International Journal of Medical and Health Research
ISSN: 2454-9142, Impact Factor: RJIF 5.54
www.medicalsciencejournal.com
Volume 3; Issue 4; April 2017; Page No. 67-72

Nutritional status of children (0.1-5 years) in Humunabad Municipality, Bidar District. Karnataka, India

[1] Pandit, *[2] Dr. RV Gangshetty

[1] Research Scholar, Department of Economics, Annamalai University, Tamil Nadu. India
[2] Assistant Professor Department of Economics Karnataka State Women University, Vijayapura Karnataka. India

Abstract
The study is designed to assess the Nutritional Status of Children (0.1-5 years) in Humunabad Municipality, Bidar District. This paper evaluates the socio-economic conditions, BMI, Child Disease, Morbidity Pattern, Age of Children, Role of the Birth Order in the determining Child Nutritional Status through a in-between-intra family analysis of stunting, and underweight in children. It further tries to evaluate, whether the child's height in relation to age varies with gender; and if the drop of the height with each additional birth order can be attributed to pre and post-poor natal health investment in pregnancies and births. The selected 120 sample respondents are the facts determining child nutrition in Humnabad taluk. In India 20 percent of children, of less than five years of age suffer from wasting due to acute under nutrition. More than one-third of the world's children, who are wasted, live in India. Forty three percent of Indian children, less than five years are underweight and 48 percent (i.e. 61 million children) are stunted due to chronic under nutrition. India accounts for more than 3 out of every 10 stunted children in the world. In this context, study the nutritional status of children is necessary for the policy circle.

Keywords: Social - Economic Status and BMI, Child Disease, Morbidity Pattern and Child Age

Introduction
This study analyzes the nutritional status of children (0.1-5 year) in Humnabad municipality of Bidar District. Nutrition is an input indicator of human health status. Nutritional disorder is a major problem in many states of India. Nutrition, nourishment, or aliment, is the supply of materials-food-required by organisms and cells to stay alive. In science and human medicine, nutrition is the science or practice of consuming and utilizing foods. "Nutritional science studies how the body breaks food down (catabolism) and repairs and creates cells and tissue (anabolism)- catabolism and anabolism = metabolism." Nutritional science investigates the metabolic and physiological responses of body to diet. Nutrition also focuses on how diseases, conditions and problems can be prevented or lessened with a healthy diet. Nutrition also involves identifying how certain diseases, conditions or problems may be caused by dietary factors, such as poor diet (malnutrition), food allergies, metabolic diseases, etc.
The study is of nutrients in food, how the body uses nutrients, and relationship between diet, health and diseases. A nutritionist focuses first on food, and then looks at its effects on people, while a dietician looks at the human being and then checks that human's health status. Good health is prerequisite to human productivity and the development process, It is essential for economic and technological development. Social scientists incorporated nutrition and health as its important components. There are several studies which have pointed out that nutrition is one of the components of health status. Disturbance in health or nutrition, regardless of aetiology, invariably affects the health of mother and child growth. Low birth weight babies are proved to have frequent infections, leading to undernourished children with reduced mental capacity, the child who has inadequate food, health and healthcare grows into a stunted adolescent who has a reduced mental capacity.
Good health is universally acknowledged to be of intrinsic values and therefore constitutes an integral element of socio-economic development. One can be rich but sick enough not to enjoy any opportunities that wealth opens up, and poor health status may translate into worsening economic opportunities as well. Health has a vital role to pay in the social and economic development of the society. It is centre of all human development to improve the quality of life of the people. Health care is the process by which the health of the individual is improved and maintained.
The health service help to make society physically and mentally sound. It is obvious that health and education (meritorious) services are recognized as the important aspect of quality life. Thus the meaning of development has shifted from economic growth to importance in human resources i.e. the emphasis is shifted from infrastructure to education and health services. In this context study on economic analysis of the nutritional status of children is necessary for the policy circle.

