

Original Article

Perceived Responsibilities of Anganwadi Workers and Malnutrition in Rural Wardha

Authors

Dongre AR, Deshmukh PR, Garg BS,
Dr Sushila Nayar School of Public Health,
Mahatma Gandhi Institute of Medical Sciences,
Sewagram – 442 102
India.

Address For Correspondence

PR Deshmukh,
Professor,
Dr Sushila Nayar School of Public Health,
Mahatma Gandhi Institute of Medical Sciences, Sewagram
India – 442102
E-mail: prdeshmukh@gmail.com

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Abstract:

Objectives: To find out the nutritional status of under-six children attending ICDS scheme and to study *Anganwadi* workers' (AWW) perceived work load and operational problems. **Material and Methods:** A triangulated research design of quantitative (survey) and qualitative (Venn diagram, seasonal calendar) methods was used. Nutritional status of children was assessed by a survey. Participatory methods like Venn diagram and Seasonal calendars were used to collect qualitative data regarding AWWs perceived work load and food security with malnourished children. **Results:** Overall, prevalence of underweight and severe underweight among children under-six was found to be 53% and 15% respectively and among children below three years it was 47% and 15% respectively. Venn diagram showed AWWs' multiple responsibilities. In seasonal diagram exercise, the mothers of severely malnourished children showed enough food availability in their house across all months of a year. **Conclusion:** To efficiently tap the potential of AWWs for reducing multidimensional problem of malnutrition, ICDS needs to design and implement flexible, area-specific and focused activities for AWW. **Key Words:** Underweight, Malnutrition, Mother's education, Caste, Food scarcity

Introduction:

In India, the prevalence of child under-nutrition is nearly double the Sub-Saharan Africa and is among highest in the world.¹ Maharashtra, which is one of the six high prevalence states shows slow decline in child malnutrition and inter-district variations. Being a signatory of the Millennium Declaration of the UN Millennium Summit, India has to halve malnutrition among children below five years by 2015. The achievement of this nutrition target uniformly across all the states and districts is important as it would contribute to reduction in child mortality and Human Poverty Index. Even after 30 years of implementation of Integrated Child Development Services (ICDS), a single major child program in India, about half of below three years children in Maharashtra were found undernourished.² The present study was undertaken in all the villages of Primary Health Centre, Anji, which is located in Wardha district of eastern Maharashtra. The objectives were to find out the nutritional status of under-six children attending ICDS scheme and to study Anganwadi workers' (AWW) perceived work load and operational problems.

Materials and Methods:

In December 2005, the Kasturba Rural Health Training Centre, Anji which is a peripheral centre of Department of Community Medicine, Mahatma Gandhi Institute of Medical Sciences, Sewagram used a triangulated design, combining both quantitative and qualitative (Venn diagram, seasonal calendar) methods to undertake present study.

A cross-sectional survey was undertaken among under six ICDS beneficiaries of all 20 *anganwadi* of Primary Health Centre, Anji. A complete list of all *anganwadi* and a list of under-six beneficiaries was obtained which was subsequently followed by health check-up at each *anganwadi* on given date and time. Out of 2442 children, 1543 (63.1%) were examined and weighed by a team of trained personnel. The nutritional status of children was assessed by obtaining weight by Salter scale, provided by UNICEF. The information on date of birth was obtained from the immunization card and the records of *anganwadi* worker. The information on other background characteristics like education of mother and caste was obtained from the mother. The data thus collected was obtained by pre-designed and pre-tested questionnaire. About 52 (3.3%) children were excluded from analysis due to incomplete information. Nutritional status of children was

assessed by Z-score classification of weight for age using NCHS standard recommended by World Health Organization.³ Children who were below two Z-score values of the reference median (< -2 Z-score) were considered to be underweight, and children who were below three Z-score values of the reference median (< -3 Z-score) were considered to be severely underweight. The relationship of nutritional status with age, sex, education of mother and caste was examined. The data was entered in the software package epi_info version 6.04 and analyzed by using EpiNut programme.

