



## “ASSESSMENT OF KNOWLEDGE OF ANGANWADI WORKERS IN RURAL & URBAN FIELD PRACTICE AREA OF A MEDICAL COLLEGE - A COMPARATIVE STUDY”

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**ABSTRACT** The government of India launched the Integrated Child Development Services (ICDS) scheme in 1975. The Anganwadi is the focal point for implementation of the ICDS scheme and the key role played in the execution of this scheme is by the anganwadi worker (AWW). Being a grass root functionary of ICDS programme, the AWW has to conduct different types of activities. This cross sectional comparative study was done in urban and rural field practice area of a medical college in Mumbai. 17 AWW from urban and 20 AWW from rural area were assessed for their knowledge about the job activities. We found that, greater number of the AWWs, in spite of having experience of more than 20 years lacked proper knowledge and skill for interpretation of flattened growth curves, earlier assessment of which could prevent malnutrition.

**KEYWORDS :** Anganwadi workers, Knowledge.

### Background:

As rightly stated that life success, health and emotional wellbeing have their roots in early childhood, the government of India launched the Integrated Child Development Services (ICDS) scheme in 1975 in 33 development blocks and a few urban areas in India. It is regarded as the world's largest community based child development programme, which aims at the holistic development of children below the age of six years, expectant and nursing mothers and adolescent girls. This involves providing a package of services comprising supplementary nutrition, immunization, health check-ups, referral services, pre-school education and nutrition and health education. The ICDS is aimed particularly at the most vulnerable sections of the population and at disadvantaged areas such as backward rural areas, tribal sects and urban slums.<sup>1</sup> The ICDS is a centrally sponsored scheme implemented by the ministry of human resource development. 2

The ICDS programs are carried out efficiently in slum, rural or tribal areas through a network of Anganwadi centres with the rural or urban areas of about 100,000 population being covered by 100 Anganwadi centres and the tribal areas of about 35,000 population by 50 centres.<sup>2</sup> The Anganwadi is the focal point for implementation of the ICDS scheme and the key role played in the execution of this scheme is by the anganwadi worker (AWW). It normally covers a population of 1000 in both rural and urban areas and 700 in tribal areas.<sup>3</sup> The anganwadi Worker (AWW), is a part-time honorary worker, a woman of the same locality, chosen by the people, having educational qualification of middle school or matric or even primary in some area. She is assisted by a helper (Sahayika) who is also a local woman and is paid honorarium. The success of the ICDS scheme depends on the Knowledge and experience of the manpower involved.<sup>4</sup>

Being a grass root functionary of ICDS programme which involves different groups of beneficiaries, the AWW has to conduct different types of activities. She has to cater a variety of beneficiary groups, and provide them with different services (nutrition and health education, non formal preschool education (NFPSE), supplementary nutrition, growth monitoring and promotion and family welfare services. She also coordinates in arranging immunization and health checkup camps.<sup>5</sup> All these roles and responsibilities are only possible if the AWW has the right knowledge of the ICDS scheme.

A number of research studies have been conducted to evaluate and assess the impact of the ICDS programme mostly focusing on the impact of ICDS on children and women. But we tried to study the knowledge of anganwadi workers who play a pivotal role in the successful implementation and execution of the ICDS. In this backdrop, this study was conducted in Urban and rural field practice area of government medical college in Mumbai.

### Methodology:

Present study was a cross-sectional and comparative study carried out in rural and urban settings which are the field practice areas of the

medical college from March 2008 to March 2009. The urban health centre caters to a population of around 1,55,650. The area constitutes different settlements of slum dwellers. The rural area is situated around 60 km from the metropolitan city and serves a population of 30,745.

### Sampling procedure and Sample Size

The urban slum area is served by a total of 34 anganwadis which were working since more than one year. The rural area has a total of 53 anganwadis of which 11 were excluded from the study as they were not fulfilling inclusion criteria of working for more than one year, hence the effective number of anganwadis was 42. As this study was a part of bigger study, i.e evaluation of ICDS project, convenience sampling was used to select the beneficiaries. For the study purpose, 50% of the anganwadis were selected randomly by lottery method from both the areas. So the effective sample for both urban and rural area came out to be 17 and 21 anganwadis respectively.

The anganwadi workers (AWW) of the above selected anganwadis, i.e. 17 AWW from urban and 20 AWW from rural area were assessed for their knowledge about the job activities. One anganwadi worker's post in the rural area was vacant at the time of the survey.

