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Unmet Need of Integrated Child Development Services (ICDS) among Economically Weaker Sections in Indian Society

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Abstract

This paper analyses the utilisation of Integrated Child Development Services (ICDS) in India and examines the unmet need for the services to the children and their mothers. To understand the pure effect of socio-economic and demographic factors on unmet need of ICDS programme, binary logistic regression was carried out separately for children and their mothers (pregnant and lactating women) on whether they received any services from Anganwadi Centres (AWC) or not using the data from National Family Health Survey 3. More than two-thirds of children did not receive any services from AWC. The unmet need was found to be higher among Muslims. Mothers with higher education, who belonged to upper castes, lived in urban area, and from non-poor households were less likely to utilise the ICDS compared with their less privileged counterparts. To reduce this unmet need, one should focus on why people with higher education and belonging to upper strata of society did not utilize the ICDS services? The purpose of the programme is to reach every section of the society. There must be some gap in the programme implementation which might make it not acceptable to all and create a cavity of unmet need.

Keywords: Malnutrition, ICDS, *Anganwadi* worker, urban poor, India

I. Background

The Integrated Child Development Service (ICDS) was launched in India in 1975 as a part of human resource development. It targets a range of interventions for early childhood care and development encompassing integrated services for development of children below six years, expectant and nursing mothers and adolescent girls living in the most backward, rural, urban and tribal areas. The ICDS services work through a network of *Anganwadi* (literally courtyard) Centres, each run by an *Anganwadi* Worker (AWW) and helper, usually selected from the local village. The responsibilities of AWWs are non-formal preschool education, supplementary feeding, health and nutrition education through growth-monitoring, immunization, health check-ups, parenting education through home visiting, community support and participation, and primary maternal and child health care referrals. The services are targeted as multi-sectoral operation to the most undernourished population in the country, weakest section of the community and vulnerable sections, viz., women and children.

Universalization of ICDS programme is a mandate of Supreme Court of India. This led to establish the required 1.4 million *Anganwadi* Centres (AWC) for the universalization (Mohmand, 2012). The Government of India, as well as the international community extend substantial financial support to ICDS in order to deal with the massive resource requirements (Gragnolati et al., 2006). In

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fact, between the fiscal years 2007-08 and 2013-14, the Government of India increased its support by approximately 66.4 per cent (Kapur, 2013).

ICDS services have a positive impact on child and maternal health (Bhasin et al., 2001; Kapil, 2002; Das Gupta et al., 2005). The prevalence of protein-energy malnutrition is substantially higher among beneficiaries of ICDS than non-beneficiaries (Swami et al., 2001). The prevalence of underweight was lower among children in areas with the ICDS programme than elsewhere (Grantham-McGregor & Ani, 2001). Efficient utilization of resources across all regions is important for the effective implementation of ICDS (Nayak & Saxena, 2006). There is a large discrepancy in receiving the funds across the regions, i.e., economically backward regions with higher levels of malnutrition have received less funding as compared to their counterparts over time (Lokshin et al., 2005; Gragnolati et al., 2006). There have been little improvements in the nutritional status of ICDS beneficiaries over time, but at the same time there is an increasing gap in the nutrition status between better off and economically weaker regions of the country (Gangbar et al., 2014). The adverse effects on the quality of the programme are mainly because of the universalization of ICDS and the effectiveness of their implementation (Drèze, 2006). There are evidences that a large number of children from the underprivileged households have no access to ICDS services mainly because of their low socio-economic status (Mander & Kumaran, 2006).

Despite almost 40 years of implementation of ICDS, merely one-thirds of babies (34 per cent) are weighed immediately after birth and over one in five (22 per cent) were of low birth weight, i.e., less than 2.5 kg (IIPS & Macro International, 2007). Nearly, 60 million children are underweight in India (Gupta & Rohde, 2004). About one-fifth of the children under age five years are wasted. The highest percentage (25 per cent) of wasted children belong to the poorest section of the society (IIPS & Macro International, 2007). Among children (aged 6-59 months), 69.5 per cent are anaemic and it is the highest among poor and rural people. Only 43.5 per cent children are fully vaccinated in our country (IIPS & Macro International, 2007). Nutrition is a basic right, but millions of children lack protection from hunger. A substantial proportion of pre-school deaths (67 per cent) are associated with malnutrition. In spite of nutritional education to mothers, only 55 per cent mothers initiated breast feeding within a day of child birth and 35.6 per cent of women in reproductive age group live with low Body Mass Index (<18.5). More than 90 million people live as urban poor and only 360 urban ICDS projects cater to their need. ICDS covered only 20 per cent of population in 3-6 years of age. Urban poor are over looked by the government.

