Journal Homepage: -www.journalijar.com
INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)
Article DOI:10.21474/IJAR01/6817
DOI URL: http://dx.doi.org/10.21474/IJAR01/6817

RESEARCH ARTICLE

A COMPARATIVE ASSESSMENT OF NUTRITIONAL STATUS BETWEEN TRIBAL AND NON TRIBAL UNDER FIVE CHILDREN IN MALAPPURAM DISTRICT, KERALA.

Sajithamohan. M[1] and Dr. P. Arunachalam[2].

1. Assistant Professor , PG Dept Of Economics, MES Mampad College(Autonomous) Malappuram District , Kerala,India.
2. Professor and Head, Department of Applied Economics Cochin University of Science and Technology Kalamassery Kochi, Kerala, India.

Manuscript Info

Manuscript History

Received: 22 January 2018
Final Accepted: 24 February 2018
Published: March 2018

Keywords:-
Malnutrition, anthropometric measure, disparity, tribal children, non tribal children.

Abstract

Despite recent achievements in economic progress in India, the fruits of development have failed to secure a better nutritional status among all children of the country. Of the Indian states, Kerala is well known for its achievements in health sector. The health indicators in Kerala are at par with the western developed world. But of late, the widely acclaimed Kerala model of health has started showing some disturbing trends. Growing evidence suggest there exists a wide disparity in nutritional level of children between different sections of the society in Kerala. Nutritional status of children in two communities tribal and non tribal was studied using conventional anthropometric measures. It seems that the health indicators are comparably low in the tribal regions than that of non tribal regions. This finding may take us to think of some inequitable access to health facilities in between these two groups that seems against the much upholded kerala model of development and deprived atributes of human development.The study also looks into the influence of maternal education and income of the family on the nutritional status of children in the study area.

Method of Study: The comparative study was conducted in tribal areas of Malappuram district in Kerala by using anthropometric measures. The villages adjacent to the tribal areas were included in the study as non-tribal population. To study the nutritional status among under five children 100 tribal and 100 non tribal children were taken. The tribal and non-tribal children were selected from Malappuram district through cluster sampling method. Tribal and non tribal were selected separately. The study was conducted among under five children.

For the purpose of the study an econometric model was constructed **Yi=β1+β2X2i+β3X3i+ui.**Mothers'education and income of the family are taken as the explanatory variables.

Results: The study revealed more of tribal (55%) children compared to non-tribal (28%) were suffering from protein energy malnutrition and 7.35% of tribal children were severely malnourished. Tribals have low socio-economic status, poor nutritional status, increased prevalence of morbid conditions compared to non-tribal population. It is also revealed

Corresponding Author:-Sajithamohan.M.
Address:-Assistant Professor, PG Dept Of Economics, MES Mampad College (Autonomous) Malappuram District , Kerala,India.

that education of mother and income of the family together explains 71% of variation in child nutritional status.

……

Introduction:-

Human beings are both, ends in themselves and means of production. So comes the need to promote human development. Health Status is a valid indicator of human development. Health Status of a population is also an indicator of social development of the country. The concern for health improvements stem from several considerations. Improvements in health translate into substantial gains in economic performance and overall wellbeing of society. Poor health adversely affects the economic well being of affected households and individuals.

Most of a person's human capital and physiological development happens early in life. Childhood is thus a key period for human capital building, and a burden of disease in childhood could have effects that persist throughout the life course. Malnutrition is the most deprived form of child ill health. The extent and severity of malnutrition, however, differ in various states and communities. Malnutrition is highly prevalent among the poor and backward communities in our country. One such community is tribal group.

Even though India occupies a prominent place among the world countries in the case of economic progress, it failed to achieve improvement in the nutritional status of children. Of the Indian states Kerala occupies a unique position and it has a unique model of development model and health model. But even Kerala also failed to achieve better nutritional status. The health indicators of Kerala can be compared with the western developed countries.The most proclaimed Kerala Model of Development failed to eradicate or reduce the wide disparity in nutritional level of children among different sections of the society.

