

ORIGINAL ARTICLE**NUTRITIONAL STATUS OF PUBLIC PRIMARY SCHOOL CHILDREN OF LOW-INCOME PARENTS IN URBAN AREA OF SIALKOT**

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Introduction

Nutritional status is an important component of Primary Health Care (PHC), it is one of the Millennium Development Goals (MDGs) and a fundamental indicator of the Socioeconomic Status (SES) of Pakistan.¹ According to a research there are about 20 million severely malnourished children in

South Asia and in sub-Saharan Africa, about 1 million of which die every year, the majority is never brought to health facilities.² A strong community based appropriate care is possible if the active case finding is established. This can be done through sensitising and mobilising communities and to decentralize health services at grass root

level. It requires very careful monitoring as nutrient adequacy is hard to achieve. Children who already are suffering from severe acute malnutrition need treatment.²

There are many determinants of malnutrition amongst school going children.

These include poverty, illiteracy amongst both the parents, environmental factors, diseases, and inadequate diet etc, which are even more powerful than genetic predisposition in producing deviations from the reference values.³

Primary school age is a dynamic period of physical growth and mental development of a child. Research indicates that nutritional deficiencies and poor health in primary school age children are among the causes of low enrolment, high absenteeism, early dropout and poor classroom performance.³

The main nutritional problems faced by a school-age child include wasting, stunting, underweight, anemia, iodine deficiency, vitamin A deficiency, vitamin D deficiency, iron Deficiency etc.⁴

Research was conducted on nutritional status of school going children. Between age group of 8 (eight) to 16 (sixteen) years in Lahore district. In this study, most of the students were boys and their mothers were mostly housewives. They belonged to lower middle socioeconomic class. Their average weight was 25 kg and their average height was 132 centimeter. Most of the students were taking breakfast, lunch and dinner. They were eating wheat, flat bread, egg, milk, yogurt, dry fruits and biscuits etc. Most of the students were not taking any poultry, fish, mutton and beef.⁵

A research was conducted for nutritional status assessment of school going children in Faisalabad. It was found that 36.1% children were stunted and 45.3% were underweight. 25.2% were below standard weight for height. Among urban children, 33% were below standard weight for height and 32.3% were below standard weight and

32.7% were wasted. In rural area 40.9% were stunted, 64.7% were underweight and 33.3% were wasted. It was concluded that poverty, lack of safe water supply and sanitation were the main root causes.⁶

Objective:

The present study is to evaluate nutritional status of public primary school children of low income parents in urban areas of Sialkot.

Methodology:

This was a cross sectional study among primary school children of a government sector school in a lower socioeconomic class area of Sialkot. Population of this industrial city is 753000 according to 2023 survey report.⁷

A total of 100 boys between the age group of 6-14 years studying in a government school belonging to a lower class income group parents were included in the study. The majority of the parents were factory workers, their income ranged between Rs. 20,000/- to Rs. 50,000/- per month.

Height, weight, head circumference and mid arm circumference of each child was measured in the metric system using standardized technique.

Anthropometric method:

Height: This is measured with the child or adult in a standing position. The head should be in the Frankfurt position (a position where the line passing from the external ear hole to the lower eye lid is parallel to the floor) during measurement, and the shoulders, buttocks and the heels should touch the vertical stand.

Weight: Weight of children was measured using digital/ electronic weighing scale.

Mid upper arm circumference (MUAC): This was measured using a measuring tape.

Head circumference (HC): It was the measurement of the head alongwith the supra orbital ridge (forehead) anteriorly and occipital prominence (the prominent area on

the back part of the head) posteriorly. It was measured to the nearest millimetre using flexible, non-stretchable measuring tape around 0.6cm wide was used for this purpose.

Height for age (stunted) and weight for age (underweight) was calculated for each child and compared with the WHO/NCHS standard charts. Cut off values between $\pm 2SD$ were considered normal.

Results

We collected data of 100 students (boys) of age between 6-15 Years of a government school in Sialkot.

Following is the distribution of students according to age.

Age	Frequency	%
6-7	8	8%
8-9	22	22%
10-11	25	25%
12-13	33	33%
14-15	12	12%

Table 1: Demographic characteristics of study population.

Figure 1: Age/ Arm Circumference Graph

According to the above data the number and percentage of stunted and underweight children is given as:

Age in years	N=	Stunted	%	Under-weight	%
6-15	100	20	20%	57	57%

Discussion

This study was conducted at a small level in an urban area of Sialkot City of Pakistan and children belonging to lower socioeconomic class were included. Malnutrition continues to be a major problem in Pakistan. In the current study the overall prevalence of stunting was 20% and underweight was 57%.

The prevalence of stunting was quite similar to that of the findings of PMRC National

health survey of Pakistan NNS 2011 which revealed that indicators of stunting and wasting were worsening during last 10 years, which showed that 43.7 percent children were stunted; this was relatively high than NNS 2001(41.6 percent). Similar trends observed for wasting, 15.1 percent children in Pakistan were suffering from wasting in NNS 2011 as compare to 14.3 percent in NNS 2001. But luckily underweight rates remained constant during last one decade (31.5%).⁷

The most of the children were belonging to low income families because their parents were factory workers, so as a result the malnutrition was prevailing in these children due to poverty.

Our study prevalence 57% is comparable to the 47% prevalence of malnutrition found in a 1993 study among children aged 5-10 years in rural Peshawar, Pakistan.⁸

Similarly high prevalence of malnutrition have been observed among school-aged children in low-income developing countries such as India and Indonesia.⁹

As Pakistan happened to be a developing country, so we are having some figures like 20% stunted growth and 57% malnutrition.

There have been similar studies done in other countries such as Poland where a comparison of the local children with WHO standard charts have been done.¹⁰

Conclusion

Considering weight, there is appreciable malnutrition prevailing among the primary school children of Sialkot. Most of them belong to low-income, and unemployed parents. However considering height of the children, most of them were within normal standards of skeletal growth. The prevalence of stunting and underweight in the school going children is found to be consistent with national health survey and other studies in Pakistan.

Recommendation

Although more wider scale studies are required to understand the sociocultural correlates of malnutrition in the school going population of Pakistan. Findings suggest the need to implement evidence-based child health policy and strategies, prioritizing the poor and socially disadvantaged population. Future national nutritional surveys in the developing countries ought to consider including school-aged children and nutritional component of the child health programs need to be strengthened.

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