Malnutrition
Malnutrition is a broad term which refers to both under (sub nutrition) and over nutrition. Individuals are malnourished, or suffer from under nutrition if their diet does not provide them with adequate calories and protein for maintenance and growth, or they cannot fully utilize the food they eat due to illness. People are also malnourished or suffer from over nutrition if they consume too many calories.
Malnutrition can also be defined as the insufficient, excessive or imbalanced consumption of nutrition. Several different nutritional disorders may develop, depending on which nutrients are lacking or consumed in excess.

Body Mass Index
Body mass index is measure of body fat based on height and weight that applies to both adult men and women. BMI = he weight in kilogram divided by the square of height in meters (Kg/M)

Under weight
People with a body mass index value less than 18.50 is considered underweight.

Normal weight
A body mass index value between 18.50 and 2.99 are considered normal weight.

Over weight
People with a BMI equal to (or) exceeding 25.00 are considered over weight.

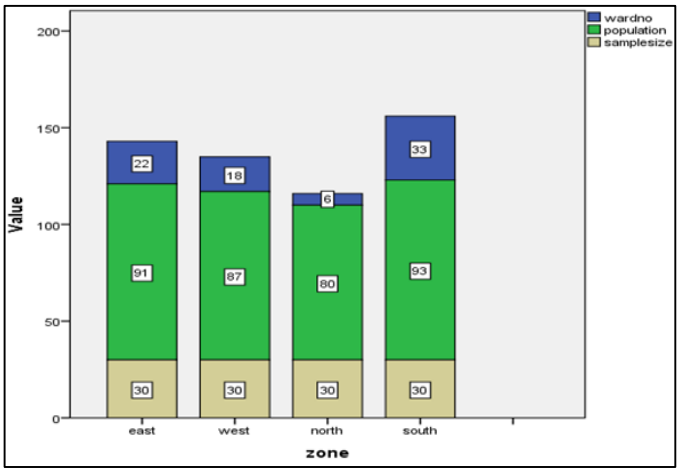
Obesity
The increase in obesity was strongly associated with body mass index with underweight, normal weight and overweight exceeding obesity 30.00 (BMI value) is considered obesity and above. Over weight has a negative effect on health because of the strong relationship between the prevalence of overweight and cardio vascular diseases, coronary heart disease, and diabetes.

Review of Literature
James Levnson. F, et al. (1971) they carried out a study of the causes of malnutrition among children aged 6 to 24 months in 18 villages surrounding the market town of Morinda at Rupangar district in Punjab compares malnutrition prevalence by gender. As seen, moderate plus severe malnutrition among girls decreased by 75 percent, from 68.6 percent in 1971 to 17.5 percent in 2001, and gender disparity which was higher in the earlier survey, was brought down considerably.
According to Rao. R.V. study in (1982) the statistics quoted by WHO malnutrition is the biggest single contributor to child mortality in developing countries. It also stated that of the 800 million growing children currently in developing countries, more than two thirds will encounter sickness or disabling diseases either bought on or aggravated by protein calorie malnutrition.
T.K. Roy, et al. (2004), have showed that the large number of primary health centres and sub centres have been created as part of the Government's " Health for All Programme", surveys such as NFHS - 1 and 2 revel that health services either do not reach unprivileged sections or not accessed by them. This paper assesses the extent of the inequalities in health care and nutritional status across status with a focus on caste and tribe.
Barlow studied in (1977), a model of health and development with five interacting variables such as income, education, nutrition, health and fertility and twenty possible linkages, nutrition is an eventual component of the progress of development both as an input and a goal. The possible linkages are that nutrition improves health; health improves attitude to family planning and promotes development which directly increased production. In order to measure economic returns to health investment, a cost of preventing a death is compared with worker's future income or investment on human capital. A nutritional survey carried out in various parts of the country established close relationship between nutritional deficiencies and certain health hazards.
Sukanta Chandre Swain (2008), recent study on infant brain development shows that most of a person's neurons are formed from ages zero to eight. If a young child does not receive sufficient nurturing and nutrition during this crucial period, the child may be left with a develop deficit that affects his or her success in the future.