Why child health is so important?

There are compelling reasons to focus on child health and also measure our efforts to improve child health outcomes. Childhood and particularly early childhood is a crucial period for development and wellbeing. Long-term cohort studies demonstrate that a healthy start to life can not only reduce later morbidity, but also produce individuals who are more able to participate in society

Childhood is the starting point of one's life.The nutritional deficiency in the childhood will affect the future of the country. **C**hildhood is a significant stage of life and deprivation during this period can have a long-term adverse impact on the wellbeing of children

As a developing economy, child malnutrition is an important matter of concern from economic growth perspective**.** The first 5 years of life play a critical role in defining a child's physical and cognitive development that has an impact on the potential attainments in adult life. Good health and nutritional status, stimulating home environment of the child, is very important in these formative years. The disadvantaged children are more likely to drop out of school, have reduced economic opportunity that spirals into intergenerational transmission of poverty.Childhood mortality is one of the important indicators of a country's general medical and public health conditions, and consequently, the country's level of socio economic development. Its decline is therefore not only desirable but also indicative of an improvement in general living standards.

Under nutrition is the result of interplay between different proximate, underlying and basic causes. While the immediate causes are inadequate dietary intake and diseases that operate at individual level, these factors are determined by underlying causes such as household food insecurity, poor living conditions, inadequate care of mothers and children and low access to health services. Factors embedded in the socio-economic-political context and structures determine how the downstream factors play out to differentially for communities and individuals, causing health inequities . WHO has defined social determinants of health inequities as "the interplay of socio-economic political context generating social stratifications and resulting socioeconomic position of individuals." Within the social structure there are stratifiers that influence how the downstream intermediary determinants will play out for individuals or communities. It has identified income, occupation, education, social class, gender and race/ ethnicity as most important social stratifies

Objectives of the study:-

1. To understand the nutritional status of tribal and non tribal under five children in the study area
2. To analyse the influence of maternal education and income of the family on the nutritional status of under five children.

Methods of study:-

Health and development are intimately interconnected. Meeting primary health care needs and the nutritional requirement of children are fundamental to the achievement of sustainable development. Anthropometric measurements to assess growth and development, particularly in young children, are the most widely used indicators of nutritional status in a community.

The comparative study was conducted in tribal areas of Malappuram district Kerala by using anthropometric measures. The villages adjacent to the tribal areas were included in the study as non-tribal population. To study the nutritional status among under five children 100 tribals and 100 non tribal children were taken.

The tribal and non-tribal children were selected from Malappuram district through cluster sampling method. Tribal and non tribal were selected separately. The study was conducted among under five children.

Measurement methods:-

The proportion of children under five with low weight-for-age and low height-for-age can be calculated by using the following formula:

% underweight children = (number of children under five with weight-for-age below -2 SD/total number of children under five weighed.) X 100

% stunted children = (number of children under five with height-for-age below -2 SD/total number of children under five measured.) x 100

% wasted children = (number of children under five with weight-for-height above +2 SD/total number of children under five measured.) x 100

All these measurements were taken with the help of a health personnel.

Measuring Nutritional Status: The Dependent Variable:-

As mentioned earlier, the paper uses height for age (stunting) as the key outcome variable, which is an indicator of chronic nutritional status capable of reflecting long-term deprivation of food following the established practice of anthropometric measures of malnutrition. The measure is expressed in the form of z-scores standard deviation (SD) from the median of the 2006 WHO International Reference Population.

Econometric Model:-

For the second objective the correlation co-efficient and multiple regression models were applied.

