“Nutritional Status of Children in age group of 0-6 years attending Anganwadi Centres in Rajasthan”

1Mona Narain, 2Akash Rajender, 3B.N. Sharma, 4R.C. Chaudhary, 5Gaurav R, 6Reshu Gupta,
1Resident, (Department of Community Medicine)
2Resident, (General Medicine)
3Professor & Head, (Department of Community Medicine)
4Professor, (Department of Community Medicine)
5Assistant Professor, (Department of Psychiatry)
6Assistant Professor, (Department of Physiology)
Institute: Mahatma Gandhi Medical College & Hospital, Jaipur, Rajasthan
Corresponding Author: Dr Akash Rajender

ABSTRACT:
Background: One of the important beneficiary of Integrated Child Development Services (ICDS) Program monitoring of nutritional status of children upto 6 years. The present study was conducted in selected ICDS projects of Rajasthan to assess the nutritional status of children between 0-6 years age.

Methodology: A cross-sectional study was conducted among Twelve (12) districts namely Ajmer, Bhilwara, Churu, Bikaner, Jhunjhunu, Nohar, Bharatpur, Alwar, Pali, Nagaur, Sriganganagar and Tonk. In each project five Anganwadi Centres (AWCs) were randomly selected. This constituted to 60 AWCs for collection of information/data about the nutritional status of nutrition of 0-6 years age beneficiaries registered with each anganwadi centre.

Result: In 0-3 years age group registered/weighed beneficiaries i.e. 122062 (weighed 112387), 33117 (29.46%) were found in grade I & II and 1074 (0.95%) in grade III & IV undernourished respectively. In 03-06 years age group, 47814 (69.27%) have been found to be normal, 21858 (31.21%) in grade, I & II and 362 (0.52%) in grade III & IV under nourished state.

Key-words: Nutritional status, anganwadi workers, children, beneficiaries.

INTRODUCTION:
With a view to provide integrated health services i.e. nutritional, environmental and social services to the identified beneficiaries in continuation throughout their specified life cycle period by a process of intersectoral coordination at different levels and community participation through a community based outlet “Angwanwadi Centre” (AWC) under the guidance and supervision of Integrated Child Development Services (ICDS) project was launched on 2nd Oct. 1975) by the government of India.1,2

One of the most important part of the scheme is covering and monitoring nutritional status of children from birth to 6th year in continuation and focusing on healthy development rather than on cure/repair. With a view to assess the growth and development of a child and to bring about appropriate response to the growth uninterrupted, growth monitoring (GM) was devised as a tool.3,4 Throughout the country in all the Integrated Child Development Schemes (ICDS) which cover nearly 3908 administrative blocks, growth monitoring is conducted regularly. The correctness of growth monitoring depends on the training provided to Anganwadi workers with appropriate use of tools for measuring it.

The Indian health system is faced by both the problems of under and over reporting of data. Though the estimated prevalence of LBW is around 30% in India but because of under reporting, true prevalence in Rajasthan is a major hurdle. The paucity of data and literature in this field of operational health sector on training and the tools for measuring growth has tempted us to analyze the AWW training and educational component with even assessing the nutritional status of children between 0-6 years age in selected ICDS projects of Rajasthan.
METHODS:

A cross-sectional study was conducted among Twelve (12) districts namely Ajmer, Bhilwara, Churu, Bikaner, Jhunjhunu, Nohar, Bharatpur, Alwar, Pali, Nagaur, Sriganganagar and Tonk. For operational feasibility, twelve districts namely Ajmer, Bhilwara, Churu, Bikaner, Jhunjhunu, Nohar, Bharatpur, Alwar, Pali, Nagaur, Sriganganagar and Tonk were randomly selected out of the total districts in the first phase. Then again stratified random sampling was done in the second phase to select 12 (twelve) ICDS projects (Rural 10 and Urban 2) for the detailed nutritional status study. At the third phase again random sampling was adopted to select five anganwadi centres (AWCs) which accounted at 60 AWCs in all for collection of information/data about the nutritional status of nutrition of 0-6 years age beneficiaries registered with each anganwadi centre. The information regarding the literacy levels, training and tools for growth monitoring were obtained. Anganwari records like their registers and charts were also observed. Weight for age of the child was considered for knowing nutritional status using WHO criteria. In addition, the anganwadi workers (AWWs) were asked to explain the methodology of growth monitoring of 2-3 children in each centre on the days of survey to see assess the skills, but it was not taken into account.

RESULTS AND DISCUSSION:

It is evident from (Graph 1) that majority of AWWs were 10th pass 52.85% while only 2.73% were literate.

The data of children under 3 years and 3-6 years were analyzed to foresee any gaps between the total Registered and Weighed children in all the 12 projects as depicted in (Table 1). The finding of the table suggests that the gap is present in both the age groups. It was analyzed that the gap widens in the age group of 3 to 6 years accounting at 14.54% in comparison to 0 to 3 years (7.92%).