II. Objectives of the Study

In the process to improve child and maternal health, especially to provide supplementary nutrition and healthcare to children and their mothers, Indian government initiated the worldôs largest ICDS through community level *Anganwadi* centres. Reduction in the proportion of under- nourished children in the country is slower than expected as nearly half of the children under five years of age are still under-nourished. Further, the low nutritional status and lack of supplementary food intake of mothers resulted in incidence of low birth weight babies and enhanced maternal morbidity and thus mortality. Therefore, the present paper analyses the utilisation of ICDS programme in India and examines the unmet need of the service to the children and their mothers. The specific objectives of the study are: (a) to examine the unmet need of ICDS to the children and their mothers among urban poor, rural poor and rural non-poor in India, and (b) to understand the influence of socio-economic and demographic factors on utilisation of ICDS among urban poor and all rural children and their mothers in India.

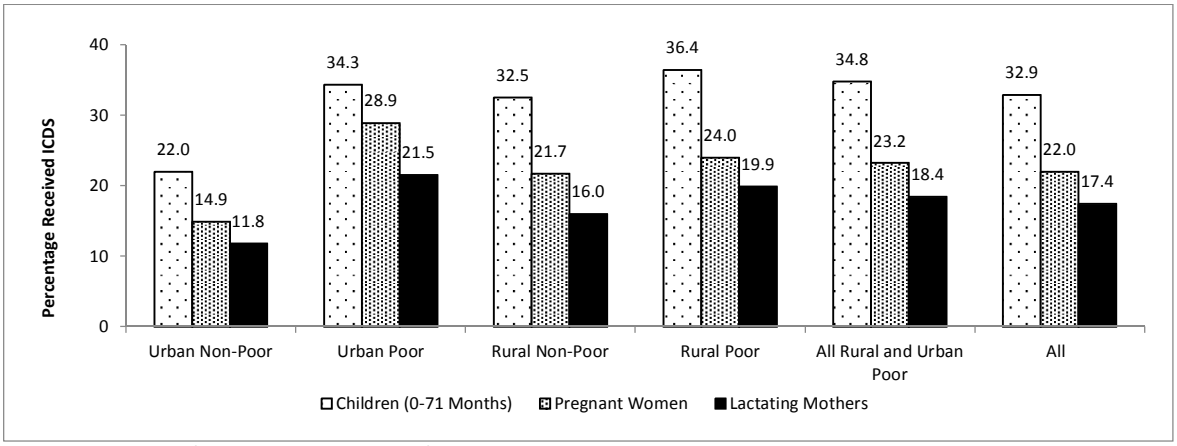
III. Data Source and Methodology

Data for the present study have been derived from the National Family Health Survey-3 carried out during 2005-06. It covered 1,24,385 women aged 15-49 years residing in 1,09,041 households. The surveyed area represents 99 per cent of Indiaôs population living in 29 states. Besides, the published reports, NFHS-3 has made the household and individual level data available

to the researchers. These form the principal source for the individual level analysis in this study. The latter includes 51,887 children, 55,550 pregnant women and 51,837 lactating mothers who are under AWC. Main focus of the study is on only 44,399 children (0-71 months), 47,756 pregnant women, and 44,362 lactating mother from *rural poor and rural non-poor background along with urban poor* who are mainly targeted in the programme. The NFHS-3 has computed a wealth index on the basis of ownership of assets, housing conditions, land holding, etc., (see IIPS & Macro International 2007, for details) and obtained quintiles based on the national distribution. The two bottom categories of the wealth index, i.e., poorest and poorer are categorized as ópoorô and the remaining categories, i.e., middle, richer and richest are considered as ónon-poorô for both rural and urban areas.

