

Coverage vs Utilization of integrated child services scheme (ICDS): A community based study in urban block of Patiala, Punjab (India)

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ABSTRACT

Introduction: Integrated Child Development Services (ICDS) scheme provides a wide range of health, nutrition and education services to children, women and adolescent girls. Maternal satisfaction usually influences service uptake and utilization. Therefore, in addition to coverage, the quality of services provided and end-user satisfaction need to be assessed. **Material and Methods:** A cross-sectional community-level study was conducted in the urban block of the Patiala district in Punjab. A total of 54 AWCs were selected from a sample frame of 222 by applying a systematic random sampling technique. From each selected AWC, 20 mothers of registered beneficiaries (0-6 years) were randomly selected for interview. The data collected was entered and analysed using SPSS version 22. **Results:** The present study revealed that most of the Anganwadis (87.19%) were regularly open for the provision of various ICDS services. However, only 48.02% of children received supplementary nutrition from AWC regularly. Only 32.36% of children who were sick were referred by AWW. Satisfaction with quantity and quality of food served was found to be 61% and 45.90% among mothers, respectively. **Conclusion:** It was concluded that there is a need to improve the quality of services to overcome the problem of under-utilisation of services despite the wide coverage of ICDS services; regular orientation and training courses for AWWs should be conducted to ensure better service delivery to all beneficiaries.

Keywords: Anganwadi, ICDS, mothers, supplementary nutrition

Introduction

Malnutrition causes over 30 lakh (35 percent) deaths among children under the age of five worldwide, which can be avoided if policies, programmes, and household interventions target children during the perinatal period and early years of life. Any intervention made later in life is likely to be ineffective. Furthermore, there is now evidence that rapid weight gain after the first two years of life raises the risk of chronic diseases later.^[1]

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Integrated Child Programme Development Services (ICDS) scheme was launched in 1975 with the goal of promoting mother and child health. Since its beginning, the ICDS programme has expanded tremendously, now covering nearly all of the country's development blocks.^[2] It offers children, women and adolescents a wide range of health-, nutrition- and education-related services.

Despite the fact that India's infant and under-5 mortality rates have decreased over the decades, the country still has the highest number of malnourished children. The Global Hunger Index (2020) ranks India 94th out of 107 nations based on total undernourishment, child stunting, wasting and child mortality.^[3]

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Despite being successful in many areas, the ICDS programme has not made a major dent in child malnutrition. This is mostly due to the program's emphasis on food supplementation, which primarily targets children over the age of 3, when malnutrition has already set in.^[4] Only nine of the 22 states surveyed in the fifth round of the NFHS (2019–2021) showed a decrease in the number of stunted children, ten in wasting children, and six in underweight children. The percentage of stunted, wasted and underweight children increased or remained unchanged in the remaining states.^[5]

Trends in Punjab have shown that under 5 years 25.7% of children are stunted, 15.6% are wasted and 21.6% are underweight.^[6] As maternal satisfaction has an impact on service acceptance and utilisation, more emphasis should be given on developing a good rapport with end-users and increasing the quality of services. Keeping this in mind, this study was planned to study the utilisation and perception of mothers regarding ICDS services in the Patiala district of Punjab.

Objectives

1. To study the socio-demographic profile of mothers receiving services under ICDS
2. To assess utilisation and perception of mothers regarding ICDS services
3. To give suitable recommendations to increase service utilisation based on the findings of this study

Material and Methods

Study area

Urban ICDS block (Patiala) Punjab.

Study population

Mothers of children aged 0–6 years (registered beneficiaries of Anganwadi centre (AWC)).

Study design

A community-based observational study.

Study period

1 year (2nd January, 2017 to 31st December, 2017).

Study Sample

Using the formula $N = 4pq/l^2$, where.

L is the margin of error (10% of p) = (0.1×0.27) ,

$Q = 1 - p (1-0.27) = 0.73$, and

$N = 4pq/l^2$

$= 4 \times 0.27 \times 0.73 / 0.027 \times 0.027 = 1081.48$, rounded down to 1085.

Inclusion criteria

Mothers of children aged 0–6 years (registered beneficiaries of AWC) who gave informed consent to participate in the study.

Exclusion criteria

Mothers who were not available for two consecutive visits at the time of data collection.

Methodology

Out of the sample frame of 222 AWCs, every fourth AWC was selected from the urban block of Patiala using a systematic random sampling method, making a total of 54 AWCs. From each selected AWC, 20 mothers were randomly selected using the lottery method [Figure 1].

A pre-designed, pre-structured questionnaire was used to find out the satisfaction of mothers with ICDS services like supplementary feeding (SNP), pre-school education (PSE) and referral services.

Statistical analysis

Data were analysed using SPSS version 22. Pearson Chi-square test was used to determine the association between variables.

Ethical approval

Prior approval was obtained from the Institutional Ethics committee of Government Medical College, Patiala (Punjab), and permission to conduct the study was obtained from the Programme Officer and Child Development Project Officer (CDPO) of the concerned ICDS block.