For qualitative data collection from AWWs and the mothers of malnourished children, Participatory qualitative methods like Venn diagram and Seasonal calendar were used.⁴ After obtaining informed consent, a trained social worker facilitated a group of eight AWWs who were willing to talk freely to draw Venn diagram showing their present workload. This exercise was undertaken during their monthly meeting at Primary Health Centre, Anji. It provided a visual picture of AWW's perceived work importance. First of all, a group of AWWs was asked to prepare a list of their responsibilities. Later they were asked to assign size and cut paper circles of different sizes for each of the enlisted responsibility with respect to their perceived severity. The bigger circles represented important work. AWWs were asked to name and paste paper circles of their various responsibilities on chart paper. During the process, facilitator listened to group discussion and noted it down. The seasonal diagram (seasonal calendar) was individually drawn with the feasibly selected mothers of 6 severely malnourished children to understand the changes in livelihood condition in their village like work load period; food and income availability; illness period; and expenditure across different months of a year.

Results:

Out of 1491 under-six children, 776 (52%) were male and 715 (48%) were female. As seen in Table I, overall, prevalence of underweight and severe underweight among children under-six was found to be 53% and 15% respectively and among below three years it was 47% and 15% respectively. The prevalence of underweight and severe underweight significantly increased with age and peaked at age of 12–23 months where it was 61% and 21% respectively. The girls were more likely to be severely underweight (17%) than boys (14%) and boys were slightly more likely to be underweight (54%) than girls (52%). This difference was not statistically significant.

Table 1: Nutritional status of under-six year children according to selected socio-demographic characteristics.

Background characteristics	Number of children	Nutritional Status	
		< - 2 Z-score (%)	< - 3 Z-score (%)
Age of child*			
< 6 months	118	16 (13.5)	5 (4.2)
6 – 11 months	115	38 (33.0)	9 (7.8)
12 – 23 months	255	156 (61.2)	54 (21.2)
24 – 35 months	284	154 (54.2)	47 (16.5)
> 35 months	719	428 (59.5)	112 (15.6)
Sex of child			
Male	776	421 (54.3)	107 (13.8)
Female	715	371 (51.9)	120 (16.8)
Total	1491	792 (53.1)	227 (15.2)

Note: Weight-for-age is expressed in standard deviation units (SD) from the median of the International Reference Population. * p < 0.001

As seen in Venn diagram exercise (Figure 1), among the three significantly perceived responsibilities, record keeping got the highest priority followed by preschool education and supplementary food distribution. Other activities like growth monitoring, immunization and examination of malnourished children got relatively poor emphasis. Notably, very little importance was given to mothers' health education. Overall, the exercise showed AWWs' multiple responsibilities which ranged from Maternal and Child Health services to participation in various other national health programmes.

