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A Study to Assess the Knowledge & Practices of Anganwadi Workers & Availability of Infrastructure in ICDS Program, at District Mandi of Himachal Pradesh

Kanchan Thakur[1st]
Junior Research Fellow
School of Public Health, PGIMER,
Chandigarh (India)

Hoshiar Singh Chauhan[2nd]
Professor,
Akal School of Public Health, Eternal University,
Sirmour, Himachal Pradesh (India)

Nand Lal Gupta[3rd]
Associate Professor,
Akal School of Public Health, Eternal University,
Sirmour, Himachal Pradesh (India)

Pratap Thakur[4th]
Assistant Professor,
Akal School of Public Health, Eternal University,
Sirmour, Himachal Pradesh (India)

Dipendar Malla[5th]
MPH Scholar,
Akal School of Public Health, Eternal University,
Sirmour, Himachal Pradesh (India)

Abstract: ***The Integrated Child Development Services Scheme (ICDS) in which Anganwadi Centers (AWCs) are the focal point for delivery of services, has been considered as one of the largest and unique grass root level early childhood development programme to address health, nutrition and development needs of children, pregnant women, nursing mothers and adolescent age group girls.Objective: Purpose of the study was to assess the knowledge and practices of Anganwadi workers (AWWs) and availability of infrastructure for AWC under ICDS. Methodology: This cross sectional study was conducted on 60 AWCs and 60 AWWs of selected ICDS blocks of District Mandi, Himachal Pradesh by simple random sampling method. Observation, brief structured interview and structured questionnaire techniques were used to collect responses from the AWWs. Results: All the AWWs and (97%) of Anganwadi helpers (AWHs) were trained and had been rendering adequate services but they were not much reflective of the same when being questioned on the knowledge parameter. Majority, (98%) of AWWs provided different services to the adolescent girls, like IFA & deworming tablets, non-formal health education and supplementary nutrition. Majority of AWCs,(85%) had single room for sitting, cooking and storing food items, LPG for cooking food, (98%) and Pucca house, (98%). All AWCs had doors, drinking water and toilet facilities, while (93%) AWCs had adequate posters and charts. Some AWWs,(27%) reported discontent with their remuneration. Conclusion: AWCs need to be strengthened in structure and supplies and AWWs need to be given more salary so that they can be motivated to take interest in all activities of the project. There is genuine need to repair/replace the storing bins and other infrastructure time to time.***

Keywords: ICDS, Anganwadi Centre, Mandi, Knowledge

I. INTRODUCTION

Children grow and develop amazingly. Mothers with their children under five years of age, not only constitute a large proportion of the community but also a "vulnerable " or special risk group [1] . The first five years of a child's life are most crucial for the foundations for physical and mental development. [2]

Today, ICDS Scheme represents one of the world's largest and unique programs for early childhood development to improve the condition of expectant and nursing mothers.[3] ICDS symbolizes India's commitment to her children –towards meeting the challenge of providing pre-school education and breaking the vicious cycle of malnutrition, morbidity, reduced learning capacity and mortality [3] .It attempts to provide a package of wholesome integrated service, supported by related services like Mid-day Meal, Balwadi, and Special Nutrition [4] .

Despite growth in literacy and economy, the understanding of holistic development of children remains less understood, absorbed, assimilated, and more importantly underinvested [5] .The prevalence of underweight children in India is among the highest in the world, and is nearly double that of Sub-Saharan Africa [6] . Certainly, there is a need for higher investment, greater commitment at all levels besides application in terms of design, delivery and deployment of resources, both human and financial to restore the overall growth and development of children [5].

Anganwadis are India's primary tool against the scourge of child malnourishment, infant mortality and curbing preventable diseases such as polio [7]. Their services can also be important tool to fight mental and physical disability in children [8]. India has the world's largest population of malnourished or under-nourished children [9].

Various researches have considerably explored many aspects of this scheme with variable results, but the coverage has been patchy and difficult to compare because of complexity involved in wholesome approach of the service and their constituents [10].