The study was initiated after obtaining approval from the Institutional Ethical committee. Informed verbal consent was taken from each mother.

### Data collection:

Anganwadi workers were interviewed with the help of a pre tested semi-structured questionnaire which included her sociodemographic information, residence, experience, training status. Her knowledge was assessed for vitamin A, IFA supplementation, minimum number of ANC visits, breastfeeding, immunisation schedule and growth monitoring.

### Analysis Plan

Data entry and analysis was done in MS office excel 2007.

### Results:

**TABLE 1 : Profile of anganwadi workers**

Age of anganwadi workers N (%)	Rural	Urban
	N = 20	N = 17
< 30yrs	4( 20)	3(17.6)
31-45	13(65)	6(35)
>45 yrs	3(15)	8(47)
<b>Education</b>		
< 10th	13(65)	2(11.7)
10 th	6(30)	9(52.9)
> 10 th	1(5)	6(35.2)
<b>Marital status</b>		

Divorced	1(5)	0(0)
Married	16(80)	14(82.3)
Unmarried	1(5)	1(6)
Widow	2(10)	2(11.7)
<b>Experience in years</b>		
< 10yrs	12(60)	8(47)
11-20 yrs	3(15)	4(23.5)
> 20 yrs	5(25)	5(29.5)
<b>Training status</b>		
Trained	15(75)	17(100)
Untrained	5(25)	0(0)
<b>Type of Training</b>		
Induction training	15(75)	17(100)
Refresher training	9(45)	14(82.3)
Other	1(5)	0
<b>Distance of residence from anganwadi centre</b>		
Same village/area	10(50%)	6(35.30%)
Different village/area	10(50%)	11(64.7%)

Table 1 shows that more than half of anganwadi workers (65%) in the rural area were between 31 to 45 years of age whereas in urban area almost half of the anganwadi workers were more than 45 years of age. Around one fourth of anganwadi workers from rural area had not received job training, whereas all the workers in urban area were trained. More than half of the anganwadi workers from both urban and rural area resided in an area which was different from that of the anganwadi centre.

**Table 2: AWWs knowledge about supplementary nutrition:**

Knowledge about supplementary nutrition	Expected answer	Anganwadi workers answer					
		RURAL			URBAN		
		Correct	Incorrect	Don't know	Correct	Incorrect	Don't know
Vitamin A is given to prevent which disorder	Night blindness	13	7	0	8	9	0
Vitamin A is given to children up to the age of	5 years	5	4	11	14	3	0
What is the dose of vitamin A							
In children less than 1 year	Half spoon/ 1 ml	8	5	7	13	4	0
In children more than 1 year	Full spoon/ 2 ml	7	7	6	13	4	0
Minimum how many tablets of iron and folic acid should be taken by a pregnant women	100	7	11	2	7	10	0

Table 2 shows that, nearly 50% of AWWs from both the areas knew the disorder prevented by vitamin A but almost 11 out of 20 AWWs from rural area did not know the age up to which vitamin A is to be given to children.

Almost more than half of the AWWs from both the areas could not tell the minimum number of iron and folic acid tablets to be taken by the pregnant women.

**Table 3: Knowledge of AWWs about growth monitoring & Antenatal Care**

Knowledge about growth monitoring	Expected answer	Anganwadi workers answer			
		Rural		Urban	
		Correct	Incorrect	Correct	Incorrect

How frequently should the weight be monitored	Every month	19	1	17	0
How many lines are there on the growth chart	4	13	7	11	6
Which grade of malnutrition should be referred to the doctor	3rd,4th	11	9	17	0
How many kgs of weight should increase in 9 months of pregnancy	10 to 12 kgs	9	11	9	8
What is the minimum no. of ANC visits	3	5	15	2	15
What is the minimum duration to be kept between 2 pregnancies	3 years	14	6	7	10

As seen in Table 3, approximately all the AWWs said that weight should be monitored every month. Around one third of AWWs from both the area could not tell the exact number of curves on the growth chart. Less than half (50%) AWWs could not mention the grades of malnutrition which are to be referred to higher centre. Around 15 out of 20 from rural and 15 out of 17 from urban anganwadi workers could not tell the minimum number of ANC visits required during pregnancy.

