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NUTRITIONAL STATUS OF CHILDREN IN ANDHRA PRADESH – NEED FOR TECHNOLOGICAL INTERVENTION IN TRACKING

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ABSTRACT

As per the UN estimates, every year 2.1 million Indian children are dying before they reach the age of 5 years, this comes to 4 children per minute due to communicable diseases like Acute Respiratory Infection (ARI), Fever, Diarrhea, Anemia and Malnutrition. As a result of nutrients deficiency the inadequate protein intake by the body resulting in Motor, cognitive and delay in development of the child during first two years of life, which may never be able to regain. About one-third of children under 3 years of age in the state of undivided Andhra Pradesh (currently divided as Telanga and Andhra Pradesh) were identified as under-malnourished (as per NFHS-3, 2005-06) with 29.8% children are underwight, 38.4% children are Stunted, 14.9% children are Wasted and79.6% of the children are anemic. The State had only a marginal reduction of 4.4% in underweight between the period from 1998-99 (NFHS-2) and 2005-06 (NFHS-3). This paper focuses on changing the monitoring system of child nutritional status through technological intervention by replacing the manual process of monitoring . (The current paper on Technology intervention of monitoring Child Nutritional Status is taken as part of PhD thesis work, which is under process by first author)

KEYWORDS : Malnutrition, Child Nutrition, IMR, Technology in Health, IMR-U3 years

1. INTRODUCTION

Undivided Andhra Pradesh (now separated as Telangana State and Andhra Pradesh) is one among the 28 states of India, located at the South East part of country surrounded by Madhya Pradesh and Orissa in the North, Maharashtra in West, Bay of Bengal in East and Tamil Nadu, Karnataka in South. The state ranks fifth in its area with a population size of 75,727,541. The state has 23 districts, including the capital district of Hyderabad with mainly three regions called Telangana, Andhra and Rayalaseema.

The child nutritional status effects directly or indirectly resulting in the growth of child's physical and mental wellbeing and is measured by anthropometric measures of weight, height and age of the child i.e weight for Age (UnderWeight), Height for Age(Stunting), Weight for Height(Wasting). UnderWeight and Wasting are the effects of acute deficiency and Stunting is a chronic deficiency which is irreversible. Some of the factors effecting child growth are breastfeeding, immunization, prevalence of infectious and parasitic disease by hygiene practices, food availability, dietary intake, water supply and sanitation. Health is a major factor influencing economic outcomes of the country and instances of ill health can expose the entire family to financial risk. Health status itself is an indicator of human well-being which is dependent on the nutritional status what we intake.

2. OBJECTIVES

The objective of this paper is to compare the nutritional status of children from different sources of data in united Andhra Pradesh and India. To discuss the issues and constraints of present Monitoring System under Integrated Child Development Services (ICDS) and discuss how technology can help in tracking the Nutritional Status of children.

3. DATA SOURCES

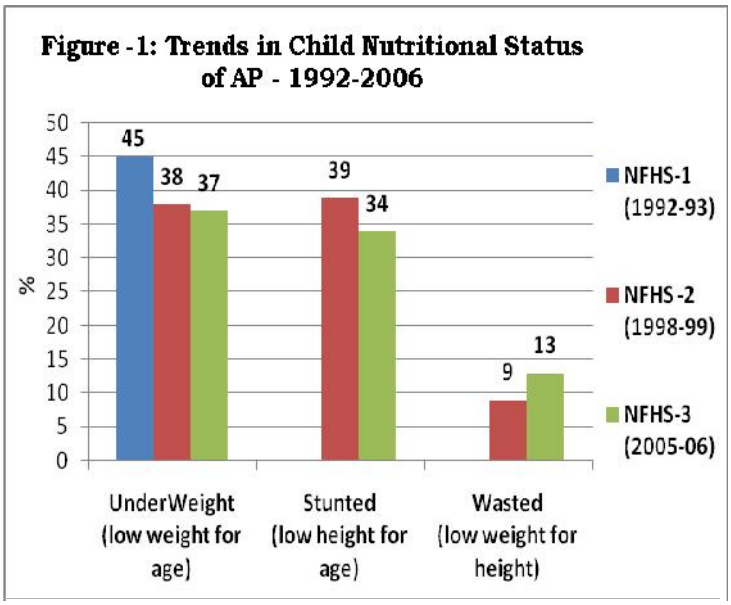
The present paper uses secondary data of :-

(1) National Family Health Survey (NFHS) which is a large-scale, multi-round survey conducted in representative sample of households throughout India. NFHS provides demographic , socio –economic, Nutritional status of children, women and other health indicators of the sampled population.

(2) District Level Household And Facility Survey (DLHS) The DLHS adopted a multi-stage stratified probability proportion to size sampling design. The DLHS provides the information almost similar to NFHS, but there might be some methodological issues.