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In Himachal Pradesh, ICDS programme is being implemented in all Developmental Blocks of the Statethrough 78 ICDS projects. Following sixservices are being provided to children and pregnant/ lactating mothersthrough 18,385 AWCs in theState. The department is providingSupplementary Nutrition, Nutrition andHealth Education, Immunization, Healthcheck-ups Referral Services and Non-Formal Pre-School Education. Monthly honorarium of Rs 3,000 and Rs 1,500 has beenfixed by the Government of India for AWWs and AWHs respectively. The ICDS Scheme in Pooh tribal block in Kinnaur district started as a first experimental project in the state of Himachal Pradesh in 1975-76. This programme was implemented through 55 AWCs and 13 Mobile Centers. These centers operated in a difficult mountainous inaccessible inhabitable terrain, and the AWW of the main nearby AWC visits the left out children and women in inaccessible areas to provide supplementary nutrition and monitor the growth of children.

Among the scanty studies conducted in HP, one study done in tribal district of Kinnaur highlighted the suggestions given by community and ICDS functionaries and the action points for qualitatively improving implementation of ICDS projects in the state[15]. Another study found that majority of AWWs was not able to monitor the growth of children. The reasons they mentioned were non-availability of growth charts, non-cooperation of parents, and weighing scales not in working condition[16]. However, since then there have been improvements in the functioning of the scheme.

The Studies point out that in HP about half of the villages have functioning AWs, and 85 per cent of these are considered "satisfactory" by the evaluators. One comparative study of schooling in Sirmaur district in the State of Himachal Pradesh and another in Allahabad district in the State of Uttar Pradesh found that the functioning of AWs was very poor in Allahabad but reasonably good in Himachal Pradesh. In Kerala (with high level of social indicators), the situation is even better: 99 per cent of the villages have an Anganwadi.

The aim of this study, specifically is to assess the knowledge and practices of AWWs and functioning of AWCs i.e. infrastructure, facilities, supplementary nutrition, preschool education, health education etc. under the ICDS scheme in district Mandi of Himachal Pradesh.

II. MATERIALS AND METHODS

This study was undertaken to explore the important parameters of functioning of ICDS in terms of knowledge and practices of AWWs, functioning and infrastructure of the AWs in an area about which no descriptive survey is available.

DESIGN AND SETTING:

A Descriptive Cross Sectional survey was planned on AWCs of purposively selected ICDS blocks of District Mandi between December 2013 and June 2014. To exclude the biasness in the sample, 60 AWCS were selected by simple random technique out of the total 332 AWCs in the district after applying inclusion and exclusion criteria. 8300 children are enrolled in these AWCs of this district.

DATA COLLECTION TOOLS AND TECHNIQUE AND ANALYSIS:

Structured questionnaire was prepared to collect socio-demographical data, assess knowledge and parameters of functioning and infrastructure. The questions regarding knowledge, functioning and infrastructure were formulated in simple language for clarity and ease of understanding, on the basis of pertinent literature. The questionnaire was then circulated among five experts for elimination of ambiguous questions and for reliability and validity. The pilot study was done on AWWs and AWWs. Pilot tryout was successfully carried out to ascertain practicability & feasibility of the study.

On the stipulated date, the District Programme Officer was contacted and after a brief introduction on the purpose of the study, he gave permission to go ahead with the research. The lists of all AWCs were obtained from his office and the sample was then finalized. The DPO contacted with the selected AWWs and the investigator talked to them individually on phone and got their consent for the participation in the study.

This validated questionnaire was then administered to the 60 AWWs individually on different dates after obtaining the consent and briefing them about the purpose of the study. Along with this cross-questioning and observation techniques were used to check and verify individual health records maintained in Anganwadi Centers. The obtained data was entered and analyzed in Microsoft Excel & SPSS version 20. Descriptive statistics were used to describe demographic characteristics and other variables considered in the study. All the respondents approached to participate in the study completed the questionnaires.

ETHICAL CONSIDERATION:

Sanction to conduct the research study was obtained from the authority and the Ethical Committee, E.U. Baru Sahib, HP. Informed consent was obtained from individuals found to be eligible on the basis of inclusion criteria & willing to participate in the study. Anonymity and confidentiality were maintained throughout the study. Research was conducted after the approval by the District Programme Officer. Thus, ethical principle of self-determination was maintained and subjects were treated as autonomous sources by informing them about the study and allowing them to voluntarily choose to participate.

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III. RESULTS

DEMOGRAPHIC PROFILE:

Table-1 indicates that the majority, (48.3%) AWWs were in the age range of 41-50 years, whereas only (6.7%) were in the age range of 21-30 years. The majority (45%) AWWs were 12thpass; while (33%) were 10th pass and only (5%) were 10th pass.