**Table 4: AWWs skill in growth monitoring, plotting & interpretation of growth chart..**

	Correct use of tool	
	Rural N=20	Urban N=17
Adjusting to zero	8	4
Weighing twice and taking average	0	2
Minimum clothes on the child	2	5
Correct plotting on growth chart		
Does she consider the age of the child	19	17
Does she put the date on the growth card	13	13
Does she plots the curve	12	14
Correct interpretation of growth curve		
Ascending growth curve	20	17
Descending growth curve	18	17
Flattened growth curve	10	9

None of the anganwadi workers from rural area weighed the baby twice and took average of the two before plotting the weight on growth card. Very few AWWs weighed the child with minimum clothes on the child. **Only 12 from rural and 14 AWWs from urban area actually plotted the curve at the moment of weighing.** Only 10 out of 20 and 9 out of 17 could interpret a flattened growth curve and the necessary action to be taken (Table 4).

**Table 5: AWWs knowledge about Breast feeding practices and Immunisation:**

Services provided	Question	Expected answer	Anganwadi workers answer			
			Rural N = 20		Urban N = 17	
			Correct	Incorrect	Correct	Incorrect
Knowledge about breast feeding	Initiation of breast feeding	As soon as possible	20	0	17	0
	Colostrum should be given	Yes	20	0	17	0
	Prelacteals should be given	No	20	0	17	0
	Exclusive breast feeding duration	6 months	14	6	10	7
	When should complementary feeding be started	6 months	14	6	10	7
	What should be the consistency of weaning food	Semi solid	0	20	0	17
	Top milk given to child should be diluted	No	7	13	3	14
	Is bottle feeding advocated	No	15	5	12	5

Knowledge about Immunisation	When should immunisation be started	Birth	20	0	17	0
	Primary immunisation schedule					
	BCG	Birth	17	2	17	0
	DPT1 AND OPV1	1.5 month	15	5	12	5
	DPT2 AND OPV2	2.5 month	12	8	12	5
	DPT3 AND OPV3	3.5 months	12	8	12	5
	Measles	9 months	20	0	17	0
	Interval between two doses of DPT	1 month	12	8	12	5

A very astonishing response was observed regarding the consistency of weaning food, Almost all the AWWs from both areas said that consistency of weaning food should be liquid. Almost three fourth AWWs from rural and urban area responded that top milk should be diluted. To our surprise one fourth of AWWs do advocate bottle feed. Around half of AWWs from both areas could not tell the immunisation schedule for DPT/OPV and the interval between two doses of DPT correctly.(Table5)

### Discussion:

In our study the age of AWWs was in the range of 25 to 60 years, with mean age 38.2 and 43.8 in rural and urban areas respectively, whereas in the study done by Manzoor et al<sup>6</sup> they found the mean age of AWWs as 29.13 with a range of 21 to 45 years. In our study almost 13 (65%) of Anganwadi workers in the rural area were educated below tenth class whereas the same was only 11% in urban area. Anuradha et al<sup>7</sup> found that 35% percent of AWWs were matriculate, fulfilling the criteria of educational qualification in their selection. The AWWs had a varied range of experience with a minimum of 2 years to maximum of 24 years. There were almost 5(25%) and 5(30%) AWWs from rural and urban area respectively with an experience of more than 20 years. This was due to the fact that many AWWs from both the areas were working at this post since the inception of ICDS. In the present study, maximum AWWs were not living in same area. If the AWW is having residence away from her Anganwadi, she may not be able to make rapport with her AW community. She may not be able to understand local people and their problems and it may affect her work in AW. Similar findings were reported by Kant et al.<sup>8</sup>

In our study almost 50% of AWWs from both the areas knew the disorder prevented by vitamin A. Almost more than half of the AWWs from both the areas could not tell the minimum number of iron and folic acid tablets to be taken by the pregnant women but according to D. Chatopadhyay<sup>9</sup>, 97% of AWWs could tell the main disorder prevented by vitamin A and 59 % of AWWs could mention the minimum number of IFA tablets to be taken by a pregnant women.