Results

In the present study, the majority, i.e. 510 (47%) mothers were in the age group of 26–30 years, followed by 459 (42.30%) in the age group of 21–25 years. 79.08% of the participants followed the Hindu religion, followed by the Sikh religion (18.43%); 27 (2.49%) belonged to other religions. In total, 430 (39.63%) of the mothers were illiterate while 276 (25.44%) had completed only primary education and 37 (3.41%) were graduates or above. The socio-economic classification was assessed using

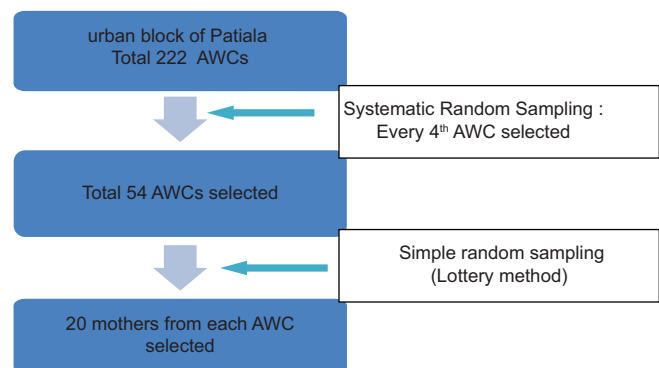


Figure 1: Selection of participants from the sampling frame

the modified Kuppuswamy Scale (2016). The majority of the study participants (74.56%) belonged to the upper lower socio-economic class (class IV), followed by the lower middle class (class III) (21.11%). In the current study, 533 (49.13%) mothers had 2 children, 371 (34.19%) had only 1 child, followed by 181 (16.68%) participants with 3 children or more [Table 1].

Here, 521 (48.02%) mothers reported that their children received supplementary food from AWC regularly while 564 (51.98%) disagreed with this view [Table 2]. Among the beneficiaries who did not receive this service regularly in the last 6 months, 464 (42.76%) said it was due to interruption in food supply by the government agencies, while 100 (9.22%) said it was due to other reasons such as the Anganwadi helper was not on duty or the AWC was not open.

In total, 498 (45.90%) mothers found the quality of supplementary food they receive from AWC acceptable while 54.10% were

not satisfied with the quality of food; 661 (60.92%) said that the quantity of food was adequate [Figure 2]. Among the beneficiaries who received regular supplementary food in the last six months, 377 (72.36%) received hot cooked meals from AWC, followed by 123 (23.61%), who received both hot cooked meals and pre-cooked material from AWC.

It was found that 47.83% of mothers were given appropriate advice by AWW regarding supplementary nutrition of children. Almost half of the study participants (52.25% and 59.81%) agreed that they were given information regarding the amount of food to be given at home and the appropriate weight gain of the child, respectively [Table 3].

Moreover, 35.03% of the mothers reported that their child was sick in the last six months, and out of them, only 123 (32.36%) were referred to the health facilities by the AWWs and the rest were treated at home. 705 (64.98%) mothers reported that their child was not sick in the last 6 months; 945 (87.19%) mothers were in view that Anganwadi is open regularly (6 days per week) in their area for providing various services to the beneficiaries. Further, 633 (58.34%) mothers said that pre-school education (PSE) is provided to children in AWC, and out of these, 538 (49.59%) said that pre-school education benefits their children. In total, 452 (41.66%) mothers said that PSE is not provided to their children [Table 3].

In total, 643 (59.27%) mothers attended the Mother's Day meeting, and out of them, 479 (74.49%) reported that AWWs cooperated with them. There was a statistically significant association between the behaviour of the AWWs and the mothers who attended the Mother's Day meeting ($P < 0.001$) [Table 4].

Table 1: Socio-demographic profile of study participants

n=1085	No.	%
AGE (in years)		
≤20	25	2.3
21-25	459	42.3
26-30	510	47
31-35	60	5.54
36-40	31	2.86
RELIGION		
SIKH	200	18.43
HINDU	858	79.08
OTHERS (CHRITIAN and MUSLIM)	27	2.49
PARITY		
1	371	34.19
2	533	49.13
>3	181	16.68
EDUCATION		
Illiterate	430	39.63
Primary	276	25.44
Middle	167	15.39
Matriculate	175	16.13
Graduate and above	37	3.41
SOCIO-ECONOMIC STATUS*		
Upper	0	0
Upper middle	31	2.86
Lower middle	229	21.11
Upper lower	809	74.56
Lower	16	1.47

*As per Modified Kuppuswamy socio-economic classification

Table 2: Response of mothers regarding supplementary nutrition and counselling

Response	Yes	%	No	%
Received regular supplementary food	521	48	564	52
Received counselling regarding supplementary nutrition	519	47.83	566	52.17
Received counselling regarding quantity of food to be given to child at home	567	52.25	518	47.75
Received counselling regarding weight gain	649	59.81	436	40.19

Discussion

According to Rapid Survey on Children (RSOC) of UNICEF,^[7] only 49.2% of children aged 6–35 months and 44.2% of children aged 36–72 months receive supplementary nutrition regularly from AWCs against the coverage of about 75% of children under the ICDS programme. Therefore, it is crucial to continue the monitoring of AWCs and recommend new strategies to overcome the issue of under-utilisation.