4. RESULTS

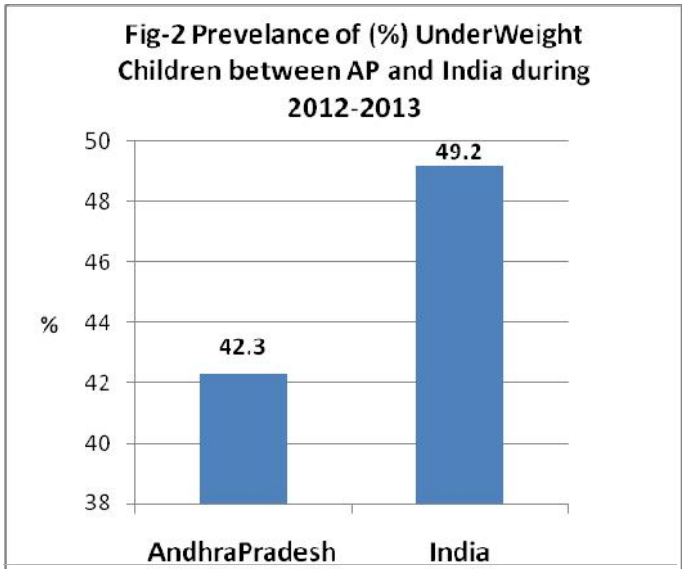
4.1 Trends in Nutritional status in Andhra Pradesh 1992-2006



Source - NFHS-1,2,3. Height was not measured in NFHS-1.

In the state of Andhra Pradesh, 45% of Under Weight children were identified during the period of 1992-93(NFHS-1) which was declined to 37% 2005-06 (NFHS-3). There is only a marginal reduction of 1% of under weight children from 38% to 37% during the period NFHS-2 to NFHS-3 respectively. Under Weight is a significant contributor to infant mortality which is likely to suffer with growth retardation and illness throughout their childhood, adolescence and into adulthood. These growth-retarded adult women are likely to carry on the vicious cycle of malnutrition by giving birth to low birth-weight babies.

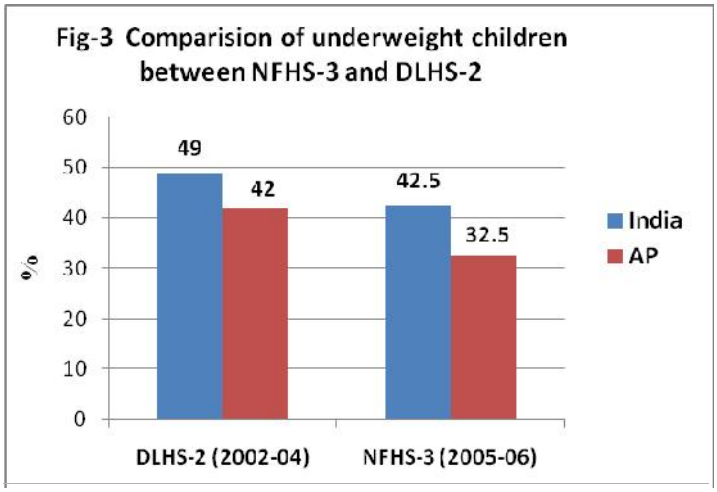
4.2 Nutritional Status of Children in AP and India -2012-13



Source - DLHS-4 in 2012-13

Children whose weight of Z score is less than -3SD would is measured as 'Severely Under-Weight' and those with weight less than -2SD as 'Under-Weight'. As per DLHS-4 conducted during the period 2012-13, underweight (weight for age) children were 49.2% from India, and the same underweight when compared to AP its 42.3% which is slightly lower than the all India level .

