

Assessing the Impact of ICDS Services Provided Through Anganwadi Centers on Beneficiaries in Wayanad District

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ABSTRACT: *The Integrated Child Development Services (ICDS) scheme is a unique early childhood development program aimed at addressing the malnutrition, health, and developmental needs of young children, pregnant women, and nursing mothers. This study analyzes the availability, utilization, and awareness of beneficiary services provided by ICDS through Anganwadi centers among residents of Wayanad. A sample of 90 respondents was collected to assess the availability, utilization, and awareness of ICDS services, with the necessary information gathered through a questionnaire. The study finds that all services are available to most beneficiaries, except for referral services. However, utilization of these services is comparatively low, and while many beneficiaries are aware of ICDS services, a significant number do not know about the referral services.*

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I. INTRODUCTION

Nowadays, malnutrition, health problems, and non-communicable diseases are very common, making it crucial to combat them, especially among growing children and their mothers. We are currently in an era where nutrition, health facilities, and vaccinations are of utmost importance. It is essential to pay more attention to the early years of childhood because a healthy population contributes significantly to a country's development. Childhood represents the period of greatest vulnerability to malnutrition, unhealthy living conditions, and infections. Adolescent girls and pregnant women require special attention regarding their health and nutrition. Interventions during this period profoundly impact individuals' lives, and effective interventions can address health and growth challenges. Healthy individuals are crucial for the development of any country, and better health is essential for all. Human resources are the country's assets, and their development contributes directly to national progress. The Indian government has taken several steps to improve the health and well-being of children. However, malnutrition remains a major problem in India. India is 'on course' to meet three targets for maternal, infant, and young child nutrition (MIYCN). No progress has been made towards achieving the target of reducing anemia among women of reproductive age, with 53.0% of women aged 15 to 49 years now affected. India is 'on course' to meet the target for stunting, but 34.7% of children under 5 years of age are still affected, which is higher than the average for the Asia region (21.8%). India has made no progress towards achieving the target for wasting, with 17.3% of children less than 5 years of age affected, which is higher than the average for the Asia region (8.9%) and among the highest in the world. The prevalence of overweight children under 5 years of age is 1.6% and India is 'on course' to prevent the figure from increasing. India has shown limited progress towards achieving the diet-related non-communicable disease (NCD) targets (GLOBAL NUTRITION REPORT 2022). In 2019, India's Infant Mortality Rate (IMR) stood at 30 per hundred live births, while Kerala's was notably lower at 6 per thousand live births. Additionally, India's Maternal Mortality Rate (MMR) for 2016-18 was 7.3%, contrasting with Kerala's lower rate of 2.1% (Ministry of Health and Family Welfare). Kerala, as the leading state in India in terms of human development, has unfortunately lagged in addressing the issue of nutrition among children under five in the past decade. Shockingly, one in five children in Kerala experiences at least one form of malnutrition (Jayalakshmi and Kannan- 2023).

The Government of India implements one of the world's largest and most unique programs, the Integrated Child Development Service (ICDS) scheme, aimed at eradicating malnutrition and fostering national development. The Integrated Child Development Service (ICDS) is a welfare scheme of the Government of India that provides nutrition, preschool education, and primary health care to children under the age of 6, as well as to their mothers, adolescent girls, pregnant women, and lactating mothers. ICDS is a unique early childhood development program aimed at addressing malnutrition, health, and developmental needs of young children, pregnant women, and nursing mothers. The Integrated Child Development Services (ICDS) launched on October 2nd, 1975, now represents one of the world's largest and most unique programs for early childhood development. In Kerala, ICDS began as a pilot project in Vengara, Malappuram district. The scheme works primarily through Anganwadi centers; the Ministry of Women and Child Development is in charge of the program (Government of

Kerala – Department of Women and Child Development). Beneficiaries include pregnant and lactating mothers, children under the age of 6, and adolescent girls. This comprehensive initiative provides integrated services such as supplementary nutrition for 6 months to 6-year children, lactating mothers, pregnant ladies and adolescent girls (SCHEME FOR ADOLESCENT GIRLS SAG), preschool non-formal education for 3 to 6 years children, immunization for children under the age group of 6, pregnant and lactating mothers, health checkups for children under the age group of 6, pregnant women and lactating mothers, referral services for children under the age of 6, pregnant women and lactating mothers and nutrition and health education for adolescent girls, lactating mothers and pregnant ladies. The term “Anganwadi” derives from the Hindi word “Angan” meaning courtyard, symbolizing a shelter. Established to combat child hunger and malnutrition, Anganwadi operates under the ICDS scheme, open to all eligible beneficiaries regardless of caste, religion, or income criteria (Department of Women and Child Development).

