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## IMPACT ASSESSMENT OF ANGANWADI SERVICES ON RURAL DEVELOPMENT IN JAKHNIDHAR BLOCK, TEHRI GARHWAL (UTTARAKHAND)

Raiz Ahmed, Rajesh Bhatt and Anita Rudola

### ABSTRACT

Rural Anganwadi services are the backbone of rural healthcare and childcare development in India. Anganwadi centres make available a combined package of facilities including supplementary nutrition, basic healthcare, and pre-school education in rural areas. The integrated child development schemes are one of the largest community-rich programmes that provide integrated packages for the child below 6 years and pregnant and lactating mothers in different areas through Anganwadi workers. Anganwadi Services plays a vital role in reducing the stress level and fatigue of the mother by contributing to their nurturing small child. Nutritional level throughout the initial phase of life mostly influences the general health and development of children to achieve the milestone of life. These centres also teach mothers about the importance of nutrition and health, empowering them to better care for their child. In this study an attempt has been made to understand the impact for Anganwadi services on the rural household for the development and also analyse the awareness, knowledge, role and responsibilities of Anganwadi workers in rural area of Tehri Garhwal, Uttarakhand. The primary survey was conducted and collected the information of 15 selected villages and 33 Anganwadi centres from Jakhnidhar block in Tehri Garhwal District of Uttarakhand through population basis 165 respondents sample used for analysis of data.

### Introduction

Anganwadi centers give women the wisdom of participation in the community. It provides a chance to participate in various activities in rural areas. In other words, it extends the social value and time to develop the healthy relations with neighbours, and attend the occasion without any hesitation with other women in the Anganwadi centres. Healthy environment and healthy nutrition are important to develop the physical appearance of every child. This basic nutrition helps the child to grow strong physically and mentally that sustained at a very young age and more likely to be the healthy adult. Anganwadi services established the key source of communication between the government

and the rural people through the Anganwadi workers that teach the parents, aware about basic health services, benefits and child development in rural area. The major challenges for the Anganwadi works are shortage of infrastructure such as non-availability of government building, separate kitchen and toilet and availability of clean drinking water facilities in rural area. Supplementary nutrition is not sufficient for the growth of children, providing of other basic facilities is necessary which reduce the mental pressure of parents towards their children (Navuluri, et al., 2020).

Anganwadi centres provide the nutrition and health care services to children and mothers through counselling, door to door counselling, pre-

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school education, supply of health and medical facilities, immunization and rich source of nutrition. The knowledge gap between the rural and urban is complex in nature, urban services provide better services as compared to rural area (Bhattarai, et al., 2017). For the improvement in the Anganwadi centres bring new technology on it to deal various problem of health, morality, child protection, etc (Bhatnagar & Bhadra, 2015). The function of Anganwadi workers is not distribution of services only, but need to develop and improve the satisfaction level of the mothers and children (Rehman, et al., 2017). Most of Anganwadi centres have less working space but maintenance of register, basic kit and equipment are better in many centres (Baseer, et al., 2021)

### The Study Area

Jakhnidhar block is located in the Tehri Garhwal district of Uttarakhand. It is situated at 30°20'16" N latitude and 78°30'55" E longitude. It is an important part of the local governance structure and plays a crucial role in the development and administration of its local community. There are a total of 151 villages in the Jakhnidhar community block of Tehri Garhwal. Total population is 47,520 with a male population of 21,897 and a female population of 25,623. The literacy rate of Jakhnidhar block is 74.98%. The climate has been pleasant and minor change in temperate throughout the years. The maximum temperature rises to about 37°C in June and July, and the minimum temperature falls to about -2°C in December and January. In Jakhnidhar, there is a diversity of flora and fauna. Tropical and dry deciduous forests are found in this area. The topography is mountainous, with flowering valleys and small grassland.