$Yi=\beta1+\beta2X2i+\beta3X3i+ui$. Mothers' education and income of the family were taken as the explanatory variables.Where Yi is the nutritional status of i^{th}children.X2i stands for education of mother of i^{th}children X3i is household i's income and,β2 and β3are coefficient of maternal education and income of the family respectively. β1 is the intercept of the regression equations

Results and Interpretation:-

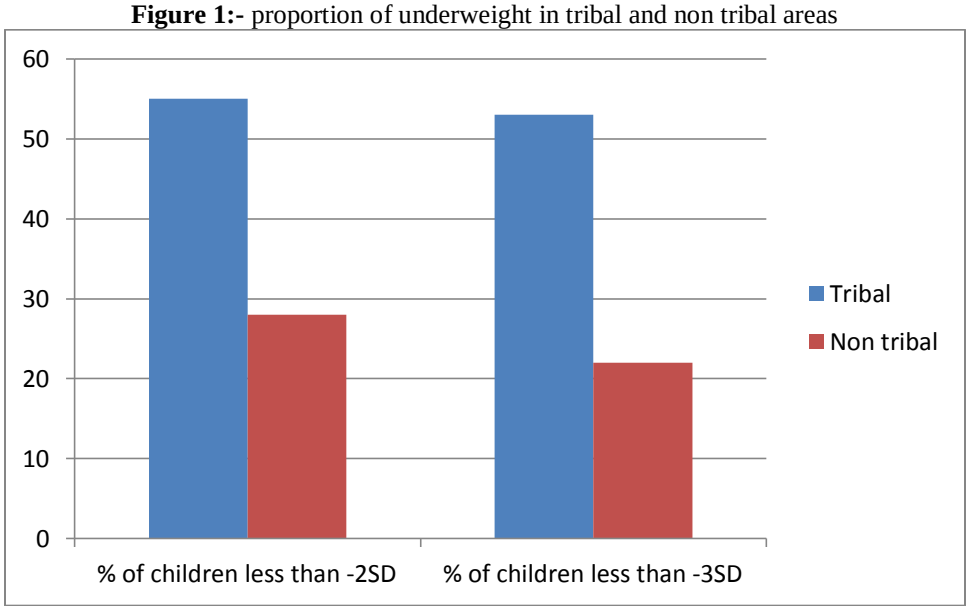
A total of 200 children were studied: The measurement of growth of the children indicates that in both areas children suffer from growth retardation *(Tables I& II).* The body weight and height were considerably lower in tribal areas rather than in non tribal areas.It was also observed that the anthropometric standards of the non-tribal children were higher than those of tribal children. It was seen that wasting is fairly common in both tribal and non-tribal children, but it is prominent in tribal children

Table 1:- Proportion of underweight in tribal and non tribal areas

	% of children less than -2SD	% of children less than -3SD
Tribal	55	53
Non tribal	28	22

Source: Primary data

Figure 1:- proportion of underweight in tribal and non tribal areas



A comparison of severity of malnutrition among tribal and non tribal reveal that in tribal area, where malnutrition is worst, there is a little difference in the degree and severity of malnutrition between boys and girls.However, when the proportion of children stunted and wasted were taken into consideration, there is a slight increase among girls below 3 years; but as the age advances, differences became insignificant.

Results of Regression Analysis:-

The regression results shows that there is a significant positive correlation between maternal education and nutritional status among children.The income of the household is also positively related with the nutritional status of under five children.From the study, it is clear that the children from both the high income group and low income group suffers from various health and nutritional problems , but due to the lack adequate income the low income family, it will not be diagnosed.

Regression co efficients	Value of variables	Standard error
β1	24.45	42.15
β2 (co efficient of maternal education)	2.2316	0.2099
β3 (co efficient of income of the family)	0.0056	0.0019
R^2 value = 0.71		

Interpretation of Regression Coefficients:-

Let us now interpret the regression co efficient.2.2316 is the partial regression coefficient of maternal education and tells us that with the influence of income of the family held constant as maternal education increases on an average nutritional status of children increases by 2.2316 units. Similarly the influence of maternal education held constant as income of the family increases child nutritional status also increases by 0.0056 units. The intercept value 24.45 means that if the values of maternal education and income of the family were fixed at zero, the nutritional status of under five children would be 24.45 per thousand children. In other words if the two regressors were fixed zero, the nutritional status of children in the society will be quite low.The R^2 value of 0.71 means that about 71 percent of the variation in child nutritional status is explained by maternal education and income of the family.