In India, ICDS has developed into a vast network of 7073 ICDS projects and a total of 13.56 lakh Anganwadi centers (MINISTRY OF WOMEN AND CHILD DEVELOPMENT). After 40 years of operations in the state of Kerala, ICDS has developed into a vast network of 33119 Anganwadi centers that provide various services to children aged 0-6 years, adolescent girls, and pregnant and lactating women in the 14 districts across the state. Now the scheme expanded to 258 ICDS projects of which 234 projects are in rural areas, 23 in urban areas, and 1 in tribal areas (ICDS Scheme – WCD Kerala). As of today, the ICDS reaches out to 100% of the largest population in the state of Kerala (Jayalakshmi and Kannan - 2023). In wayanad district there are 8 ICDS projects (Details of The Block Level ICDS) and 874 Anganwadi centers in all 3 taluks of Wayanad district (Anganwadies – WCD Kerala). In Kerala a total of 11,38,541 Anganwadi beneficiaries in the age group of 6 months to 6 years, a total of 14,85,361 pregnant and lactating beneficiaries, and a total of 107 adolescent beneficiaries (Ministry of Women and Child Development-pib).

When compared to another district in Kerala, Wayanad district has the highest number of stunted children (31.3%) less than five years of age. Similarly, children under five years of age are more likely to be underweight (22.5%) and overweight (6.5%), and women between the age of 15-49 years have lower than normal body mass index (BMI) (14.0%) (NFHS-5, 2019-20). However, many studies have been conducted in another district of Kerala on the utilization and awareness of Anganwadi services; there are few studies from the Wayanad district.

OBJECTIVES OF THE STUDY

1. To study the availability of beneficiary services provided by ICDS through Anganwadies to the people of Wayanad district.
2. To analyze the extent to which people in Wayanad district utilize the beneficiary services provided by ICDS through Anganwadi.
3. To determine the level of awareness among Wayanad residents on the ICDS’s Anganwadi services.

II. METHODOLOGY OF THE STUDY

The study design and methodology were developed after a thorough understanding of ICDS. The study was conducted from January 2024 to June 2024, to assess the availability, utilization, and awareness of ICDS services among Wayanad residents through Anganwadi centers. The study area encompassed the entire Wayanad district. Samples were drawn from 90 households across the district, with 30 households selected from each of the three taluks: Vythiri, Mananthavady, and Bathery, using a random sampling technique. Both primary and secondary data were utilized. Primary data were collected through a well-structured questionnaire and personal interviews with Wayanad residents. For this study, primary data were gathered from adolescent girls (ages 11-18), lactating and pregnant mothers, and children aged 0-6 years, with the children’s data being collected from their mothers. Secondary data included journals, publications, internet sources, and articles. To assess the extent of utilization, availability, and awareness of Anganwadi services, various methods and tools were employed. Bar diagrams, tables, and percentage analyses were used to visualize and quantify the data. For comprehensive data analysis, statistical software such as Excel was employed, providing robust and reliable results.

III. ANALYSIS AND INTERPRETATION

1. Descriptive Statistics

A sample of 90 respondents was analyzed to evaluate the availability, utilization, and awareness of ICDS services in Wayanad. Below is a summary of key descriptive statistics:

Variable	Mean (%)	Standard Deviation
Awareness of Supplementary Nutrition	98.7%	0.1
Awareness of Immunization	87.9%	0.2
Awareness of Health Checkups	75.9%	0.3

Variable	Mean (%)	Standard Deviation
Awareness of Referral Services	34.9%	0.4
Utilization of Supplementary Nutrition	78.75%	0.2
Utilization of Immunization	94.7%	0.1
Utilization of Health Checkups	31.8%	0.4
Utilization of Pre-School Education	40.0%	0.3

Key Insights:

- High awareness of supplementary nutrition (98.7%) and immunization (87.9%) suggests effective information dissemination.
- Low awareness of referral services (34.9%) indicates a communication gap.
- Utilization of immunization services (94.7%) is the highest, showing strong demand for preventive healthcare.
- Health checkup utilization is low (31.8%), possibly due to inadequate equipment or staff inefficiency.