Table 1. Gaps among the registered and weighed beneficiaries.

<table>
<thead>
<tr>
<th>Age group</th>
<th>Beneficiaries as Registered</th>
<th>Beneficiaries weighed</th>
<th>Registered/ weighed Beneficiaries (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-3 years</td>
<td>1,22,062</td>
<td>1,12,387</td>
<td>9675 (7.92%)</td>
</tr>
<tr>
<td>3-6 years</td>
<td>81,955</td>
<td>70,034</td>
<td>11921 (14.54%)</td>
</tr>
<tr>
<td>Total</td>
<td>2,04,017</td>
<td>182421</td>
<td>21596 (10.58%)</td>
</tr>
</tbody>
</table>
An attempt was made to see any relationship among the unweighed and the weighed children in both the age groups. A significant association was observed ($x^2 = 2269.0, p<0.00, df1$) between the independent and dependant variables.

**Table 2. Association between weighed/unweighed children In relation to both the age groups.**

<table>
<thead>
<tr>
<th>Age group</th>
<th>unweighed children</th>
<th>Beneficiaries weighed</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-3 years</td>
<td>9675</td>
<td>1,12,387</td>
<td>1,22,062</td>
</tr>
<tr>
<td>3-6 years</td>
<td>11921</td>
<td>70,034</td>
<td>81,955</td>
</tr>
<tr>
<td></td>
<td>21596</td>
<td>182421</td>
<td>2,04,017</td>
</tr>
</tbody>
</table>

In view of assessing the grades of malnutrition, among both the age groups, Table 3 was formulated. It is observed from the table the majority of children fall under grade I and II in both the age groups. Thus it can be stated that almost 70% of beneficiaries are normal, with only less than 1% with severe malnutrition.

**Table 3 Grades of Malnutrition among both the age groups.**

<table>
<thead>
<tr>
<th>Age group</th>
<th>0-3 years</th>
<th>3-6 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>78,126 (69.52%)</td>
<td>47814 (68.27%)</td>
</tr>
<tr>
<td>Grade I &amp; II</td>
<td>33,117 (29.47%)</td>
<td>21858 (31.21%)</td>
</tr>
<tr>
<td>Grade III &amp; IV</td>
<td>1074 (0.96%)</td>
<td>362 (0.52%)</td>
</tr>
<tr>
<td>Total</td>
<td>112387 (100%)</td>
<td>70034 (100%)</td>
</tr>
</tbody>
</table>

In 2005-2006 NFHS-III and UNICEF, it was found that 46% of preschool children were suffering from moderate and severe grades of protein calorie malnutrition. In 2008, S. Malik et al noticed that 51% of children were malnourished. Out of these, 29% were suffering from grade-I, 14% from grade-II and 6% from grade-III and 2% from grade-IV malnutrition. In another study in 2005 by Deeksha Kapur et al found 75% children of 9-36 months age were underweight, 35% were severely nourished and 40% chronicle malnourished. In western, Rajasthan during 2006 Dinesh Kumar et al found 60% children below 5 years were malnourished. AWWs training record has also been found reasonable i.e. induction 1662, JCT-2259, refreshers 1736 and orientation courses 388. However 52 AWWs have no course to their credit who need to do earliest. Besides, special training for growth monitoring of each child every month must be got done. Innovative medical technology & health education is essential patients so that diseases can be cured rather than be managed.
An ever-expanding literature base, the complexity of modern medicine and a limited amount of time and human mental capacity make clinical uncertainty a reality of medical practice.  

**Tools for Growth monitoring**

All the tools like weighing machine, growth charts, utensils (SNP), registers, referral slips etc. were sufficient in numbers except in some AWCS which have the deficiency or non functional weighing machines 83, growth charts 42, PSE Kit 196, SNP 117 and NHED Kit 86 are deficient.

**Other salient findings during the study which needed immediate attention**

(a) Growth monitoring skills to interpret prefitted growth charts with ascending, descending and flattened growth curves and proper updating all the register, regularly.

(b) Approximately half of the AWWs did not know – how to use salter weighing scale properly.

(c) The AWWs must know about the type of intervention measures to be taken after filling Growth monitoring charts, which quite a few do not do properly.

(d) There must be proper communication from the AWWs to all the mothers of children attending AWCs to use supplements as additional food like milk, dalia, meshed bananas etc. and breast feed upto 6 months age.

**Recommendations:**

To achieve a better nutrition status among 0-3 and 3-6 years children, the following points need proper attention:-

(i) Training and retraining of complete staff under ICDS particularly the supervisors, AWWs and their helpers to maintain proper and accurate records of nutritional status of each child.

(ii) Must have direct communication with the parents particularly mothers of children in AWCs so that intervention measures could be taken promptly.

(iii) Use of growth data must be community friendly for participation of all concerned for real benefits.

(iv) The menus must keep changing weekly and be displaced on board to read for all.

(v) Monotony of supplementary nutrition food supply needs immediate attention to improve fast consumption.

**References:**