4.3 Comparison of Under-Weight Children between NFHS and DLHS



Source DLHS-2, NFHS-3

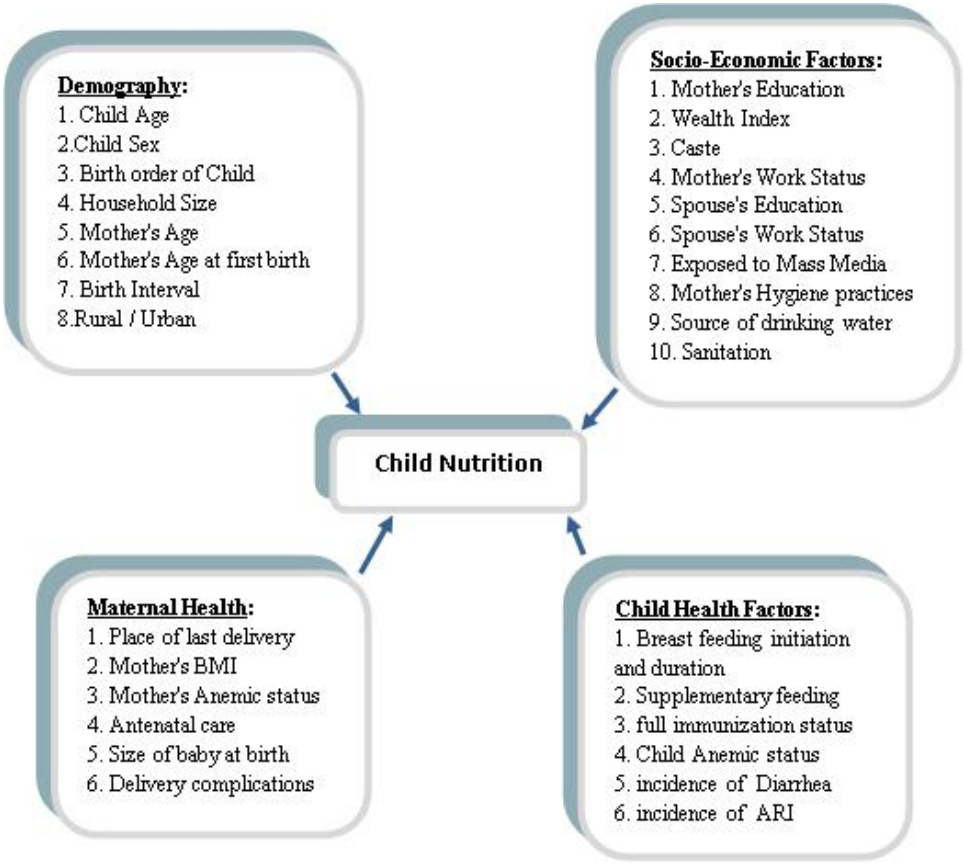
The comparison of nutritional status in children from the different data sources like DLHS and NFHS is presented in fig 3 .The percentage of children who were under weight in DLHS-2 was 49 for All India and 43 percent in NFHS -3, while for Andhra Pradesh the figures are 42% and 33 % respectively. The differences may be due to the reference period considered, sampling procedure and age of the children. The DLHS covered children below 5 years while NFHS covered children below 3 years.

However the policy maker will find difficulty to accept the results because of wide variation in prevalence of figures between AP and India. Hence might not be interested to go in depth into methodological issues and there is need to focus on the monitoring system of the program.

4.4 Factors effecting Child Nutritional Status :

The various factors affecting Nutritional status of children is presented in Fig 4.

Figure-4: Factors affected Nutritional status of children



4.5 Present System of Monitoring of ICDS

Government of India has strengthening and restructuring of ICDS with special focus on children under three years pregnant and lactating mothers. These ICDS has rolled out in three phases with focus on the 200 high burden districts for malnutrition during 2012-13 and additional 200 districts in 2013-14 including districts from the special category States of NER (North East Region) and the remaining districts in 2014-15.

The State of undivided Andhra Pradesh has introduced many programs on Child nutritional aspects which are been initiated through ICDS to reduce the incidence of malnutrition, Low Birth Weight, educate the mothers on breast feeding practices and to motivate beneficiaries in availing the facilities provided by them. One of the main target to be attained by ICDS is to reduce the prevalence of under nutrition among children by (% underweight children 0-3 years) by 10 percentage(Goals set by ICDS with other bodies during 2013) [5].also to focus on child hood education and development.

The main drawback identified, is tracking of the system which is a manual process from the Anganwadi centers, Block level and District and state levels . The data is entered either on hard copies or in EXCEL and there is no system to monitor the tracking process, errors in data and take appropriate action at various levels on the errors committed by the staff at different levels.. Hence there is a need to replace the present monitoring system with Technological intervention to automate the tracking system and Reports generation of the child and maternal nutritional status .

4.6 Need For Technology Intervention

The gaps in manual tracking system need to be replaced with Technology intervention for Tracking of the nutritional programs on a regular basis to help the policy makers and the implementers in making the system error-free, by providing data on a

a. Timely basis
b. Current data, i.e. upto-date information
c. Complete data
d. Error free data and data analysis
e. For entire population
f. In no time

and to bring the policy to a grass root level by reaching every beneficiary immediately and to take appropriate action instead of waiting till the **damage happens, as it's a control exercise. "Prevention is better than Cure".**

5. CONCLUSION

On comparing the data from different sources, the policy maker are getting confused with multiple agencies conducting studies with different methodologies with different results And also the present system of monitoring of the program is not error free. Hence this paper raises the need for monitoring the system using technology Intervention for tracking of nutritional status of children on a Regular basis by helping the policy makers in tracking the maternal and child nutritional status, and program implementation by minimizing the error through replacing the monitoring system from manual process. To enhance the quality and acceptability of nutritional food by the pregnant and lactating women and their enrollment in declining anemia and under nutrition child, resulting in reduction of IMR and to reduce the prevalence of low birth-weight.

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