

**Assessment of Health Status of Pre-school Children in Auraiya district of  
Uttar Pradesh**

**ABSTRACT:** Pre-school children undoubtedly are the most crucial segment of our population. Assessment of nutritional status of community clinical examination is one of the first steps in the formation of any public health strategy to overcome malnutrition. The 100 pre-school children were selected at random from 5 village of Bhagyanagar block of Auraiya District for their clinical examination in 2016. Fifty eight children fell between 1-3 years of age while 42 children came under 4-6 years of age. It was evident from results that most prevalent from nutritional deficiency was Anemia (44%) followed by protein energy malnutrition (43%) and deficiency of vitamin C (40%). Mottling of enamel, the sign of Fluorosis was also observed among 42 per cent children. Prevalence Conjunctival xerosis (1%) has been observed among younger children, whereas, Bitot's (2%) was observed among their elder counterparts. Deficiency of Vitamin D (16 %) has also been observed among children. The 69 per cent of the children were immunized whereas 31 per cent children were not immunized. Forty seven per cent children were immunized by measles and 41 per cent MMR(15-18 month) whereas very few children (2% )very immunized by Typhiod at the age of two year in rural areas of Auraiya District.

**KEY WORDS:** Clinical assessment, Pre-school children, Protein energy malnutrition (PEM), Vitamins deficiency, Fluorosis, Anemia, Immunization.

**Introduction:**

Malnutrition is one of the major public health problems in most of the developing countries, including India. In the country the highest percentage of child population was found in Bihar (40.8%) and Uttar Pradesh (40.1%). Nearly two out of three pre-school children in India malnourished (**Shrilakshmi, 2000**).

India has the highest population in the world and pre-school children (1-6 years) undoubtedly are most crucial segment of our population. Malnutrition is one of the major health problems in children. Clinical examination is an important indicator which reveals nutritional deficiency sign for the assessment of nutritional status of communities. Assessment of nutritional status of community is one of the first steps in the formation of any public health strategy to combat malnutrition. **Gupta and Bhandari (1972)** found that in the order of occurrence, Vitamin A deficiency was recorded as first, second and B complex deficiency is third. Among the Vitamin A deficiency sign, xerosis was more

36 prevalent than Bitot's spot and phrynoderma while in case of Vitamin B complex deficiency  
37 signs. Angular stomatitis was more common.

38 **Kumar et.al (1983)** studied clinical signs of nutritional deficiency diseases among  
39 children and reported anemia is the most common followed by PEM. A vitaminosis and  
40 Vitamin B deficiency. They also reported that prevalence of malnutrition showed a  
41 significant increase with increase in the age of children and was maximum in children  
42 between 3-4 years. Approximately 48.7 percent children were identified as children at risk.

43 Prevalence of nutritional deficiency of anemia (27%), followed by Protein Energy  
44 Malnutrition (8%). The sign of fluorosis was observed 2% in children. Prevalence of  
45 conjunctival xerosis (1%) observed among younger children, whereas, Bitot's spot (1%) and  
46 Vitamin D 3% among children (**Indu et.al.,2012**).

47 Keeping in view importance of assessment of health status the present study was  
48 conducted with an objective to assess clinical status of preschool children of Auraiya district  
49 of Uttar Pradesh.

## 50 **RESEARCH METHODS**

51 To fulfil the objectives of the present study 100 preschool children were selected at  
52 random from 5 villages ie. Parwaha, Siganpur, Kutubpur, Khanpur and Ban ke purwa of  
53 Bhagyanagar block of Auraiya district of Uttar Pradesh in 2016. Thus the 20 children were  
54 selected from each village. The children were categorized under two age groups viz., 1-3  
55 years and 4-6 years. Based on objectives of the study structured and pre-coded interview  
56 schedule was designed. Mother/ caretaker of the children were interviewed for the  
57 purpose.

## 58 **RESEARCH FINDINGS AND DISCUSSION**

59 The results obtained from the present study have been discussed under following heads.

### 60 **Age wise distribution of children:**

61 Table 1 reveals that 58 children fall between 1-3 years of age while 42 children came under  
62 4-6 year of age. They were clinically assessed in the present study.

63 **Table 1: Age wise distribution of the children**

S.No.	Age( Years)	No. of Preschool children ( n=100)
1	1-3	58
2	4-6	42

64

### 65 **Clinical deficiencies:**

66 Clinical deficiencies and excesses were assessed among children of both age-groups  
 67 separately (Table 2). It was found that on the basis of their general appearance, 54 per cent  
 68 were normal and 45 per cent were thin and obese 1% in different village of Bhagyanagar  
 69 Block of Auraiya district.