Objectives
1. To study the socio economic status of sample respondents in the study area.
2. To study the childhood (0.1-5 year) diseases in the study area.
3. To assess height, Weight and BMI of the childhood population.

Methodology
The present study attempts to examine nutritional status of children with special reference to Humnabad Municipality Bidar District. This study is based on primary data. The identified variables are correlated with respect to respondent socio economic status and Child Nutrition which gives analytical orientation to the study. The sampling method has been adopted to collect the primary data from the respondents. There are 23 municipal wards in the town. The wards have been divided into four zones viz. South, North, West and East for research uppers. Based on the wards classification, each zone one ward has been selected, therefore totally for wards have been chosen for this study, and in each ward 30 households have been selected with the help of systematic random sampling method. The total sample size of the study is 120. The selected households have been interviewed with a schedule for quantitative data. The data comprises socio economic status, health status and morbidity. The height and weight of the sample population have been measured with the help of scale and weighing machine. The frequency distribution and percentage analysis has been used for this study.

Analysis and Interpretation



Source: Humnabad Municipality Report 2011
Note: Figures in parentheses indicate percentage

Fig 1: Ward and Zone Wise Child Population

Humnabad has 23 wards. Based on the zone wise classification of one ward has been selected in each zone. The total children population of the selected wards is 351.

Table 1: Age Wise Classification

Sex	Frequency
24 to 30	16 (13.3)
31 to 35	45 (37.5)
36 to 40	45 (37.5)
41 to 45	12 (10.0)
46 and above	2 (1.7)
Total	120 (100)

Source: Computed
Note: Figures in parenthesis denotes percentage.

Age is a vital factor for economic activities. The age of the sample population is grouped into five categories such as 24 - 30, 31-35, 36 - 40 - 45 and above (Table - 1). The major age class of the study population is 31 - 40 (75 percent), followed by 24 - 30 (13 percent), 41 - 45 (10 percent) and above 46 (12 percent). It shows that the study has more active age class population. Therefore the data on nutritional of the children is more valid.

Table 2: Community Wise Distribution

Frequency	
SC	17 (14.2)
MBC	37 (31)
OBC	65 (54)
OC	1 (0.8)
Total	120 (100)

Source: Computed
Note: Figures in parenthesis denotes percentage.

The caste wise classification of sample population is presented in (Table 2). It shows that, the OBC and MBC are the predominant caste system in the study area, followed by SC 14.2 percent.

Table 3: Occupation Wise Distribution

Occupation	Frequency
Agriculture	2 (1.7)
Public servant	13 (10.8)
Private servant	42 (35)
Business	63 (42.5)
Total	120 (100)

Source: Computed
Note: Figures in parenthesis denotes percentage.