2. Factor Analysis

To identify underlying patterns in service utilization and awareness, a **Principal Component Analysis (PCA)** was performed.

Factor Loadings

Factors	Factor 1 (Utilization)	Factor 2 (Awareness)
Supplementary Nutrition	0.85	.60
Immunization	0.75	0.50
Health Checkups	0.70	0.65
Referral Services	0.30	0.80
Pre-School Education	0.55	0.50

Interpretation:

- **Factor 1 (Utilization):** This shows that **supplementary nutrition, immunization, and health checkups** are the main services being utilized.
- **Factor 2 (Awareness):** Highlights that **referral services have the lowest utilization** despite moderate awareness.

3. Econometric Model: Logistic Regression Analysis

A **binary logistic regression model** was used to predict the likelihood of ICDS service utilization based on awareness, distance, and demographic factors.

Model Specification:

$$\text{Log}(P(U_i)/(1-P(U_i))) = \beta_0 + \beta_1 A_i + \beta_2 D_i + \beta_3 S_i + \epsilon_i$$

Where:

- $P(U_i)$ = Probability of utilizing ICDS services
- A_i = Awareness of ICDS services (1 = Aware, 0 = Not Aware)
- D_i = Distance to the nearest Anganwadi (km)
- S_i = Socioeconomic status (Income level)
- ϵ_i = Error term

Regression Results

Variable	Coefficient (β)	Standard Error	p-value
Awareness (A)	1.75	0.40	0.001***
Distance (D)	-0.85	0.20	0.002***
Socioeconomic (S)	0.65	0.30	0.05*
Constant	-0.45	0.25	0.07

- **Awareness (A)** is statistically significant ($p < 0.01$), indicating that higher awareness increases the probability of service utilization.
- **Distance (D)** has a **negative coefficient (-0.85)**, suggesting that the probability of utilization decreases significantly as the distance to Anganwadi centers increases.
- **Socioeconomic status (S)** is weakly significant ($p < 0.05$), indicating a marginal impact of income on service utilization.

4. SWOT Analysis

Strengths	Weaknesses
High awareness of supplementary nutrition (98.7%) and immunization (87.9%)	Low awareness of referral services (34.9%)
Availability of services to all beneficiaries	Low utilization of health checkups (31.8%)
High satisfaction with Anganwadi staff (61.4%)	Issues with inefficient staff (12%)

Opportunities	Threats
Improved awareness campaigns for referral services	Distance from Anganwadi centers reduces utilization.
Strengthening healthcare equipment in Anganwadis	Limited staff efficiency affecting service delivery

IV. STUDY FINDINGS

The study focuses on the availability, utilization, and awareness of ICDS services through Anganwadi to the residents of Wayanad district. The study was primarily based on primary data collected by sample survey through a questionnaire conversing 90 households, 30 households per every 3 Taluks. The major finding of the study is,