Conclusion:-

Nutritional status is the sensitive indicator of community health and nutrition. The present study highlighting a need for an integrated approach towards reducing the malnutrition and improving the health, as well as nutritional status among tribal population would be invaluable. Otherwise it leads to the unbalanced growth of the economy.

Conditions like sanitation, housing, overcrowding, access and utilization of safe drinking water are all important determinants of infection and nutritional status. Our observation in the villages suggests that these factors have made a major contribution to the differences between the nutritional statuses of the two groups of children. It is clear that despite comparable levels of stunting between the two groups in the first two years, as age advances, the proportion of stunted children increases in the tribal area while it does not show the same pattern in the non-tribal children. However, there was no steady increase in wasting as age advances. The proportion of children wasted is far less than those stunted both for the tribal and non-tribal children. When stunted and wasted are together considered, the non-tribal children are worst affected in the second year and thereafter there is a significant improvement in their nutritional status. In contrast the situation remains more or less same for the tribal children throughout childhood.

References:-

1. Chatterjee et al Social determinants of inequities in undernutrition(weight-for-age)among under-5children: a cross sectional study in Gumla district of Jharkhand, India *International Journal for Equity in Health (2016) 15:104*
2. Dilip T.R. (2002). Understanding levels of morbidity and hospitalization in Kerala, India. *Bulletin of World Health Organization*, 80 (9), 746-751.
3. Duriasamy, P (1998). Morbidity in Tamil Nadu. *Economic and Political Weekly*, 33(17), 982-990.
4. Gautam Kumar Kshatriya(2014)Changing Perspectives of Tribal Health in the Context of Increasing Lifestyle Diseases in India Journal of Environmental and social sciences Volume-1.issue 1-2014
5. Government of India. (2007) National Family Health Survey (NFHS*)* 2005- 2006
6. Gumber, A. and Kulkarni (2000). Health Insurance for Workers in Informal Sector, Detailed Results from a pilot study. New Delhi: National Council for Applied Manpower Research.
7. Health and nutrition profile of children in rural Kerala: A call for an action K.P Vipinchandranhttps://mpra.ub.uni-muenchen.de/27132/ MPRA Paper No. 27132, posted 1. December 2010 18:43 UTC
8. Ibrahim Cholakkal, Dr. N. Radhakrishnan(2014) Education complements health status in kerala: A study of Malappuram District *IOSR Journal Of Humanities And Social Science (IOSR-JHSS) Volume 19, Issue 1, Ver. V (Jan. 2014), PP 50-55*
9. Krisnaswami, P (2004) 'Morbidity Study - Incidence, Prevalence, Consequences, and Associates', *Discussion paper*, Kerala Research Programme on Local Level Development, Centre for Development Studies.
10. Morbidity pattern in tribals and non tribalsabovethe age of 5 years of Gundlupet forest area, Mysore district, India Sarjapura V. Divakar, P. A. Balaji1, Syed Sadat Ali http://www.jdrntruhs.org on Tuesday, November 22, 2016, IP: 117.203.26.32]
11. Murray CJL, Chen LC (1992). Understanding morbidity changes. *Population and Development Review*; 18:481-503
12. Navaneetham K., M. Kabir and C.S. Krishnakumar (2006) 'Patterns and Determinants of Morbidity in Kerala' paper presented at the International Conference on Emerging PopulationIssues in the Asia Pacific Region: Challenges for the 21st Century, International Institute for Population Sciences, Mumbai, India, December 10-13, 2006.
13. Nutritional Status Of Children In Kerala S. Rajasree C.R. Soman
14. Sundar (1995). Household Survey of Health Care Utilisation and Expenditure. Working Paper No.53, NCAER, March
15. WHO Multicentre Growth Reference Study Group. *WHO Child Growth Standards: Length/height-for-age, weight-for-age, weight-for-length, weight-for-height and body mass index-for-age: Methods and development.* Geneva: World Health Organization, 2006.
16. Internet sources