

A CROSS-SECTIONAL STUDY TO FIND THE PREVALENCE AND VARIOUS SOCIO-DEMOGRAPHIC FACTORS OF MALNUTRITION AMONG 0-5 YEARS CHILDREN IN AN URBAN FIELD PRACTICE AREA RAJAPURS. R. Nigudgi¹, Sunil Deshmukh², Mohammad Waseem Faraz Ansari³, Srinivas Reddy⁴**HOW TO CITE THIS ARTICLE:**

S. R. Nigudgi, Sunil Deshmukh, Mohammad Waseem Faraz Ansari, Srinivas Reddy. "A Cross-Sectional Study to find the Prevalence and Various Socio-Demographic Factors of Malnutrition among 0-5 Years Children in an Urban Field Practice Area Rajapur". Journal of Evolution of Medical and Dental Sciences 2015; Vol. 4, Issue 69, August 27; Page: 11964-11969, DOI: 10.14260/jemds/2015/1727

ABSTRACT: BACKGROUND: Childhood is the most vulnerable phase in the life of human being, nutritional inadequacies will result in the hampering of the development of the body. If this nutritional inadequacy is continued for a long period of time it results into malnourishment. So the current study was undertaken to know the prevalence of malnutrition in under five children in urban field practice area. **METHODS:** The present study was a cross sectional study conducted in urban field practice area Rajapur which include 759 children whom 450 males and 309 females. Anthropometric data was collected from the study population and analysis was done according to IAP Classification. **RESULTS:** The percentage of underweight among under five children according IAP classification was 37.94%. Age wise distribution of malnourishment was found to be more 25% in 1-2 years. Males were more malnourished 51.04% than females. **CONCLUSION:** Malnourishment was more prevalent in 1-2 years and 2-3 years and in the SES IV followed by III. Mothers should be taught regarding the treatment of the common ailments in the house such as diarrhea using homemade ORS and to monitor the growth of their children by regular weighting and noting on the WHO growth charts, so that the growth faltering can be diagnosed at an earlier stage and the necessary timely interventions can be taken.

KEYWORDS: Under five children, Urban area, Nutritional status.

INTRODUCTION: Malnutrition continues to be a primary cause of ill health and mortality among children in developing countries. It is a major public health problem and accounts for about half of all child deaths worldwide.¹ The level of childhood malnutrition is exceptionally high in South Asia, ranging from 45-48% in India, Bangladesh and Nepal, 38% in Pakistan and 30% in Sri Lanka. The underlying causes of malnutrition vary from poverty, low levels of education and poor access to health services.² Nutrition plays a very important role in the physical, mental and socio-emotional development of a child. The infants and pre-school children are most vulnerable to retardation in growth as a result of malnutrition particularly under-nutrition. Malnutrition is one of the major killers of children in developing countries.³ Children are in a constant phase of development. Their body is in a phase of constant wear-tear and repair, their brain is developing, bones are growing. These growing children require constant supplementation of calories, proteins and micronutrients to keep the pace of increased demands of the body. Since childhood is the most vulnerable phase in the life of human being, nutritional inadequacies will result in the hampering of the development of the body. If this nutritional inadequacy is continued for a long period of time it results in the growth faltering manifested in the form of low weight, small height, low.⁴ The risk of dying from a disease is twice as high for mildly malnourished children, five times as high for those moderately malnourished and eight times greater for children classified as severely malnourished when compared to normal children.⁵ Health has been considered as one of the major goals of education and social development amongst the children.

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But little has been done in the direction of achieving the objective of optimal health. Children as a cohesive group occupies an environment that gives for systematic planning, implementation, and evaluation to develop desirable results for a positive health.⁶ Annually, over 10 million children in low- and middle-income countries die before they reach their fifth birthday. Seven in ten under-five deaths in such countries are from illnesses such as diarrheal dehydration, acute respiratory infections, measles, malaria, and malnutrition. All these five conditions can either be treated or prevented. Despite this, more than 25,000 under-five children die from these illnesses each day. Factors that contribute to illness are poor living conditions like lack of safe water supply, poor hygiene, overcrowding; inability of parents to recognize danger signs; and delay in seeking appropriate treatment. The problem is compounded by the poor quality of care provided at the health facilities.⁷ Projections based on 1996 analysis in the Global Burden of Disease indicate that these conditions will continue to make major contributions to childhood mortality through the year 2020 unless significant greater efforts are made to control them.⁸

MATERIAL & METHODS: This cross sectional study was conducted in under five children in urban field practice area of M. R. Medical College in Gulbarga. Ethical clearance was taken from the institutional ethical committee. Total population of under five children was 759 by house to house survey in 7000 population (Approximately 10% of population).¹⁴

AIMS AND OBJECTIVES:

1. To assess the prevalence of malnutrition among 0-5 years children.
2. To describe certain Socio-demographic characteristics related to malnutrition among 0-5 years children.