In so far as the work experience was concerned, (26.7%) AWWs had maximum experience in the range of 11-15 years and the majority, (40%) had 5-10 years' experience, while only (6.7%) had had minimum experience of 0-5 years.

Table-1: Showing Socio-demographic profile of AWW's

	Variables	Frequency	Percentage (%)
1.	**Age (in years)**		
a.	21-30 years	4	6.7
b.	31-40 years	21	35
c.	41-50 years	29	48.3
d.	Above 50 years	6	10
2.	**Educational**		
a.	8th pass (Middle)	3	5
b.	10th pass (Matriculation)	20	33
c.	12th pass (Senior Secondary)	27	45
d.	Graduate and above	10	17
3.	**Work Experience in years**		
a.	0-5 years	4	6.7
b.	6-10 years	24	40
c.	11-15 years	16	26.7
d.	Above 15 years	16	26.7

IV. INFRASTRUCTURAL FACILITIES OF THE AWCS

In the present study, as Table-2 reveals, (85%) AWCs were situated in rented building, while (8.3%) were functioning as a part of primary school and (6.7%) were in AWW's own premises. (98%) of AWCs had Pucca building and only (2%) had partially Pucca building. (85%) AWCs were having only 1 room and (15%) were having 2 rooms. It was found that (98%) of AWCs roofs were that of concrete & in only (2%) AWCs roofs were made up of wood. Almirah/wooden boxes were available in (93%) of AWCs and in all the AWCs there were chairs, tables, tools, mats, benches, medical kits, first aid boxes & weighing machines in AWCs. Displaying of posters & charts were also found in (98%) of the AWCs.

The majority, (87%) of children had Taatpatti/Mat to sit, while (5%) sat on chairs & stools and only (3%) sat on the floor. (92%) of AWCs have combined room for sitting, cooking and storing food items & only (8%0 of AWCs were having separate rooms for other activities. Small playground was in (95%) and open space in (92%) of AWCs. (95%) of AWCs were having windows& grills within the rooms. Electricity was available in (97%) of AWCs. All AWCs were having doors, toilets & drinking water facility.

Common room for sitting was there in (88%) of AWCs, cooking and other purposes and only (12%) had separate kitchen. In this study, (98%) of AWCs were having LPG as cooking fuel & only (2%) were having stove & heater. In the study, (98%) of AWCs were using tap water & only (2%) were using tube well. In this present study, (95%) toilets were in good condition only and (5%) toilets were in an unhygienic condition. [Table-2]

Table-2: Showing Infrastructural facilities of the AWCs

Sr. No.	Facilities in the AWC	Yes	No
1.	Door	60 (100%)	0
2.	Window	57 (95%)	3 (5%)
3.	Grill on window	57 (95%)	3 (5%)
4.	Toilet	60 (100%)	0
5.	Drinking water	60 (100%)	0
6.	Electricity	58 (97%)	2 (3%)
7.	Play ground	57 (95%)	3 (5%)
8.	Open space	55 (92%)	5 (8%)
9.	Almirah , wooden box	56 (93%)	4 (7%)
10.	Chair, Table, Tool	60 (100%)	0
11.	Mat, Bench	60 (100%)	0
12.	Medicine Kit	60 (100%)	0
13.	First Aid Box	60 (100%)	0
14.	Posters and charts	59 (98%)	1 (2%)
15.	Weighing machine	60 (100%)	0

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V. LOCATION OF AWC

In this study, (65%) AWCs were having the distance of less than 1 km from the nearest health center and only (6.7%) were more than 2 km away. Most of AWCs (51.7%) were less than 1km from the nearest primary school, (38%) were 1 km-2 km away and (10%) were more than 2 km away.

VI. KNOWLEDGE AND PRACTICE OF AWWS

In this study, all the AWWs had been imparted training for 3 months before joining, while (97%) of AWH had attended training for 1week and the remaining (3%) were not trained. Table 3 and Table 4 indicate the Knowledge of AWWs and the Services delivered by them.