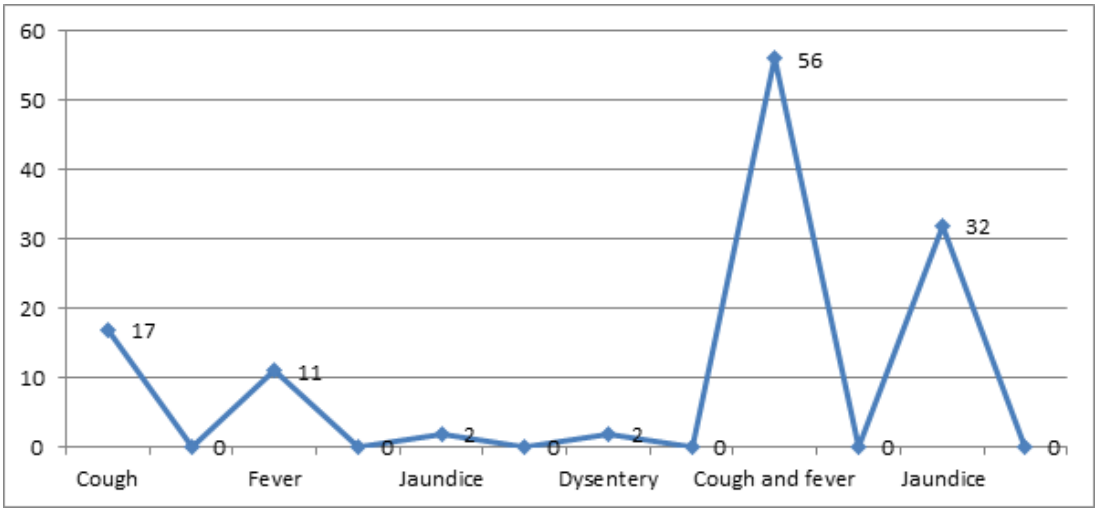
Occupation is an important factor for economic condition of family. The occupational status of the study area is categorized into four major groups such as Agricultural labour, public servant, private servant and business class. Of these four groups business class stands as a prime occupation (43percent) of the study respondents, followed by private servants (35percent) and public servants shared 11 per cent of the total population, (Table- 3) agricultural labour is very meagre in the study area. Therefore it is found that business and private service sector are the major employment providing sectors in the study population.

Table 4: Annual income Classification of Study Respondents

Household income	Frequency
Rs.75,000 - 2,50,000	58 (48)
Rs. 2,51,000 - 5,00,00	43 (36)
Rs. 5,01,000 - 7,00,000	7 (6)
Above Rs.7,00,000	12 (10)
Total	120 (100)

Source: computed
Note: Figures in parenthesis denotes percentage.

Income is a vital factor for standard for living. It is one of the variables for calculation of HDI (Human development Index). The annual income of the respondents includes income from employment, business, agriculture and other sources. Finally gross income of the household has been estimated with the current market price in 2013 - 2014. The household income has been classified into four groups (Table. 4) such as Rs 75,00 - 2,50,000, 2,51,000 - 5,00,000,5,01,00 -7,00,000 and above Rs 7,00,000. It shows that the majority of them are in Rs 75,000 - 2, 50,000 (48 percent), followed by Rs. 2, 51,000 - 5, 00,000 (36 percent). The estimated per capita income (PCI) of the study area is Rs. 22,731 and it is lower than India's PCI, Rs. 43,131 in 2013 (statistical outline of India 2013)



Source: computed
Note: Figures in parenthesise denotes percentage.

Fig 2: Common Child Diseases

Assessment major childhood disease is important to know the natural status of study population. Cough and fever is major disease prevalent in the child population (47 percent). It is important to observe that the jaundice is another major disease in the study area. Therefore it is found that there is a lack of purified drinking water supply in the study area.

Table 5: Gender of Child Population

Sex	Frequency
Male	61 (51)
Female	59 (49
Total	120 (100)

Source: computed
Note: Figures in parenthesise denotes percentage.

The main objective of this is, to study the nutritional status of the child population (0.1 - 5 years). The sex wise child population of 0.1 - 5 year is presented in (Table 5). It shows that 51 percent of them are male and the rest is female's child and age wise child is given in Table. 6

Table 6: Age Wise Classification of Child

Child age	Frequency
1 to 2	33 (27.5)
2 to 3	17 (14.2)
3 to 4	30 (25)
Above 4	4 (33.4)
Total	120 (100)