70 **Table 2: Incidence of clinical deficiencies and excesses**

S.No.	Clinical Signs	Preschool children		
		1-3 years (n=58)	4-6 years (n=42)	Total (n=100)
<b>A</b>	<b>General appearance</b>			
i	Normal	31	23	54
li	thin	27	18	45
iii	Obese	00	01	01
<b>B</b>	<b>PEM</b>			
I	Absent	35	22	57
li	Present	23	20	43
lii	Hair changes	15	13	28
Iv	Marasmus	04	03	07
V	Odema	01	02	03
vi	Moonface	03	02	05
<b>C</b>	<b>Anemia</b>			
i	Absent	34	22	56
li	Present	24	20	44
iii	Pale conjunctiva	15	13	28
iv	Koilonia	09	07	16
<b>D</b>	<b>Vitamin A deficiency</b>			
i	Absent	57	37	91
li	Present	00	05	05
iii	Night blindness	00	00	00
iv	Bitot's Spot	01	02	03
v	Conjunctival xerosis	01	03	04
<b>E</b>	<b>Vitamin B deficiency</b>			
I	Absent	47	20	67
li	Present	11	22	33
iii	Angular stomatitis	02	07	09
Iv	Magenta tongue	01	03	04
v	Dermatitis	08	12	20
<b>F</b>	<b>Vitamin D deficiency</b>			
i	Absent	51	33	84
ii	Present	07	09	16
iii	Knock knee and Bow leg	01	02	03
iv	Pigeon chest	03	04	07
v	Breeding of ribs	03	03	06
<b>G</b>	<b>Vitamin C deficiency</b>			
i	Absent	42	18	60
ii	Present	16	24	40

iii	Bleeding of gums	14	16	30
iv	Spongy gums	02	08	10
<b>H</b>	<b>Fluorosis</b>			
i	Absent	43	15	58
ii	Present	15	27	42
iii	Mottled enamels	15	27	42

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72 Hair changes related to PEM were more commonly observed among younger  
73 children (23%) in comparison with their elder counterpart (13%).

74 The most common deficiencies among children were prevalence of anemia (44 %),  
75 Protein energy malnutrition (43%) and vitamin C deficiency (40%). In addition deficiency of  
76 vitamin B (33%) and Vitamin D (16%) also were observed but to a lesser extents in Table 1.

77 Sign of Fluorosis namely mottling of enamel in teeth was observed most of the elder  
78 children (4-6 years) ie. 27 per cent as compare to the children belongs the age group of 1-3  
79 years ie, 15 per cent.

80 The commonly observed sign of anemia were pale conjunctiva (28%) and Koilonychia  
81 (16%). Prevalence of conjunctival xerosis (1%) and Bitot's spot (2%) was similar but  
82 conjunctival xerosis was observed among younger children and Bitot's spot was observed  
83 among their elder counterparts.

84 Thus, it may be concluded that health status of the preschool children was found to  
85 be unsatisfactory. So, therefore it's great need of health counselling for the mother/  
86 caretaker of the children to upliftment the health status of rural children.

87 **Immunization Status of pre School Children:** Vaccines have reduced and, in some cases,  
88 eliminated many diseases that killed or severely disabled people just a few generations ago. For  
89 example, smallpox vaccination eradicated that disease worldwide. In the present study, children  
90 were considered to have received immunization if they had received even a single dose of any  
91 antigen. As per this criterion, immunization coverage of the children was abysmally low.

92 **Table -3. Immunization Status of pre School Children:**

S.No.	Age	Details of Immunization	Prevents	No. of children
1.		Not Immunized		31
2		Immunized		69
A	( At birth	BCG	TB & bladder cancer	69
		Poliovirus	Polio	69
		HepB	Hepatitis B	34
B	4-6 Week	DTP	Diphtheria, Tetanus & Pertussis	08
		HepB	Hepatitis B	01

		Poliovirus	Polio	08
<b>C</b>	10 Week	Poliovirus	Polio	18
		HepB	Hepatitis B	03
		DTP	Diphtheria, Tetanus & Pertussis	03
<b>D</b>	14 Week	DTP	Diphtheria, Tetanus & Pertussis	00
		HepB	Hepatitis B	00
		Poliovirus	Polio	18
<b>E</b>	06 Month	HepB	Hepatitis B	02
<b>F</b>	9-12	Measles	Measles	47
		Polio	<b>Polio</b>	47
<b>G</b>	15-18 month	MMR	Measles, Mumps, Rubella	41
<b>H</b>	18 month	DTP	Diphtheria, Tetanus & Pertussis	28
		Polio	Hepatitis B	<b>28</b>
<b>i</b>	2 year	Typhoid	Fever, Diarrhoea	<b>02</b>
<b>j</b>	4 year	MMR	Measles, Mumps, Rubella	<b>00</b>
<b>k</b>	5 year	DTP	Hepatitis B	<b>00</b>
		Polio	Polio	<b>12</b>

93

94 It is evident from the Table 3, that 69 per cent of the children were immunized whereas 31  
95 per cent children were not immunized in rural area. Most of the children immunized at the time of  
96 birth (69%) by BCG and Polio. Forty seven per cent children were immunized by measles and 41 per  
97 cent MMR(15-18 month) whereas very few children (2%) very immunized by Typhoid at the age of  
98 two year.

99 **Conclusions:** India has the highest population in the world and pre-school children (1-6  
100 years) undoubtedly are most crucial segment of our population. It was found that on the  
101 basis of their general appearance, 54 per cent were normal and 45 per cent were thin and  
102 obese 1% in different village of Bhagyanagar Block of Auraiya district.

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104 be unsatisfactory. So, therefore it's great need of health counselling for the mother/  
105 caretaker of the children to upliftment the health status of rural children.

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