It is important to understand that the services are meant to reach all eligible targeted population in the country. However, they are only utilized by the limited targeted population and did not reach all. Therefore, a huge number of targeted population which is in their need remained unreached. This unreached population, which is eligible for the services under ICDS but did not utilize the same will be considered as unmet need of ICDS to the targeted population. Both bi-variate and multivariate analysis have been carried out in the course of analysis. To understand the pure effect of socio-economic and demographic factors on unmet need of ICDS programme, binary logistic regression was carried out separately for children and their mothers (pregnant and lactating women) to know whether received any services from AWC or not. It has been used to show the relationship between a set of predictor variables and a dependant variable which is dichotomous. The dependent variable is unmet need of ICDS (0 = met need and 1 = unmet need) while the predictor variables considered for unmet need of ICDS for children (0-71 months) are region, religion, caste, motherôs educational level, age of child, sex of the child, birth order and years since AWC is established, while the predictor variables considered for unmet need of ICDS for pregnant women and lactating mothers are region, religion, caste, motherôs educational level, age of women, children ever born and years since AWC is established.

Figure 1: Met need of any ICDS in India



Source: Computed from NFHS-3, 2005-06 files.

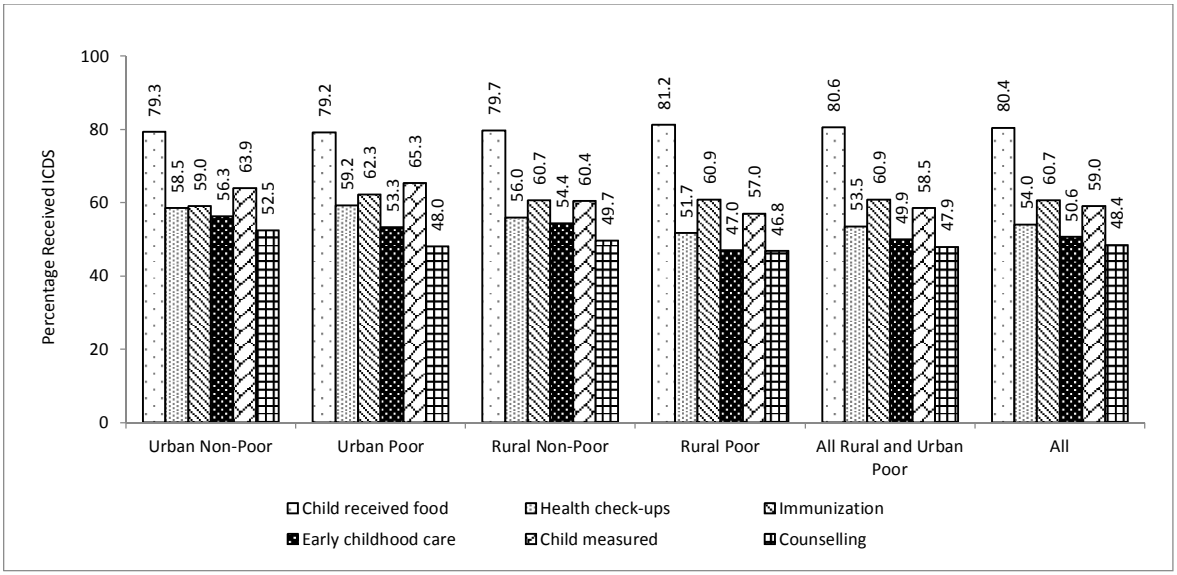
IV. Findings and Discussions

Overall, among all beneficiaries of ICDS, children (0-71 months) have received maximum benefits from the services, followed by pregnant women and lactating mothers. While analysing through the economic lens, it was found that children are the highest proportion of beneficiaries of ICDS irrespective of their familyôs economic status. Urban non-poor do not avail the services in general and rural poor are the highest in terms of reaching through the programme. There are marginal differences in ICDS uptake between rural poor and urban poor in India. It is clear that ICDS did not reach the urban poor, whereas malnutrition among them is almost equivalent as rural population. Within rural areas, there is a marginal difference in ICDS utilization among poor and

non-poor in all the three types of beneficiaries. This reveals that the services are not universal to all the beneficiaries in a given area (Figure 1).