Source: Computed
Note: Figures in parenthesis denotes percentage

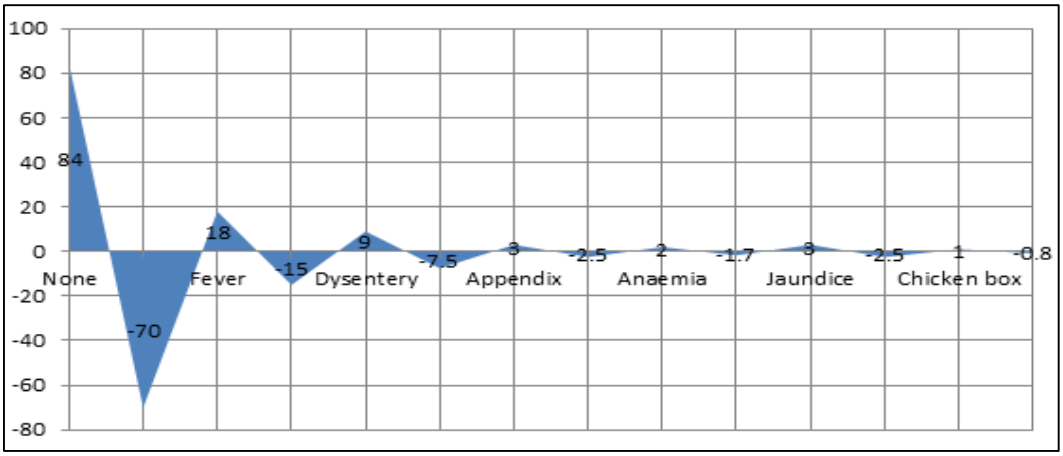
The table presents the age classification of the children there are four age groups (Table.8). It reveals that the above 4 years age shared 33.4 per cent, followed by 1-2 years (28 percent), 3-4 years (25 percent) and 2-3 years (14.2 percent). This analysis is important for assessing the nutritional problem in the study area.

Table 7: Child Weight at the Time of Birth

Birth weight	Frequency
Up to2	33 (28)
2.1 - 3.0	17 (14.2)
3.1 - 4.0	30 (25)
4.1 - 5.0	29 (24.2)
Above. 5	11 (9.2)
Total	120 (100)

Source: Computed
Note: Figures in parenthesis denotes percentage

Weight of the child at the time of birth is a major determining factor for health status of mother and baby. In this environment analysis on weight of the baby is necessary. The normal weight of the baby should be 2.5 - 3kg at the time of birth. The resent analysis reported that nearly 42 percent of the babies are under weight at the time of birth. The remaining 58 percent of them are normal weight. Therefore knowledge is an important for reducing nutritional disorder in the community.



Source: Computed
Note: Figures in parenthesis denotes percentage

Fig 3: Morbidity Pattern of Child Population

The morbidity pattern of the child population is presented in the (Table-10) It shows that the 70 percent of the children's are healthy, only 30 percent of them have different health problems such as fever, dysentery, appendix, anaemia, jaundice and chicken box. Therefore the 30 percent of them have nutritional problems in the study area.

Table 11: BMI Distribution of Surveyed Respondents

BMI	Frequency
Underweight	21 (17.5)
Normal	75 (62.5)
Over weight	22 (18.3)
Obesity	2 (1.66)
Total	120 (100)

Source: Computed

Note: Figures in parenthesis denotes percentage.

Estimation of BMI of children is a major objective of this study. The (Table-11) shows the nutritional status of the surveyed children in the study area. The nutritional status of children is classified into four major groups such as BMI less than 18.5 is under weight, BMI 18.5 - 25.0 is normal, BMI 25 - 30 is overweight and BMI greater than 30 is obese. The percent analysis explains that 36 percent of children are normal in the study area. Nearly 18 percent of the children are under weight. It is important to status that the 18 percent of them are overweight and around 2 percent are obese categories, underweight and overweight children are rick categories. Therefore attention is necessary to protect them from diseases.