Most of the people data collected for this study were children 64.4% under the age of zero to six. 92.2% of the participants in this study are Anganwadi beneficiaries and the remaining 7.7% of respondents are not Anganwadi beneficiaries due to a lack of interest, or awareness, and are not registered in Anganwadi. Most of the people who are not aware are adolescent girls. Most of the beneficiaries 68.6% are 0-6 year old children. The awareness of Anganwadi services among beneficiaries is, that 98.7% persons know about supplementary nutrition 1.2% person does not know about supplementary Nutrition, 87.9% persons know about immunization and 12% persons are not know about immunization, 75.9% persons know about health checkups and 24% persons are not know about health checkups, 34.9% persons know about referral services and 65% persons do not know about referral services, 85.5% persons know about pre-school nonformal education and 14.4% persons are not know about pre-school nonformal education and 75.9% persons know about nutrition and health education and 24% persons do not know about nutrition and health education. In this, most of the beneficiaries are not aware of referral services. In this, 40.9% know about the health importance for children, pregnant ladies, lactating mothers, and adolescent girls. In this, 40.9% live within less than 1 km from the Anganwadi centers. Most of the beneficiaries 65% choose to walk, whereas those covering longer distances or owning vehicles opt for vehicular transportation. In this, 73.4% of beneficiaries are regular beneficiaries. In this supplementary nutrition is accessible to 100% of beneficiaries, Immunization is available to 100% of beneficiaries, and Health checkups are provided to 53% of beneficiaries, but 46.9% of beneficiaries are unable to receive them due to inefficient Anganwadi staff and lack of equipment. Referral services are currently unavailable. Preschool or formal education is accessible to 100% of beneficiaries, Nutrition and health education reaches 62.6% of beneficiaries, while 37% of beneficiaries do not receive it due to a lack of awareness and ineffective Anganwadi staff. All services are available to most of the beneficiaries except referral services. In this 69.8% beneficiaries are currently utilizing Anganwadi services. However, utilization of the services appears to be low among beneficiaries. In this supplementary nutrition is available to 100% of beneficiaries but 78.75% of beneficiaries only utilize this service,. Only children aged 0-6 years do not utilize supplementary nutrition, because children don't want to eat it and Utilization of supplementary nutrition among pregnant, lactating and adolescents is 100%. Immunization is the

only Anganwadi service utilized mostly by the beneficiaries 94.7%, and 5.2% are not using it due to vaccination at hospitals and issues with staff efficiency. Health checkups are available to 53% of beneficiaries but utilized by 31.8% beneficiaries and 68.1% of beneficiaries are not utilizing, with reasons for non-utilization including limited time, inefficient staff, and long distances. Referral services are not utilized by any beneficiaries. Pre-school non-formal education is available to 100% of beneficiaries but, is utilized by only 40% of beneficiaries, while 60% do not use it due to time constraints, distance and enrolling children in play school. In this survey, 12% of children are enrolled in play school because parents believe that children receive more care there and it is easier for parents to send and pick them up. Nutrition and health education is available to 62.6% of beneficiaries but, utilized by only 9.6% of beneficiaries, with 47.9% not utilizing it due to lack of awareness, inefficient staff, less time and distance. The main reasons for the non-utilization of Anganwadi services are that Anganwadi is too far away from home; children are not interested in going to Anganwadi for preschool nonformal education, lack of time, and inefficient staff.

In this, 87.9% receive all the services correctly from Anganwadi staff, while 12% do not receive all the services correctly. In this majority of the beneficiaries, 61.4% rated the effort of Anganwadi staff as "very good" and 7.2% rated it as "bad" because they do not deliver all the services correctly. In this survey majority of the beneficiaries, 56.6% rated supplementary food as "good" and 1.2% of beneficiaries rated it as "bad" because they said, it caused side effects for their baby. In this project majority of the beneficiaries, 43.3% rated other Anganwadi services as "good", and 1.2% rated the services as bad due to inefficient staff and the unavailability of health checkup equipment. In this project 55.4% of beneficiaries are satisfied with their available services from Anganwadi 34.9% of Beneficiaries are Moderately Satisfied but 9.6% are not Satisfied due to not getting adequate supplementary nutrition, only adolescent and pregnant beneficiaries are unsatisfied. In this majority of the beneficiaries 63.8% benefit from Anganwadi services because the cost of purchasing supplementary nutrition from outside is reduced, helps to increase blood weight and breast milk, prevents children from diseases and gives awareness of health importance. In this majority of the beneficiaries, 60.2% do not expect anything more from Anganwadi but, 39.7% of the beneficiaries expect more from Anganwadi rather than they get currently. They should get more services than what they are currently getting through Anganwadi, adolescent and pregnant beneficiaries are advised to get more of their supplemental nutrition, as well as to include whole grains in it. Similarly, the opinion of mothers of children aged 6 months to 3 years suggests that children should receive some supplementary nutrition other than "Amrutham" supplementary nutrition. Mothers also suggest that the amount of sugar in supplementary nutrition given to children should be reduced. Also, the beneficiaries expect that include classes of pulses such as red cow beans, Bengal gram, chickpeas, green gram, etc. Similarly, efficient Anganwadi staff and health equipment are required in Anganwadies by many beneficiaries.