As discussed in the previous section, ICDS provides several services to children (0-71 months), pregnant women and lactating mothers enrolled in AWC. Figure 2 shows that the services for food received the highest among children at the AWC. There is not much difference in the pattern across the economic class. Even urban non-poor received food from AWC equally as urban poor and rural poor. This is to confirm that receiving service regarding food from AWC is universally present among all the children which was the main goal under ICDS to eradicate malnutrition. However, uptake of other services varies widely among children across the economic strata. Data revealed that immunization and measuring children are most sought after services for children after food. Though urban poor preferred to receive health check-up for their children under ICDS, the rate is lower among rural poor and non-poor for the same. Counselling is one aspect that is neglected all through however Under the programme it was made clear to the AWW that counselling should be provided to all regarding child care and immunization. Counselling to women on how to use available resources more effectively on efficient feeding of children by AWW is an important area of focus as counselling section is completely neglected (Figure 3). This approach of counselling is used in many other countries like China, Vietnam and Republic of Korea (Whang, 1981; Allen & Gillespie, 2001). Capacity building of AWWs is needed to increase uptake of other services apart from food from the AWCs and soft skill on communication like counselling is the prime need for the frontline workers.

Figure 2: Types of ICDS services received among children in India

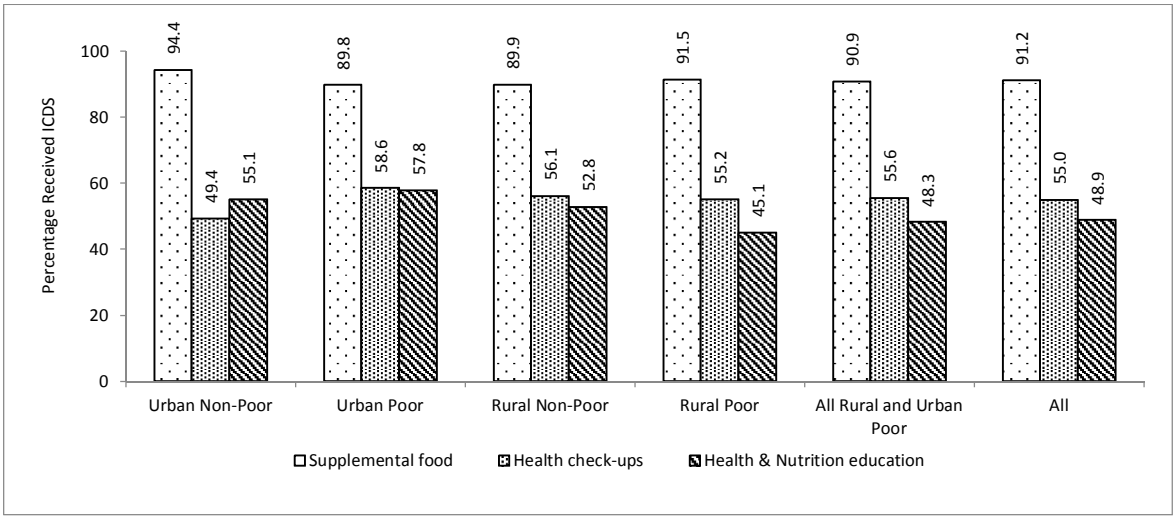


Source: Computed from NFHS-3, 2005-06 files.

AWC not only serves children (0-71 months) but also provides services to pregnant women living under the AWC area. Pattern to receive different services under ICDS among pregnant women is the same across the economic classes except among urban non-poor (Figure 4). Pregnant women belonging to urban non-poor class received services mostly for supplemental food followed by health and nutrition education and the uptake was low for health check-up. This shows that ICDS may be successful to provide supplemental food to pregnant women but could not support them holistically. Similar situation is also observed among lactating mothers registered under AWC. Most of them received supplemental food for six months after the child birth but health check-up and health and nutrition education remain minimal for them (Figure 5). Pattern of services received does not vary across the economic strata where supplemental food remained the most sought after service among lactating women. ICDS was also sought to curb maternal death and promote healthy behaviour through health and nutrition education among lactating mothers, but the result shows that there is a long way to go to reach that goal. Similar results were found in a small scale survey conducted in 46

AWCs in rural and 14 in urban areas of 12 districts in Gujarat during 2012-13 (Chudasama et al., 2015). It is reported that routine health check-up of enrolled beneficiaries and immunization services were inadequate and mostly in urban areas there was non-availability of indoor and outdoor space.

Figure 3: Types of ICDS services received among pregnant women in India



Source: Computed from NFHS-3, 2005-06 files.

Figure 4: Types of ICDS services received among lactating mothers in India

Source: Computed from NFHS-3, 2005-06 files.