Table-3: Showing Assessment of knowledge of the AWWs

Sr No	Questions asked	Satisfactory
1	What method is used for assessment of nutritional status of child?	23 (38.33%)
2	Why do we need maintenance of growth chart and its importance?	35 (58.33%)
3	What are the services being provided under ICDS?	35 (58.33%)
4	How mothers are responding to look after the normal health, nutrition and development needs of child?	26 (43.33%)
5	How do you monitor the growth?	34 (56.67%)
6	What kind of services pregnant women receives under ICDS?	32 (53.33%)
7	What medicines are given to children for different problems?	30 (50%)
8	What are the services available for adolescent girls (KishoriShakti Yojna under BPL)?	58 (96.67%)
9	Do you think Nutrition and health education is important?	60 (100%)

Regarding the parameter of knowledge, most of the AWWs, (98.67%) had satisfactory knowledge, only regarding to the services available for adolescent girls (Kishori Shakti Yojnaunder BPL) and (100%) regarding importance of nutrition and health education, while (38.33%)AWWs had satisfactory knowledge about the assessment of nutritional status of child, (58.33%) regarding the need maintenance of growth chart, (58.33%)regarding the services being provided under ICDS,(43.33%) regarding how the mothers respond to look after the normalhealth, nutrition and development needs of child,(56.67%) regarding how she monitors the growth, (53.33%) regarding the services pregnant women receives under ICDS and (50%)AWWs had satisfactory knowledge regarding the medicines given to children for different problems. Thus, most of the AWWs had inadequate knowledge regarding most of the services under the ICDS.

Table-4: Showing the Assessmentof the services delivered by Anganwadi workers

Sr.No.	Questions asked	Yes	No
1.	Do you maintain records of immunization, health checkups etc.?	60 (100%)	0
2.	Do you assist hospital staff in immunization, health checkups?	60 (100%)	0
3.	Do you provide referral services?	60 (100%)	0
4.	Do you provide health and nutritional education to adolescent girl, women & the community?	60 (100%)	0
5.	Do you provide prophylaxis against blindness and anemia?	47 (78%)	13 (22%)
6.	Do you have any kind of work overload?	48 (80%)	12 (20%)
7.	Do community supports you?	56 (93%)	4 (7%)
8.	Do you participate in DOTS programme by giving medicines to TB patients?	47 (78%)	13 (22%)
9.	Do you provide JSY Services to mothers?	58 (97%)	2 (3%)

In the present study, almost all AWCs were providing most of the services to a greater extent. The majority (60%) of AWWs were providing good quality of food to children and (20%) very good food to the beneficiaries, whereas (20%) were not providing satisfactory quality of food as per observation of the investigator.

VII. FUNCTIONING OF AWC

Most of the AWs were open for 25 days. (50%) of AWWs covered 200-400 population and (8%) of AWWs covered population range of 801-1000 persons. Majority, 23 AWWs covered 51-100 houses & 2, 10 and 15 AWWs, covered 0-50 and 50-200 and 201-300 houses respectively. Majority of AWCs had 1-3 pregnant women in their area, 12 AWCs did not have any pregnant woman registered and only one AWC was found catering to more than 6 pregnant women. 37 AWWS (61%)had paid 3 or more health checkup visits during pregnancy. Some of them paid only 1-2 visits only.

In this study, (93%) of AWWs were conducting community survey once in a year. (97%) AWWs assessed nutritional status of children by regular weight checkup, whereas only 2- (3%) AWWs assessed by plotting on growth charts.Provision of medicines for common ailments like fever, deworming, cough and cold were in (96%), whereas (98%) provide IFA & deworming tablets, non-formal health education and supplementary nutrition.

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VIII. PROBLEMS FACED BY AWWS

Inadequate salary as their major problem (they got only Rs.3300 honorarium per month), was reported by (27%) of the AWWs, (15%) had reported problem of delay in receiving funds and necessary items, like kerosene oil, cooking items etc. According to (13%) record maintenance was unnecessary burden & (3%) of AWW had problem related to infrastructure. However, (42%) reported to have no problem.

IX. ASSESSMENT OF SERVICES

In the present study, (100%) of AWWs maintained records of immunization, health checkups, assistance given to hospital staff in immunization, health checkups, provide heath & nutritional education to beneficiaries.

JSY services to mothers was being provided by (97%) AWWs, (93%) AWWs got support of community and (78%) of AWWs reported that they provided prophylaxis against blindness and anemia & also participate in DOTS programme by giving medicines to TB patients.

