disliked papaya, idli and greens, while 14% and 7% children were not fond of vegetables and guava, respectively. Lack of knowledge of nutritional value of the eatables was the main reason of dislike of the students for certain food items. Therefore it is of paramount importance to educate the kids regarding benefits of the nutritive healthy diets for their optimum development and growth<sup>13</sup>.

**Limitations:** This study was done in a small population and as such cannot be taken as a representative of the entire population and as such reflects food preferences of primary school students only. Since the questionnaire was filled by the parents there are chances that these choices may not be reflective of the actual student preferences.

## CONCLUSION

The food preferences of school going children shows that there is a significant shift in liking of fast food like pizza and burgers whereas the known nutritious dietary items have come into the non-preferred items. It is alarming that milk remains as one of the most non preferred food. There is high probability that such trends would result in severe micro and macronutrient dietary deficiencies which will lead to different diseases and have significant morbidity and mortality impact on our healthcare system.

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