### Objectives

1. To analyse the availability of services in Anganwadi centres for children and mothers.

2. To analyse the perception and awareness of Anganwadi services on rural development.

### Research Methodology

This study is based on the primary survey which was conducted in the Jakhnidhar block of Tehri Garhwal district of Uttarakhand. The data is collected through the questionnaires and door to door survey to understand the impact of Anganwadi services on rural household. A total 165 samples collected in 15 villages and 33 AWWc survey on the population basis. Villages are divided on the three categories (High, Medium and Low population) on the basis of purposive sampling method.

### Data Analysis

For the analysis of data, we use Jamovi open-source statistical software and Microsoft excel software. Total 165 samples were finalised for analysis of data to understand the impact of Anganwadi services on socio-economic condition of the respondents in rural landscape and also analyse the impact of services on rural development considering the indicators like 0-3 years children, 3-6 years children, and pregnant women and nursing mothers.

For the first three factor, we use the one-way Anova statistical method and observed that result is statistically significant and have a positive impact on services and rural development because p value less than 0.05. In this method, we calculated p-value, variance, standard deviation and mean standard error.

In people perspective on the Anganwadi services and rural development, we calculate the z-score value and percentage. Higher the value means people perception is positive and lower the means people perception is less on the services. To calculate the z-score given formula is to be used.

$$Z = \frac{x - \mu}{\sigma}$$

Where, z = Standard score  
x = observed value  
 $\mu$  = Mean of the sample

$\sigma$  = Standard Deviation of the sample

## Results and Discussion

### Socio-Economic Status of Respondent in The Study Area

The socio-economic condition in rural areas progressively changes over time. It represents the household condition and standard of living in society. Major indicators of socio-economic status are

education, income, family type, etc., which signifies the structure of society. To understand the status of the socio-economic condition, the age group of the respondents was divided into three categories, as shown in Table 01 below (young, middle, and old age groups). The mean value of the age group is 55.00, and the standard deviation is near about 20.00, as shown in Table 01.

**Table 01 : Socio-Economic Status of Respondent**

Attribute	Groups	Frequency	Percentage	Mean	STED
Age (years)	< 30 (young)	35	21.21	55.00	20.000
	31-41 (Middle)	75	45.45		
	41 above (old)	55	33.33		
Educational Qualification	Primary	32	19.39	27.50	9.225
	Secondary	35	21.21		
	Sr. Secondary	30	18.18		
	Graduate	25	15.15		
	Professional	10	6.06		
	Illiterate	33	20.00		
Monthly Income (Rs.)	< 5000	65	39.39	33.00	24.176
	10,000-20000	52	31.51		
	20,000-30,000	23	13.93		
	30,000-40,000	15	9.09		
	Above 40,000	10	6.06		
Family type	Joint	98	59.39	82.50	21.92
	Single	67	40.60		

Source: - Data Based on Primary Survey

Education is one of the most powerful tools for socio-economic development. As per the survey, most of the respondent's qualifications are secondary, which represents 21.21 per cent, and other educational categories show the minor proportions of the respondents. The mean value of the education qualification of the respondents was 27.50, which is very low. As far as income is concerned, 39.39% of respondents belong to the less

than Rs. 5,000 monthly income group, while 31.51% belong to the Rs. 10,000–20,000 monthly income group, and other income groups show a minor respondents' percentage. The mean value of monthly income is 33.00, as shown in the table. Most people prefer to live in a joint family, which shows 59.39% and a mean value of 82.50, which is very high.

### Impact And Availability of Anganwadi Services For 0-3 Years Children on Rural Development.



Children are the backbone of a country, and their protection is the greatest concern for economic and political stability (Srivastava, et al., 2012). Anganwadi services are provided for the children below 3 years to reduce health instability, such as proper health nutrition, routine check-ups for illness, and supplementary feeding to monitor the growth of the child on a daily basis. This study analyses the impact of available Anganwadi services on children under 3 years old. As shown in Table 02 below, for

health checkup, the p value is 0.02, and for immunization, the p value is 0.01, supplementary feeding (0.04), and take-home ration in service, the p value is 0.02, which shows that there is a statistically significant relationship between the Anganwadi services and rural development. In the case of growth monitoring and basic treatment of minor illnesses, the p values (0.36 and 0.27), respectively, are greater than 0.05, which indicates there is no statistically significant relation with services.

