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Nutritional Status in Children of Urban Slums in Western Rajasthan

[1]Dr. Zakariya Chouhan, [2*]Dr. Sneha Maheshwari, [3]Dr. Monica Sindhu, [4]Dr. Sandeep Kishore Singh, [5]Dr. Kritika Mathur

[1] (MPH, BDS, FAGE) Project Coordinator, Fluorosis Mitigation Program, Rajasthan.
[2](BDS, FAGE), Dental Practitioner, Jodhpur, Rajasthan.
[3] (MPH, BDS, FAGE) Assistant Research Officer, INCLEN international trust, New Delhi.
[4]Program Head, FMP, Rajasthan.
[5]BDS, (MPH) Post Graduate student, Prasanna School of Public Health, Manipal.
**Corresponding author: *Dr. Sneha Maheshwari*

Abstract
Aim: *Undernutrition in childhood was observed one of the major factors for child mortality in developing countries. The aim of the present study was to evaluate the nutritional status of children living in urban slums of Jodhpur city in western Rajasthan.*
Material and methods: *The study was cross-sectional and base in an urban slum. The study was conducted in urban slums of Jodhpur city. Children under 5 year of age were involved in the study. Total 416 participants were involved in the study. All data were analyzed with the help of SPSS Version 16.*
Results: *Out of 416 participants 234 (56%) children found malnourished and remaining 182 (44%) of children were not in good health, most of them found in border line cases. Hygiene status was very bad, no proper sanitation and safe drinking water for them.*
Conclusion: *Most the children in this study were poor nutritional status and illiterate. There is an urgent need for developing a program for people living in urban slums such as skills-based nutrition education, fortification of food items, maintain proper hygiene, improved knowledge about proper nutrition and healthy eating habit, the harmful effect of open defecation.*
Keywords: *Urban slums; nutritional status; western Rajasthan, socio-economic status*

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I. Introduction

Urbanization is running fast in the present world. People are migrating more in urban areas from a rural part of the country for their livelihoods and there are major features of the cities in low income and middle-income countries. Most of them get success, good shelter and good health. But a major part of this population is struggling with their work. They are daily wages labor, and they live mostly in slums. Some slums are of town size. According to a study done by the University of California[1], one-third of the population on this globe lives in slums and 60% of the urban population in developing countries lives in slums, which includes millions of children. People living in slums were struggling with their day to day life activities. Most of them suffered from diseases like diarrhea because of unsafe drinking water, malnutrition because of the scarcity of food and nutrition, respiratory disease due to overcrowding or indoor air pollutions, less vaccination of children due to their migratory nature and unawareness and various other challenges which they are facing in their daily life. Undernutrition in childhood was observed as one of the major factors for child mortality in developing countries. The aim of the present study was to evaluate the nutritional status of children living in urban slums of Jodhpur city in western Rajasthan.

II. Material and Method

The study was cross-sectional and based in an urban slum. The study was conducted in urban slums of Jodhpur city. Children under 5 years of age were involved in the study. Total 416 participants were involved in the study. The sample size was carried out 416, at 95% confidence interval and 5% error also accounting for 10% attrition and missing data. The participants were selected from simple random sampling technique. Children were selected from different slums setting around the city. Anthropometric measurements were carried out following with standard methods. The data included weight, recumbent length, and height. Weight was measured with the help of salter weighing machine. Height was measured against a non-stretchable tape fixed to a vertical wall with the participant standing on the level of the surface. Leaning length was measured by using an infant measuring board. All data were analyzed with the help of SPSS Version 16.

III. Result And Discussion

The demographic data of the population studied is shown in Table 1. Out of the 416 participants, 234 (56%) children were found to be malnourished and remaining 182 (44%) of children were not in good health, most of them were border line cases. Children in urban slums were not attending schools as their parents are usually labor who are depending on their daily wages and event they are uneducated and not aware of the role of education. Lots of children were seen playing around their parents during their work time on construction sites which are harmful to them. Hygiene status was very bad, no proper sanitation and safe drinking water for them. They are prone to hundreds of disease around them. During the study, it was recorded that 56% (233) participants were male and 44% (189) were female. Children were divided into sub-variables of the age group of 0-6, 7-11, 12-23, 24-35, 36-47 and 48-59 months. Most of the children who were found to be malnourished were under 48-59 months of age. It may be due to the reason that, during data collection, these children were found more as playing outside the homes and in the periphery of the slums. A study done in Haryana state recorded that people living in urban slums have 48% prevalence of tobacco chewing which ultimately increases oral cancer among the community which leads to a socioeconomic burden on the family.[2] A study done in Indore slums suggested that dental caries prevalence is 73% in which required immediate treatment for their oral health. One more study was done in Barely (U.P.) showed that mean height and weight of the students were lower as compared to CDC guidelines for children and study also supported that education level is one of the significant factors for nutritional stability of children.[3]Nutrition is one of the major factors for health and well being of the individual. Malnutrition is one of the major issues in public health especially in countries which are in developing phase.[4] A study done in western Maharashtra suggested that children who are under 5 years of age living in urban slums have a major problem of malnutrition, which was predominantly seen in the girl child. The study suggested that more focus was needed for nutrition of children especially for girls, educating their mothers and educating them about family planning.[5] It was observed in a study done by Kulkarni MV et al., in the urban slums that with an increase in the education level of girls there is a significant decrease in anemia problem.[6] Educated girls were more aware of their nutritional status and this further helps in taking care of the nutritional status of their households members. One more study done by Bhattacharyya H et al., supported that education is a key concept in the urban slums by which various problems can be resolved. The study shows a significant association between nutritional level and mother's literacy level.[7] One more study done in urban slums in Pondicherry area of south India observed that people were having huge burden of disease like diarrhea, ARI and malnutrition.[8] Study done by Acharya et al., in Bikaner district of Rajasthan on under 5-year age group showed that malnutrition and malnourishment were observed more in males as compare to females and 25.1% children were observed wasting and children with underweight observed 37.6% in male and 26.2% in female.[9]

IV. Conclusion

Most of the children in this study were having poor nutritional status and were illiterate. There is an urgent need for developing a program for people living in urban slums such as skills-based nutrition education, fortification of food items, maintenance of proper hygiene, improved knowledge about proper nutrition and healthy eating habit, the harmful effect of open defecation. They are far away from good health and education. There must be a program for making people aware of good health and for maintaining proper hygiene among the community.

V. Limitation

As this study was conducted in urban slums setting, children of all age group were not included equally as most of the places people refuse to allow their children or refused to bring their children for taking measurements.

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Tables

Table 1: Table showing demographical distribution

Variable	Level of Variable	Frequency	Percentage
Age	0-6 Month	46	11%
	7-11 Month	41	10%
	12-23 Month	34	8%
	24-35 Month	65	16%
	36-47Month	60	14%
	48-59Month	170	41%
Gender	Male	233	56%
	Female	189	44%
Religion	Hindu	274	66%
	Muslim	142	34%
Malnourishment	Yes	234	56%
	No	182	44%

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