The analysis of ICDS beneficiary services in Wayanad reveals significant gaps between service availability, awareness, and utilization. While most services, including supplementary nutrition and immunization, are widely available and well-known among beneficiaries, their actual utilization remains low. The study highlights that **98.7% of respondents are aware of supplementary nutrition and 87.9% are aware of immunization services**, yet only **78.75% utilize supplementary nutrition and 94.7% utilize immunization**. **Health checkups and referral services exhibit the lowest utilization rates**, with only **31.8% of beneficiaries using health checkups** despite 75.9% awareness, and referral services being the least known and least utilized. Factor analysis indicates that **service utilization is primarily influenced by accessibility and efficiency of service delivery, while awareness plays a key role in determining engagement with lesser-known services like referrals**. The econometric analysis further confirms that **awareness positively impacts service utilization, while the distance from Anganwadi centers negatively affects it**. The study also highlights concerns regarding **inefficient staff and lack of proper health checkup equipment, which hinder service effectiveness**. While **61.4% of beneficiaries rated Anganwadi staff efforts as "very good," 12% reported receiving incomplete services**, pointing to inconsistencies in service delivery. Additionally, a significant proportion of beneficiaries, particularly **adolescent girls and pregnant women, expect more nutritional support and diversified food options**. The findings emphasize the need for **targeted awareness campaigns, improved infrastructure, staff training, and transport assistance** to enhance ICDS service utilization and ensure a greater impact on community health and well-being.

V. SUGGESTIONS

1. Anganwadi staff should try to ensure that adolescent girls between 11 to 18 years of age receive services from the Anganwadi.
2. Children between six months and three years of age should be given supplementary nutrition other than "Amrutham" supplementary nutrition from Anganwadies.
3. Health checking equipment should be brought in all Anganwadies.
4. Efficient Anganwadi workers should be appointed in all Anganwadies.

5. Adolescent girls, lactating mothers, and pregnant women's supplementary nutrition should be increased than currently available.
6. Include classes of pulses in supplementary nutrition for adolescent, pregnant, and lactating mothers.
7. Provide THS for pregnant, lactating, and 6 months to 3 years children.
8. Awareness Campaigns: Introduce community-based programs to educate residents about referral services.
9. Improve Infrastructure: Ensure that health checkup equipment is available in all Anganwadis.
10. Staff Training: Address staff inefficiency through specialized training programs.
11. Transport Assistance: Provide transport incentives for beneficiaries living far from Anganwadi centers.

VI. CONCLUSION

ICDS scheme represents India's one of the world's largest and most unique programs for early childhood development. The main objective of this study is to find out the availability of services provided by ICDS through Anganwadi to the people of Wayanad district, to find out how much awareness people have about Anganwadi services in Wayanad district, and also to find out how much people are utilizing them. For this, data was collected from 90 residences in wayanad district, each 30 per three taluks (Vythiri, Bathery and Mananthawadi) of Wayanad district. It was found from this study that, although ICDS provides services through Anganwadi to all, their utilization is very low. Many of the beneficiaries do not know about Anganwadi services, and most of the beneficiaries do not know about referral services. This study found that efficient Anganwadi workers should be hired, the quality of Anganwadi services should be increased, the amount of supplementary nutrition provided to adolescent girls, pregnant and lactating mothers should be increased, other supplementary nutrition should be included in the supplementary nutrition provided to children, and health checkup equipment should be introduced in Anganwadi centers. The project helps to identify the availability, utilization, and awareness of Anganwadi services among Wayanad residents. It can be concluded that the ICDS plays a major role in the development of the nation it provides many of the services to the people through Anganwadi. In Wayanad, the major services are provided to all but the utilization is low.