X. DISCUSSION

This study was conducted on randomly selected 60 AWWs and AWCsafter applying inclusion and exclusion criteria, out of 332 AWCs under 10 Blocks of ICDS. The aim of this study, specifically was to assess the knowledge and practices of AWWs and functioning of AWCs i.e. infrastructure, facilities, supplementary nutrition, preschool education, health education etc. under the ICDS services in district Mandi of Himachal Pradesh.

On the basis of review of literature, a structured questionnaire was formulated and validated as per required standard to collect socio-demographical data, assess the knowledge and practice of AWWs and the infrastructure of AWCs. Observation and cross checking techniques were also used to ascertain the factual information. The collected data was analyzed and interpreted.

Regarding the parameter of knowledge, almost all of the AWWs had satisfactory knowledge regarding the services available for adolescent girls (Kishori ShaktiYojna) and importance of nutrition and health education, while only (38.33%)AWWs had satisfactory knowledge about the assessment of nutritional status of child, (58.33%) regarding the need maintenance of growth chart, (58.33%) regarding the services being provided under ICDS, (43.33%) regarding the how mothers respond to look after the normal health, nutrition and development needs of child, (56.67%) regarding the how she monitors the growth, (53.33%) regarding the services pregnant women receives under ICDS and (50%) AWWs had satisfactory knowledge regarding the medicines given to children for different problems. Thus overall, the knowledge of AWWs was low.

In so far as the work experience was concerned, in our study, (93.4%) AWWs had experience in the range of 5-15 years which is similar to the study by Nagaraj etal [11] which found (54.05%) AWWs had work experience of 10-13 years and similar to finding of the study by Madhaviet et.al 12 which found (80%) AWWs had the experience of more than 5 years. In our study, (27%) AWWs were unsatisfied with the salary, (13%) complained about excessive work load of registers and (3%) complained about infrastructure which differs with the study byMadhani (2011) [12] that found (53%) workers were not satisfied by salary packages, (73%) complained about infrastructure and work overload. This may be explained on the basis of socio-cultural and life style differences of the population.

In the present study, (98%) AWCs were having Pucca building, which is almost similar with report published by NIPCCD in March 2003 that showed the maximum (71.2%) of AWC were Pucca, (21.1%) were Kaccha14 some difference could be considered in view of the socio- economic change in the last 10 years. Madhaviet et.al [17] also conducted a study which found that (100%) of AWC had Pukka house.

In the present study, (68%) AWCs had toilet and (97%) had electricity facility whereas in the study of Madhaviet al 17, (46.6%) had sanitary toilet and (20%) had the availability of electricity. (92%) didn't have adequate space for food storage and other facilities in contrast to the study by Vaijayanti (2010) [18] that found that (43%) of centers didn't have space for food storage. This could be because of difference due to the socioeconomic development of the areas on which studies were conducted.

As far as infrastructure and functioning of AWCs were concerned, in the present study, the finding that (85%) AWCs were on rented building, (8.3%) were part of primary school and only (6.7%) were having AW's own premises is in line with the finding of the study conducted by Vaijayanti (2010) 18 which found that (85%) of the AWCs were rented building and the study conducted by Anil (2005) 13 found (82.5%) AWCs were housed in rented accommodation and only (15%) had their own building.

XI. CONCLUSION

AWCs need to be strengthened in structure and supplies and AWWs need to be given more salary so that they can be motivated to take interest in all activities of the project. There is genuine need to repair/replace the storing bins and other equipment time to time. It was found that majority of AWWs were not able to monitor the growth of children. The reasons they mentioned were non-

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availability of growth charts, non-cooperation of parents, and weighing scales not in working condition which helped to lay a foundation for proper functioning. As the AWWs had rendered most of the services, but they were not reflective on them during the enquiry.

There is a genuine scope for improvement of the infrastructure and equipment/ material supplied to them, apart from regular supply of medicines, nutrients and food material. Moreover, there must also be a system to give AWWs reasonable incentive time to time so that their motivation may be enhanced and maintained and they feel proud of their work to serve with spirited involvement. Time to time orientation courses would keep them in touch with the latest knowledge. Public awareness need to be enhanced to ensure more community participation as a support the system of whole service.

XII. LIMITATION

The sample of this study was small viewing the large number of AWCs, so, future study need to include a larger sample size so as to generalize the results to draw reasonable inference.

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