Growth monitoring (GM) is one of the important activities conducted by the AWWs. For two-way communication with mothers, growth chart is the excellent tool. It not only clearly depicts the growth of a child to the mothers, but also gives early warning to both of them (AWWs and mothers) to take appropriate actions for children who are malnourished or going towards malnourishment. Flattening of the growth curve is the earliest sign of protein energy malnutrition and may precede clinical signs by weeks or even months. The whole purpose of GM is to detect growth flattening. Almost all the Anganwadi workers in both the areas could interpret the ascending and descending growth curves, but only 50% of them could interpret a flattened growth curve. The findings are similar to a study done by Anuradha Davey et al<sup>7</sup>

AWWs work includes health and nutrition education on various aspects of mother and child health. It is thus of utmost importance that she has adequate scientific knowledge about breastfeeding so that she can impart the correct knowledge to mother. In our study all the AWWs from both areas gave correct response about initiation of breast feeding, colostrum and prelacteal administration. These findings are similar to those found by Sanjay Bhasin et al<sup>10</sup> where almost all (98.7%) AWWs had the correct knowledge that breastfeeding should be started immediately after birth. Almost all the AWWs from both areas said that consistency of weaning food should be liquid. Another

very important finding was regarding diluting top milk before giving it to the child. Almost 65 % from rural and 80 % from urban area responded that top milk should be diluted. These findings are similar to those found by Sanjay Bhasin et al<sup>10</sup>, where 56.6% had the correct knowledge of diluting the top feed.

The PHC and its subordinate health infrastructure have to carry out immunization of infants and expectant mothers as per the national immunization schedule. The AWWs are required to assist the health functionaries in the coverage of the target population for immunization. They are also required to help in the organization of fixed day immunization sessions, maintain immunization records of ICDS beneficiaries and resort to follow up action to ensure full coverage. Hence she should have an adequate knowledge about the immunisation schedule. We found that around 40 % of AWWs from both areas could not tell the immunisation schedule for DPT/OPV and the interval between two doses of DPT correctly. These findings correlate with the study done by D Chatopadhyay et al<sup>9</sup> where almost 56 % of the AWWs could not mention the interval to be kept between two doses of DPT.

Surprisingly, during the survey, it was found that urban anganwadi centres did not provide immunisation to the children. On the contrary the AWW advised the parents of the children to get their children immunised from the nearest health centres.

### Conclusions:

In assessment of the knowledge of the AWW, we conclude that majority of them had not even completed the basic criteria of eligibility of achieving matriculation. In this view, Care must be taken while appointing the AWW as their education plays a pivotal role in carrying out their assigned functions. A greater number of the AWWs, in spite of having experience of more than 20 years lacked proper knowledge and skill for interpretation of flattened growth curves, earlier assessment of which could prevent malnutrition. Also, the knowledge regarding antenatal care, breast feeding, immunisation and supplementary nutrition was deficient. Accordingly, various fruitful and frequent training sessions should be held to update and maintain the competence of the AWWs thus enhancing the functioning of the ICDS.

### References:

1. Umesh Kapil. Integrated child development services (ICDS) scheme: A program for holistic development of children in India. The Indian Journal of paediatrics. 2002; 69 (7): 597-601.
2. Annual Report. Department of Women and Child Development, Ministry of Human Resource Development. 2003-04: p 16.
3. Kapil U. Monitoring and continuing education system in ICDS scheme-A module for national health programmes. Indian Pediatrics. 1989; 26: 863-867.
4. Dr.Sunder Lal. National Health Programme Series 7, Integrated Childhood Development Services, National Institute of Health and Family Welfare, New Mehrauli Road, Munirka, New Delhi.
5. Three Decades of ICDS – An Appraisal NIPCCD (2005-6) National Evaluation of Integrated Child Development Services. National Institute of Public Cooperation and Child Development, New Delhi, Government of India Press, New Delhi,
6. Dr. Shazia Manzoor & Shabana Khurshid. Assessment of knowledge of anganwadi workers and their problems in district ganderbal of kashmir. Acme International Journal of Multidisciplinary Research. 2014; 2(10): 109-113.
7. Anuradha Davey, Sanjeev Davey, Utsuk Datta. Reorientation training in enhancement of the knowledge regarding growth monitoring activities by anganwadi workers in urban slums of Delhi. Indian journal of community medicine. 2008; 33(1): 47-49.
8. Kant Lalit, Gupta A, Mehta SP. Profile of anganwadi workers and their knowledge about ICDS. Ind J Pediatrics. 1984; 51: 401-402.
9. D. Chatopadhyay. Study on Knowledge and Skills of anganwadi workers in Hooghly District, West Bengal. Indian journal of community medicine. 2004; 29(3): 117-118.
10. Bhasin S K et al. Knowledge and attitudes of anganwadi workers about infant feeding in Delhi. Indian paediatrics. 1995; 32: 346-350.