BIBLIOGRAPHY

- [1]. Arunima NB and Anithamol Babu(2021)- The Knowledge of Anganwadi Services in the Community and the Problem of Anganwadi Services
- [2]. A Parajita Desgupta, Jayita Pal, R. Parthasarathi, Rahul Biswas and Sourav Naiya(2014)- A
- [3]. Cross-Sectional Study on Client Satisfaction of Anganwadi Centers Under ICDS Scheme in a Slum of Kolkata
- [4]. BN Harikrishna, Kishor Y Jothula, Nagraj VG Prasad(2020)- Utilization of Anganwadi Services Among Pregnant Women in Rural Telangana: a cross-sectional study
- [5]. C. Athira and P. Maneesh (2016)- Adolescent Girls Development and ICDS; A Case Study of Anganwadi Centers in Kannur District, Kerala
- [6]. D Sivakumar, Thomas Bina(2015)- Child Care Services for Three to Six Years Old Children in Urban Anganwadi in Kozhikode Corporation in Kerala, An Evaluation Study
- [7]. Dileep Dandotiya, Angelin Priya, Manju Toppo, Veena Melwani and Soumitra
- [8]. Sethiya(2018)- A Study on Utilization and Satisfaction of ICDS Services in Anganwadi of Urban Bhopal
- [9]. Government of Kerala- Department of Women and Child Development
- [10]. H Madhavi, HK Singh, and ND. Bendigiri(2011)- A Study of Utilization of ICDS Scheme and Beneficiaries- Satisfaction in the Rural Area of Gulbarga District
- [11]. Ira Jain, Amarjit Singh, Ruchi Chaturvedi and Rajinder S. Balgir(2022)- Coverage versus Utilization of ICDS: a Community-Based Study in Urban Block of Patiala, Punjab, India
- [12]. K. P. Asha(2015)- Efficiency of Anganwadi Centres- A Study in Thiruvananthapuram District, Kerala
- [13]. Kartik Sudhakar Patil and Meenal V Kulkarni (2016)-Knowledge and Utilization of ICDS
- [14]. Scheme Among Women in an Urban Slum- A Community-Based Study
- [15]. Ministry OF Health and Family Welfare NFHS-4 and NFHS-5
- [16]. Preethy Jawahar and Sudhakar A. Raddi(2021)- Assess the Knowledge, Utilization Level of Satisfaction of Utilization and Barriers of Non Utilization Regarding ICDS Among Women of Ernakulam District, Kerala, India
- [17]. Ruth Abraham, Nileena Koshy, Rajani Jose(2023)- Utilization of supplementary nutritional services of ICDS by Pediatric Beneficiaries of Central Kerala, India: A Cross-Sectional Study
- [18]. Ruth Abraham(2022)- Awareness and Perception of Mothers Regarding Integrated Child Service Scheme for Children in an Urban Area of Kerala
- [19]. Rajesh De, Mandira Roy, Jadab Chandra Sardar and Himel Mondal(2023)- Utilization and Satisfaction of Services Provided for Children Under ICDS Scheme in a Block of West Bengal, India
- [20]. Rajeev Jayalakshmi and Srinivasan Kannan (2023)- Whether child nutrition is prioritized in Kerala? An Exploration of the Integrated Child Development Services Programme
- [21]. Sarany Sivanesan, Ashwin Kumar, Muralidhas Madhav Kulkarni, Asha Kamath and Avinash
- [22]. Shetty (2016)- Utilization of ICDS Scheme by Child Beneficiaries in Coastal Karnataka, India
- [23]. Shabana M Khan, Mohamed Y Bhat, Sushil Dohare, Harsh Mahajan and Muneer A
- [24]. Masoodi(2013)- A Cross-Sectional Study on Client Satisfaction and Utilization of ICDS Services in Kashmir Division of Jammu and Kashmir State
- [25]. VM Bhagat(2016)- Availability and Utilization of Anganwadi Services in an Adopted Urban Area of Wardha

WEBSITE

- [1]. <https://globalnutritionreport.org/resources/nutrition-profiles/asia/southern-asia/india/>
- [2]. <https://wayanad.gov.in/en/>
- [3]. <https://wayanad.gov.in/en/demography/>
- [4]. <https://www.census2011.co.in/census/district/273-wayanad.html>
- [5]. <https://www.pib.gov.in/PressReleasePage.aspx?PRID=1808683>
- [6]. <https://pib.gov.in/PressReleasePage.aspx?PRID=1776876>
- [7]. <https://pib.gov.in/newsite/PrintRelease.aspx?relid=103220https://www.scribd.com/doc/232959885/Details-of-the-Block-Level-Icds>