Table 12: Education Wise BMI Distribution

S. No	Education	Body Mass Index				
		Under Wight	Normal	Over weight	Obesity	Total
1	Primary	0 (0)	3 (2.5)	0 (0)	0 (0)	3 (2.3)
2	Secondary	10 (8.33)	29 (24.1)	6 (5)	1 (0.83)	46 (38.3)
3	Higher secondary	3 (2.5)	17 (14.16)	4 (3.33)	0 (0)	24 (20)
4	Degree	5 (4.16)	7 (5.83)	4 (3.33)	0 (0)	16 (13.3)
5	Professional	3 (2.5)	19 (15.8)	8 (6.66)	1 (0.83)	31 (25.8)
Total		21 (17.5)	75 (62.5)	22 (18.33)	2 (1.66)	120 (100)

Source: Computed
Note: Figures in parenthesis denotes percentage

Education is a major input for economic and health development. It provides knowledge for maintain good health and hotter environment of households. In this environment, analysis about relationship between Education and BMI for the children assumes important. Under-weight categories are high in secondary and degree educational status households. Normal nutritional status is high in secondary and professional education household, over weight is high in professional educational category. Therefore it reveals that education has low impact on nutritional behaviour.

Table 13: Annual Income Wise BMI Distribution

S. No	Annual Income	Body Mass Index				
		Under Weight	Normal	Over weight	Obesity	Total
1	Rs.75,000-2,50,000	12 (10)	58 (48.33)	15 (12.5)	2 (1.66)	87 (74.5)
2	Rs 2,51,000-5,00,00	6 (5)	11 (9.16)	4 (3.33)	0 (0)	21 (17.5)
3	Rs.5,01,000-7,00,00	2 (1.66)	4 (3.33)	1 (0.83)	0 (0)	7 (5.83)
4	Above Rs. 7,00,000	1 (0.83)	2 (1.66)	2 (1.66)	0 (0)	5 (3.5)
Total		21. (17.5)	75 (62.5)	22 (18.33)	2 (1.66)	120 (100)

Source: Computed
Note: Figures in parenthesis denotes percentage

Income is a deciding factor for consumption and investment. From this analysis, under weight is higher in the category of Rs 75,000 - 2,50,000 and another integrating finding is that normal and over weight is also higher in the same group. It is important to state that obesity is also higher in the same group. Therefore it reveals that education, occupation and income have a small role in the nutritional status of the children. Finally it is also found that knowledge about micro nutrients, food consumption and day to day diet pattern is also necessary for reducing malnutrition and nutritional disorders in the child population.

Findings, Conclusion and Recommendation

The total study respondents are 120, 75 percent of the respondents belong to the more active age class 31 - 40 years. It reveals that the study has more productive age population class.

- The major occupation of the study respondents is business.
- OBC and MBC are the predominant communities in the study area.
- Cough, fever and jaundice are the major diseases of the children
- Nearly 42 percent of the study children are under weight
- The 30 percent of the study children have nutritional disorder and related problems
- 63 percent of children are normal as per BMI calculation
- It is important to observe that the 18 percent of the children are under weight.
- Education, occupation and income have low impact on BMI

Nutritional status is an essential factor for good health and labour productivity. Improved health could accelerate economic growth of the nation. Nutritional disorder is a major health concern in India. If it is not treated, it can cause many economic effects of day - to - day life. The economic consequences of nutritional disorders are quite large. The higher incidence of nutritional diseases required considerable amount of private and public health expenditure and with this back drop the present study on economic analysis of nutritional status of children in Humnabad town has been carried out.

- Awareness has to be created among the public for seriousness of economic and health effects of nutritional disorders.
- Periodic health camps to be conducted for mapping of nutritional diseases.
- Strengthen of peer and positional care services
- IEC tools for nutritional diseases
- Awareness programme for consumption pattern

Reference

1. James Levinson. F, *et al*. Nutritional Well Being and Gender Differences Economic and Political Weekly 2003; 3340-3341.
2. Rao RV. Food Nutrition and Poverty (New Delhi, Vikas Publication House, Pvt. Ltd.: 20 1982
3. Roy TK, *et al.* Social Inequalities in Health and Nutrition in Selected Status Economic and Political Weekly. 2004, 677-683.
4. Barlow R, Health and Economic Development, A theoretical and empirical Review unpublished report, university of Machigam. 1977.
5. Sukanta Candre Swain 'Nutritional Deprivation of Children in Orissa Economic and Political Weekly. 2008, 49-55.
6. Humnabad Municipality Report 2011.