**Table 02 : Anganwadi Services Below 3 Years of Age.**

Sr. No	Anganwadi Services	Standard deviation	Variance	P value	Std. Error
1	check up	25.02	.626	0.02	9.14
2	Immunization	27.29	.745	0.01	9.96
3	Basic treatment for illness	23.65	.560	0.27	8.63
4	Supplementary feeding	32.61	.106	0.04	11.91
5	Growth monitoring	29.77	.887	0.36	10.87
6	Take home ration	35.80	.128	0.02	13.07

Source: - Data Based on Primary Survey  
 \*\*p < 0.05, is statistically significant

#### **Available Anganwadi Services For 3-6 Years Children**

Anganwadi services are intended to improve the nutritional and health status of children in the age group of 0-6 years and encourage optimal growth and progress (Shanawaz, et al., 2013). Anganwadi services for children 3-6 years are health checkups, immunizations, basic treatment for illness, supplementary feeding, growth monitoring, pre-school education, health and nutrition education, and early childhood care to stabilize the nutrition and health status of children. In Anganwadi centers, the growth and progress of children are monitored on a daily basis through various parameters such as indoor and outdoor activities, play with cards and charts, identification of symbols and alphabets, etc. to develop the whole physical appearance and mind

for better thinking. These services play a major role in the whole development of the children, especially in the hilly area. As shown in Table 03, all these services are statistically significant because  $p < 0.05$  indicates that services have a good impact on children and rural development, except for the three services of immunization, growth monitoring, and health and nutrition education, which have p values of 0.32, 0.43 and 0.31 respectively.

#### **Anganwadi Services for Pregnant Women and Nursing Mothers**

These services are provided for women to reduce the stress level of pregnant and nursing mothers for family welfare, post-natal care, breast feeding, immunization, and prevention of some common communicable diseases during pregnancy such as malaria, tuberculosis, iron



**Table 03 : Anganwadi Services For 3-6-Year-Old Children.**

Sr. No	Services	Standard Deviation	Kurtosis	Skewness	P-value	Confidence Level	Standard Error	F-Critical
1	Health checks up	21.68	-2.342	0.269	0.01**	26.92	9.70	2.313
	Immunization Services	12.04	-0.945	0.601	0.32**	14.95	5.39	
3	Basic treatment for minor illness	23.35	1.212	1.183	0.02**	28.99	10.44	
4	Supplementary feeding	25.33	-2.600	0.542	0.01**	31.45	11.33	
5	Growth monitoring	23.10	2.457	1.392	0.43	28.68	10.33	
6	Pre-school education	19.12	-0.123	0.656	0.00**	23.74	8.55	
7	Health and nutrition education	17.28	-1.701	0.720	0.31	21.45	7.73	
8	Early child hood care	26.58	1.114	1.136	0.00**	33.00	11.89	

Source: -Data Based on Primary Survey

\*\*p < 0.05, is statistically significant and positive impact on services rural development

deficiency, weaning, and supplementary feeding, as well as improvement in the psychological level and children's nutritional care and balanced diet. In table 04, it is shown that the p-value and skewness of services indicate that if  $p < 0.05$ , there is a statistically significant and positive impact of Anganwadi services on the pregnant and nursing mothers in the study area. The p-values for the services of health check-ups (0.024), immunization services (0.043), referral services (0.013), and take-home ration services (0.004), as shown in the table below, are very significant and have a positive impact on mothers and rural development. On the other hand, only one service, health and nutrition education (0.321) for mothers showed a value above 0.05, which is not significant with the analysis result. This indicates that there is no statistically significant and positive relationship between this service and mothers.