RESULTS: Table 1 shows that majority of the male children were in the age group of 0-1 years (24.30%) followed by 1-2 years & 4-5 years (21.53%) and least in 3-4 years (15.28%) respectively. Whereas majority of the female children were in the age group of 4-5 years (25.26%) followed by 1-2 years (21.21%) and 2-3 years (20.20%) and least in the age group of 3-4 years (15.15%) respectively.

Table 2 shows that among 759 studied children, 471 (62.06%) were normal. Whereas among undernourished children according to IAP classification, Majority belonged to Grade-I 144 (18.97%) followed by Grade-II 78 (10.28%), Grade-III 50 (06.59%) and least belonged to Grade-IV 16 (2.11%) respectively.

Table no 3 reveals that among 288 malnourished children, majority of the malnourished children belonged to the age group of 1-2 years 72 (25.00%) followed by 2-3 years 69 (23.96%), 0-1 years 53 (18.40%) and least were in the age group 3-4 years & 4-5 years 47 (16.32%) respectively and which was found to be statistically highly significant ($P < 0.001$).

Table no 4 reveals that malnutrition was more in males 147 (51.04%) as compared to females 141 (48.96%) which was statistically highly significant ($P < 0.001$).

Table no 5 reveals that among 288 malnourished children, majority of the children belonged to the SES class-IV 134 (46.53%) followed by class-III 91 (31.60%) and least belong to class-I 10 (3.47%) respectively, which was statistically highly significant ($P < 0.001$).

DISCUSSION: Our present study was done among 759 children of Rajapur, Gulbarga. The prevalence of underweight among under five children according to IAP classification was 37.94%, majority of

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whom belonged to Grade-I 144 (18.97%) followed by Grade-II 78 (10.28%), Grade-III 50 (06.59%) and least belonged to Grade-IV 16 (2.11%) respectively. Similarly a study done by Stalin P et al.,⁹ on prevalence of Underweight and its Risk Factors among Under Five Children in a Rural Area of Kancheepuram District in Tamil Nadu, India found that the prevalence of underweight among under five children was 52.9%. According to IAP classification, the proportions of mild and moderate malnutrition were 47.1% and 30.9%. Around 7% of children were severely malnourished. Similarly a study done by Saiprasad Bhavsar et al,¹⁰ on Impact of Health Intervention on Nutritional status of Malnourished Children in an Urban slum of India found that majority of underweight children belonged to Grade-I 38.7% followed by Grade-II 25.3% and least belonged to Grade-IV 0.5% respectively.

Similarly a study done by Sanjana Gupta et al,¹¹ in An Intervention Study on Malnutrition among Under Five Children in a Rural Area of Jammu found that prevalence of malnutrition was 20.87%. 14.56% of the children were having grade-I malnutrition and 5.83% of the children were having grade-II malnutrition and none of the children were having grade-IV malnutrition. Similarly a study done by Shubhada S et al,¹² on an Epidemiological study of malnutrition among under five children in a section of rural area in Loni found that the prevalence of malnutrition was 50.46%. Majority of malnourished children belong to grade-I (51.0%) & grade-II (41.9%) of IAP classification and only 0.2% children were severely malnourished.

Among 288 malnourished children, majority of the malnourished children belonged to the age group of 1-2 years 72 (25.00%) followed by 2-3 years 69(23.96), 0-1 years 53 (18.40%) and least were in the age group of 3-4 years & 4-5 years 47 (16.32%) respectively. Similarly a study done by Stalin P et al,⁹ on prevalence of Underweight and its Risk Factors among Under Five Children in a Rural Area of Kancheepuram District in Tamil Nadu, India found that The prevalence of underweight among infants was 62.4% which was the highest as compared to other age groups. Similarly a study done by Sanjana Gupta et al,¹¹ in an Intervention Study on Malnutrition among Under Five Children in a Rural Area of Jammu found that Malnutrition was observed to be more in the age group of 13-48 months (81.39%) and least common in the age group of 0-12 months (6.97%). Similarly a study done by Shubhada S et al,¹² on an Epidemiological study of malnutrition among under five children in a section of rural area in Loni found that majority of Children from the age group of 1 to 3 years were significantly malnourished.

In our study malnutrition was more in males 147 (51.04%) as compared to females 141 (48.94%) which was statistically significant ($P<0.001$). Similarly a study done by Sanjana Gupta et al,¹¹ in an intervention study on malnutrition among under five children in a Rural area of Jammu found that Malnutrition was more prevalent among male children (72.09%). Similarly a study done by Shubhada S et al,¹² on an Epidemiological study of malnutrition among under five children in a section of rural area in Loni found that females (54.30%) were more malnourished than males.