State level variation of unmet need of ICDS among children (0-71 months), pregnant women and lactating mothers

India is a large country and ICDS programme is running for past forty years to eradicate malnutrition among children and also to provide nutritional support to pregnant women and lactating mothers. It is found that the needs of children belonging to northern states were not met through ICDS as above 70 per cent children did not receive ICDS services offered to them (Figure 5). However, half of children living in Gujarat, Maharashtra, Madhya Pradesh, Chhattisgarh and Odisha received ICDS services. Moderate unmet need of ICDS is observed among children residing in central India. Severe unmet need of ICDS was also observed among all northern states including Gujarat, West Bengal, Andhra Pradesh and Kerala among pregnant women where more than 70 per

Figure 5. State Level Variations in Unmet Need of ICDS among Children in India

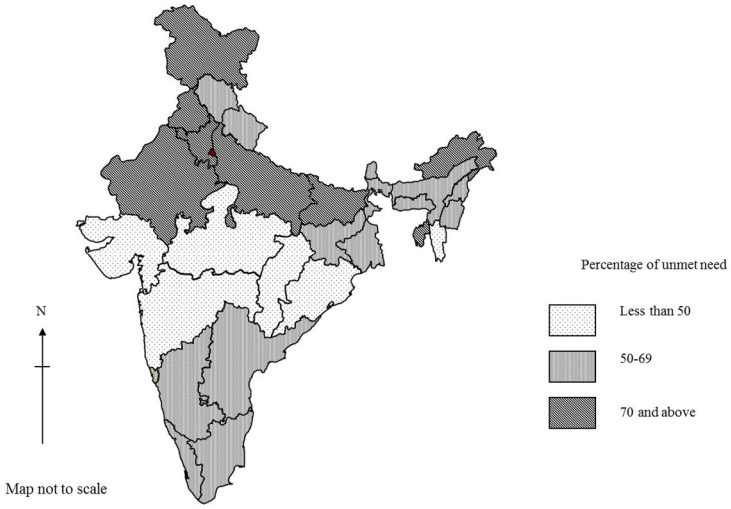


Figure 6. State Level Variations in Unmet Need of ICDS among Pregnant Women in India

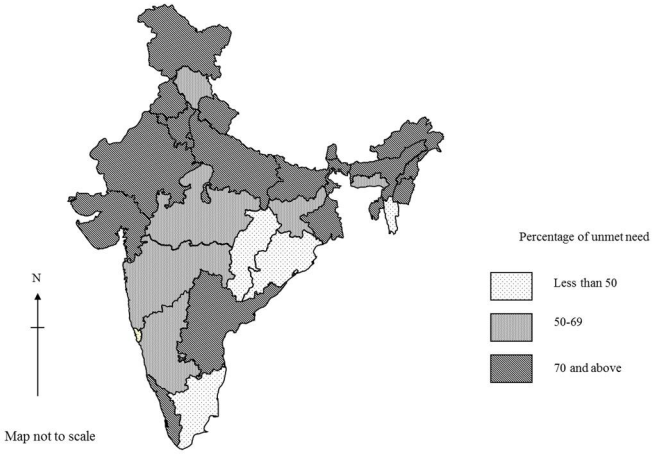
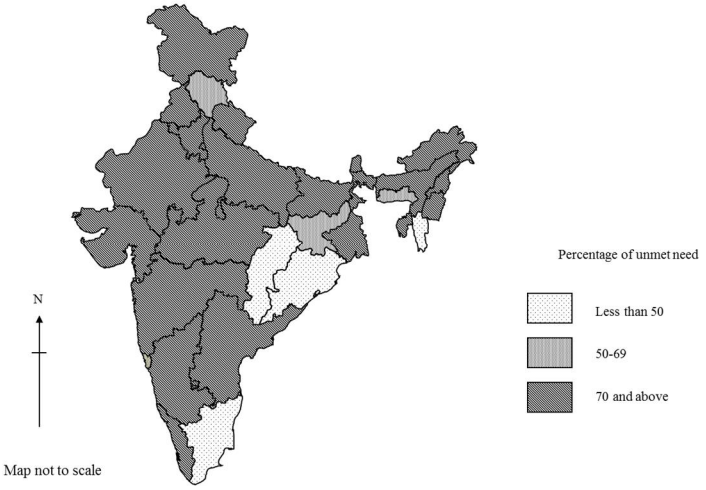


Figure 7. State Level Variations in Unmet Need of ICDS among Lactating Mothers in India



cent of pregnant women did not receive full services under ICDS (Figure 6). Low unmet need of ICDS is felt among pregnant women residing in Odisha, Chhattisgarh, Tamil Nadu and Goa. In addition, lactating mothers are allowed/designed to receive supplemental food and other health care services under ICDS. However, unmet need is high for ICDS in almost 90 per cent states. Only Chhattisgarh, Tamil Nadu and Mizoram have less than 50 per cent of lactating mothers availing the services under ICDS (Figure 7).