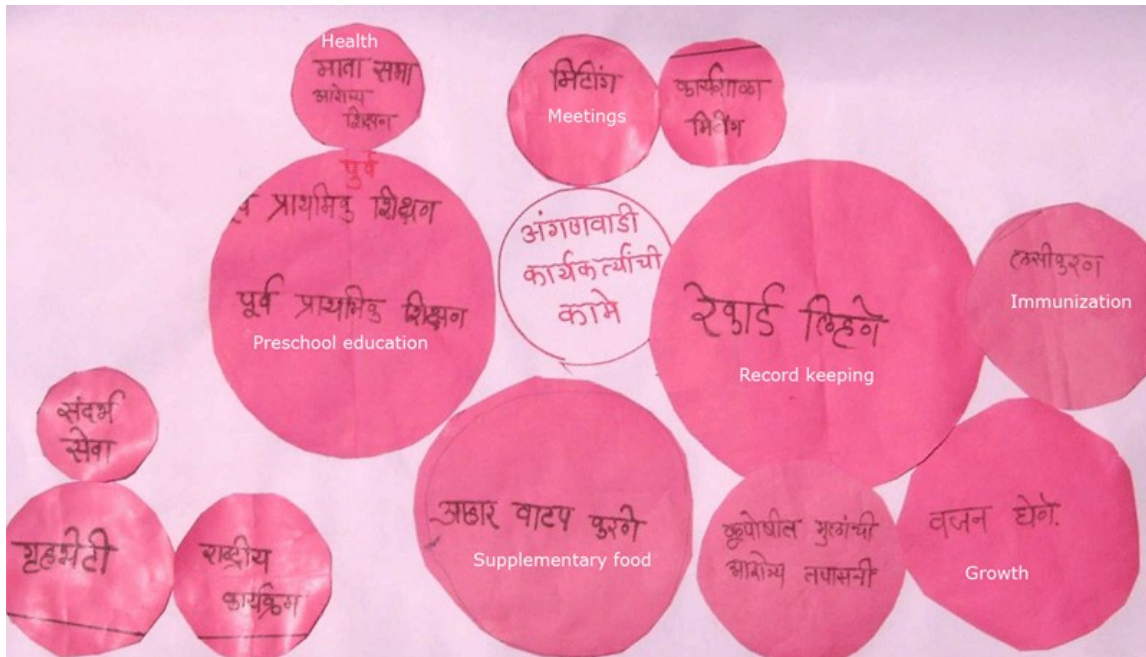


Figure 1: Venn diagram showing various responsibilities of Anganwadi worker

In seasonal diagram exercise, the mothers of severely malnourished children (Figure 2), showed enough food availability in their house across all months of a year.



Figure 2: A Seasonal calendar of a mother of severely malnourished child

Discussion:

In the present study, overall prevalence of underweight and severe underweight among children below six years was found to be 53% and 15% respectively. The prevalence of underweight children significantly increased with rising age group. It was found to be significantly associated with maternal education. The group of AWWs perceived record keeping, preschool education and supplementary food distribution as their major time consuming activities. The seasonal calendar drawn by the mothers of severely malnourished children showed food availability in their house across all months of the year.

The Reproductive and Child health (RCH) program emphasized monitoring of child health on the basis of their nutritional status. In year 2002, as reported by Wardha district level health survey under RCH, the prevalence of underweight and severely underweight children was 53% and 16% respectively.⁵ The condition worsened with rising age; peaked at the age group 12-71 months; and had inverse relationship with maternal education. The present study reported the similar findings.

In the present study, the prevalence of underweight and severely underweight children among children below-three years was found to be 47% and 15%, respectively.

NFHS-I (1992-1993) and NFHS-II (1998-1999) survey in Maharashtra have reported no significant decline in the prevalence of underweight children where it was found to be 51% and 50% respectively. Recently, In Maharashtra, NFHS-III has shown overall 10% decline in underweight children.⁶ The decline is encouraging but needs to be examined in the light of rural-urban and inter-district variations in decline. Also it is to be noted that this decline is in below three years children and prevalence of underweight rises with age.

One of the main objectives of Integrated Child Development Services Programme (ICDS) is to improve maternal and child nutrition. The effective delivery of ICDS services at village level depends on efficiency of AWW. As seen in Venn diagram exercise AWWs' most of the workload was due to record keeping neglecting their primary functions. Ghosh⁷ have already pointed out the similar fact and emphasized that AWW's prime responsibility should be health and nutrition education. As seen in Venn diagram, amidst the multiple responsibilities very little time is given for nutrition education. Ghosh et al⁸ have also stressed that in-depth nutrition education regarding feeding with home available foods can help to improve nutrition. AWW should devote more time for nutrition education. The arrival of another village level female worker called Accredited Social Health Activist

(ASHA) under National Rural Health Mission may be trained in effective communication to bridge gaps in present maternal and child health services.

In seasonal diagrams exercises, the mothers of severely malnourished children have shown household food security throughout a year. However, this finding might be study area specific. This finding suggested that the malnutrition in study area could be due to faulty feeding practices and not due to scarcity of food. Hence there is need to educate the mothers about correct feeding practices. NNMB findings revealed that median intake of proteins and calories among children between 1-3 years is 81% and 57% respectively and that of children between 4-6 years is 87% and 61% respectively. This further emphasizes the faulty feeding practices of mothers.⁹ Integrated Management of Neonatal and Childhood Illnesses (IMNCI) have emphasized dietary counseling of the mothers on frequency of feeding and adding oil/ghee in diet. Kent¹⁰ has suggested the right based approach specifying entitlement of beneficiaries for supplementary feeding and entitled families should be informed of what services they are entitled to. Notably, the success of community based Tamil Nadu Integrated Nutrition Project was in their focused approach on nutrition intervention including growth monitoring and selective nutritional supplementation.¹¹

Conclusions:

Considering the high prevalence of malnutrition, its inverse relationship with maternal education and socio-economic status and multiple responsibilities of AWWs a focused, need based strategy is required. To efficiently tap the potential of AWWs for reducing multidimensional problem of malnutrition, ICDS needs to design and implement flexible, area-specific and focused activities for AWW.

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