Among 288 malnourished children, majority of the malnourished children belonged to the SES class-IV 134 (46.53%) followed by class-III 91 (31.60%) and least belong to class-I 10(3.47%) respectively, which was statistically highly significant ($P<0.001$). Similarly a study done by Stalin P et al,⁹ on prevalence of Underweight and its Risk Factors among Under Five Children in a Rural Area of Kancheepuram District in Tamil Nadu, India found that the prevalence of Underweight among under five children who belongs to class 1 and class 2 SES was 40% and 43.7% and under five children belonging to class 4 SES were more malnourished (63.4%). Similarly a study done by Shubhada S et al,¹² on an Epidemiological study of malnutrition among under five children in a section of rural area in Loni found that Majority of Children from the socioeconomic status IV and V were malnourished.

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Age in Years	Sex				Total	
	Male		Females			
	No.	%	No.	%	No.	%
0-1	109	24.30	56	18.18	166	21.81
1-2	97	21.53	66	21.21	162	21.40
2-3	78	17.36	62	20.20	141	18.52
3-4	69	15.28	47	15.15	116	15.23
4-5	97	21.53	78	25.26	175	23.05
Total	450	100.00	309	100.00	759	100.00

Table 1: Age and sex wise distribution of the study population

IAP Classification	No.	%
Normal	471	62.06
Grade I	144	18.97
Grade II	78	10.28
Grade III	50	6.59
Grade IV	16	2.11
Total	759	100.00

Table 2: Distribution of malnourished children according to IAP classification

Age	Malnutrition		Normal		Total	
	No.	%	No.	%	No.	%
0-1	53	18.40	112	23.78	165	21.74
1-2	72	25.00	90	19.11	162	21.34
2-3	69	23.96	72	15.29	141	18.58
3-4	47	16.32	69	14.65	116	15.28
4-5	47	16.32	128	27.18	175	23.06
Total	288	100.00	471	100.00	759	100.00

Table 3: Age-wise distribution of malnutrition among 0-5 year's children

$\chi^2 = 22.00$ d. f=4 P < 0.001.

Sex	Malnutrition		Normal		Total	
	No.	%	No.	%	No.	%
Male	147	51.04	303	64.33	450	59.29
Female	141	48.96	168	35.67	309	40.71
Total	288	100.00	471	100.00	759	100.00

Table 4: Sex-wise distribution of malnutrition among 0-5 year's children

$\chi^2 = 13.1$ d. f=1 P < 0.001.

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SES	Malnutrition		Well Nourished		Total	
	No.	%	No.	%	No.	%
Class I	10	3.47	15	3.18	25	3.29
Class II	28	9.72	150	31.85	178	23.45
Class III	91	31.60	247	52.44	338	44.53
Class IV	134	46.53	59	12.53	193	25.43
Class V	25	8.68	0	0.00	25	3.29
Total	288	100.00	471	100.00	759	100.00

Table 5: Distribution of malnourished children based on Socio-Economic status classification

$\chi^2 = 177$ d. f. = 4 $P < 0.001$.

CONCLUSION: Nutritional education should be considered as a major intervention to reduce the problem of PEM. Use of non-expensive, culturally acceptable nutritious recipes should be promoted and demonstrated. As the education status of the mothers cannot be improved further but there is lot of scope to improve the knowledge of mothers regarding proper child rearing practices. Mothers should be taught regarding the treatment of the common ailments in the house such as diarrhoea using homemade ORS and to monitor the growth of their children by regular weighting and noting on the WHO growth charts, so that the growth faltering can be diagnosed at an earlier stage and the necessary timely interventions can be taken.¹³

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AUTHORS:

1. S. R. Nigudgi
2. Sunil Deshmukh
3. Mohammad Waseem Faraz Ansari
4. Srinivas Reddy

PARTICULARS OF CONTRIBUTORS:

1. Professor, Department of Community Medicine, MRMC, Gulbarga.
2. Assistant Professor, Department of Community Medicine, MRMC, Gulbarga.
3. Assistant Professor, Department of Community Medicine, MRMC, Gulbarga.

FINANCIAL OR OTHER

COMPETING INTERESTS: None

4. Assistant Professor (Biostatistics),
Department of Community Medicine, ESIC
Medical College, Gulbarga.

NAME ADDRESS EMAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Sunil Deshmukh,
Assistant Professor,
Department of Community Medicine,
MRMC, Gulbarga.
E-mail: drsunil.deshmukh@gmail.com

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