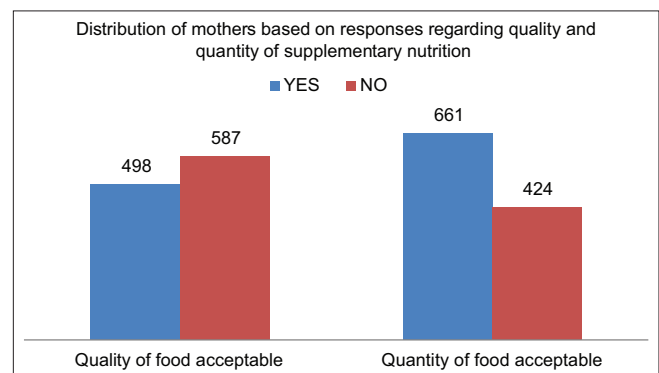


Figure 2: Satisfaction of mothers regarding supplementary food

Table 3: Perception of mothers regarding other services of AWC

Question	Yes	%	No	%
Child referred by AWW in case of sickness (n=380)	123	32.36	257	67.63
Pre-school education given	633	58.34	452	41.66
Provides counselling during home visit	618	56.96	467	43.04
Support from the local community	600	55.30	485	44.70
AWW co operative	689	63.50	396	36.50
AW opens regularly	946	87.19	139	12.81
Mothers day meeting held	643	59.27	442	40.73

Table 4: Association of AWW's behaviour with the mothers attending meeting at AWC (n=1085)

Mothers' day Meeting attendance	Behaviour of AWW cooperative	
	Yes	No
Attended (n=643)	479 (74.49%)	164 (25.51%)
Not attended (n=442)	210 (47.51%)	232 (52.49%)

Uncorrected=82.2881, 2 tailed, P=0.00 (highly significant). Corrected (Yates)=81.1280, 2 tailed, P=0.00 (highly significant)

An impact evaluation study^[8] on ICDS found that rural women who received nutrition and health education specifically from ICDS had a 12.3% higher birth rate compared to those who did not receive ICDS services. However, no positive effect was observed on the nutritional status of the children. In our study, 48.02% of mothers reported that their children received regular supplementary feeding from AWC, and 47.83% of mothers found counselling regarding supplementary feeding useful. In another study from Gujarat,^[9] it was reported that only 20.8% of mothers received counselling regarding child nutrition and only 12.5% said that child growth chart was discussed with them.

Although more than half of the mothers in this study (61%) were satisfied with the quantity of food served to them, only 45.90% of the mothers found the quality of food acceptable. In a study conducted by Sarkar M *et al.*,^[10] 78.6% and 71.4% of mothers were satisfied with the quantity and quality, respectively. Poor taste and improper preparation were the main reason for non-acceptance. These findings suggest that the quality of food served in Anganwadis could be improved.

In the current study, only 32.36% of the children who were sick were referred by AWW and the rest were treated only at home. Similar results were found in a study^[11] where the uptake of referrals by beneficiaries was very low as opposed to the expected uptake of 100%, which could be due to lack of knowledge and interest of AWWs or inadequate mobilisation of AWW staff.

In our study, 42% of mothers reported that PSE was not given. 50% of the mothers were not aware of the components like nutritional counselling, health, advocacy and village health and sanitation committee, as found in a study from coastal Karnataka.^[12] Another study^[13] found that the utilisation of services (of any kind) by mothers during pregnancy was about 20

percentage points higher in rural areas than in urban areas. One out of every two mother-child pairs did not avail any services from ICDS in urban areas.

A study conducted in Uttar Pradesh^[14] found that nearly two-fifth (39.5%) of parents did not send their children to Anganwadi centres and more than one-third (36.6%) of parents said that overall services were of poor quality. Monya M *et al.*^[15], in their study in a tribal area of Maharashtra, found that only half of the AWCs were functioning in their own building. Among infrastructure and logistics, registers for record-keeping were found to be most deficient (88.9%) and regularity of supplementary nutrition supply was seen deficient in 69.4% of AWCs.

Few studies^[16,17] also reported a high level of satisfaction of mothers with the services. These findings suggest that there are many within- and between-state variations in the uptake of the ICDS programme and utilisation of services. There is a need to improve services according to the needs of the geographical area rather than a uniform approach across states. As family physicians are the first point of contact in the community, their services can be used to sensitise the community to address malnutrition and its early detection to avoid long-term consequences.

Conclusion

Based on the findings of this study, the following recommendations are made:

1. Quality of services needs to be improved to overcome the problem of under-utilisation of services despite the wide coverage of ICDS services.
2. Regular orientation and training courses for AWW should be conducted to ensure better coverage of all beneficiaries.
3. A mechanism should be developed to get regular feedback from end-users.
4. A uniform standard of care needs to be defined for all AWCs.

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Conflicts of interest

There are no conflicts of interest.

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