### People Perception and Awareness on Anganwadi Services

People's perceptions are most important for analysing the impact of Anganwadi services at the gross root level. People have a positive response to Anganwadi services and are much more aware of them. To analyse the people's perception and awareness, z-score techniques are used. A higher z-score indicates a higher people's perception, and a lower z-score indicates a lesser people's perception, as shown in Table 05. The value of the z-score is higher for infrastructure (1.33), awareness (1.35), development in children (1.42), cleanliness and hygiene for children (1.69), home-based skill training (1.40), interest in outdoor and indoor activities for children (1.25), and play equipment (1.59), which indicates people's perceptions of these indicators are higher and more satisfied, as shown in the table. The lower value of the z-score indicates less positive impact on rural development (0.47), children's

**Table 04 : Anganwadi Services for Pregnant Women and Nursing Mothers**

Sr. No	Anganwadi Services	Standard Deviation	Range	Skewness	Confidence Level	Standard Error	P-value
1	Health check up	16.16	41	0.78	20.06	7.22	0.024**
2	Immunization services	8.43	21	0.68	10.46	3.77	0.043**
3	Health and nutrition education	17.28	40	0.72	21.45	7.73	0.321
4	Referral services	23.10	61	1.39	28.68	10.33	0.013**
5	Take home ration	27.65	65	1.07	34.33	12.37	0.004**

Source: - Data Based on Primary Survey

\*\*p < 0.05, is statistically significant and positive impact on services rural development

interest (0.84), birth preparedness (0.31), and promoting breast feeding (0.30), which depicts people's perceptions of these indicators being lower, as shown in the table. On the other hand, only two

indicators have a negative z-score value: health a nutrition education (-0.62) and meeting on a routine basis (-0.26), as shown in table 05.

**Table 05 : People's Perceptions and Awareness of Anganwadi Services.**

Sr. No	Statement	Percentage (%)	Z-Score
1	Are Anganwadi services have positive impact on rural development		
2	AWSS increase your children's interest	27.87	0.47
3	Are you satisfied with the infrastructure of Anganwadi centres	30.3	0.84
4	Are you aware about Anganwadi services	40.00	1.33
5	Are you seen development in your child	41.21	1.35
6	AWW workers provide you health and nutrition education	44.85	1.42
7	Are you worried about clean and hygiene of your children in Anganwadi centres	19.39	-0.62
8	Home based skill training provide to you	46.06	1.69
9	Counsel women on birth preparedness	33.33	1.40
10	Are Anganwadi works take interest of outdoor and indoor activities for your children	21.82	0.31
11	Play equipment/material provided to your children	31.52	1.25
12	Are Anganwadi services Promote breastfeeding in your area	40.6	1.59
13	Are you invited to the meetings on routine basis.	24.24	0.30
		18.18	-0.26

Source: - Data based on primary survey,



### Conclusion and Suggestions

Anganwadi services have a positive and statistically significant impact on the beneficiaries and rural development in this study. P-values have a strong relationship between the services and considered variables. In 0–3 years, Anganwadi services indicate positive responses, except for basic treatment for illness and growth monitoring, which are not significant. For the past 3–6 years, the available Anganwadi services have been quite good; the p value has a positive relationship with the services. Pregnant and nursing mothers lack of health and nutrition education services. People's perceptions are very positive and relevant to the Anganwadi services, infrastructure, living space, children's care development and cleanliness, service awareness, home-based skill training for women, counselling for women on birth preparedness, outdoor and indoor children's activities, playing materials and equipment, and the promotion of breast feeding for mothers. Most people are satisfied with the available Anganwadi services and eager to admit their children to Anganwadi services for child care and pre-school education. Anganwadi services have a positive and statistically significant impact on the beneficiaries and rural development in this study. P-values have a strong relationship between the services and considered variables. Significant and positive value of z-score on people perception lies (1.69 to 0.30) which indicates that services positively impact on rural develop and rural children care.

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