This is clear from the results that a majority of states have a severe need of ICDS services for all three beneficiaries, i.e., children, pregnant women and lactating mothers, especially in northern states. Though focus on ICDS was primarily to provide supplemental nutrition to children (0-71 months) earlier, at present services are extended to pregnant women and lactating mothers to curb malnutrition among children. It is clear that pregnant women in northern part of the country are not covered under the service net of ICDS scheme and data from different nationwide surveys showed that more underweight children as well as pregnant women with anaemia are present in these states (IIPS & Macro International, 2007). Severe Acute Malnutrition (SAM) children need priority attention from Government of India even within the target to reduce under five mortality rate. Children with SAM are at nine times higher risk of mortality as compared with optimally nourished children. According to NFHS-3, (2005-06) 6.8 per cent of children below 60 months of age suffer from SAM (acute variety of severe under-nutrition, i.e., weight-for-height less than ï 3SD) in India. At the state level, a majority of children are stunted due to malnutrition in Uttar Pradesh. Even Tamil Nadu, despite prevalence of high education, has a prominent child malnutrition problem with 23 per cent of underweight children and in Chennai one-fourth children show moderately stunted growth. Reducing malnutrition was considered as one of the Millennium Development Goals (MDGs) under eradication of extreme poverty and hunger. ICDS is perceived as a tool to achieve the goal but current situation is far beyond the target.

Do social factors influence uptake of ICDS among beneficiaries from different economic strata?

There are distinct variations observed across the economic strata on uptake of ICDS among children in rural as well as urban areas in the country. In addition, within the same economic strata, utilization of ICDS services varies across social factors associated with the household of the children.

While looking through the lenses of wealth index and socio-demographic characteristics of children under ICDS, it is clear that among urban non-poor, unmet need is higher in northern and eastern India and children with higher educated mothers (90.7 per cent). Religion, castes, age of the child, sex of the child and birth order play a marginal difference on uptake of ICDS services among this group (Table 1). However, the scenario is completely different among urban poor as compared with children belonging to north-eastern states, scheduled castes/scheduled tribes (SCs/STs), without education of mothers, children aged below one year and with birth order of four and above. In rural areas children among non-poor also showed a similar pattern on uptake of the services as of urban poor with minor differences in region and religion. Overall, unmet need of ICDS is high among children living in northern India and children aged one year and below across all economic strata in the country. Another small study also emphasized that children sometimes enrolled in the AWC but did not attend. A study in urban area in Ludhiana in Punjab shows that 826 children (0-6 years) were registered in AWCs but only 93 (11.3 per cent) of them continued with services. Number of pregnant women, lactating mothers and adolescent girls enrolled were 97, 78 and 657 respectively but did not avail of the services (Thomas, Sengupta & Benjamin, 2015).

Similar pattern on unmet need was observed from the survey among pregnant women who are eligible for ICDS services (Table 2). Pregnant women living in northern India (96.5 per cent) experienced highest unmet need of ICDS services among urban non-poor. However, there are marginal differences among religion, age of the women, children ever born and age of the AWC in the area. Unmet need is the highest among aged women (80.3 per cent), with parity of 3-4 children (75.4 per cent) among pregnant women living in urban areas and also poor by wealth index. Among rural non-poor pregnant women, unmet need for the services is the highest among Muslim women,

Table 1: Unmet need of ICDS among children (0-71 months) by wealth index and selected background characteristics, India

(%)

Background characteristics	Wealth Index									
	Urban non-poor		Urban poor		Rural non-poor		Rural poor		Rural and urban poor	
Region										
North	93.6	701	(89.5)	19	75.5	3,000	76.9	1,835	76.1	4,854
Central	74.8	1,137	65.2	201	73.1	4,195	65.0	8,969	67.5	13,364
East	83.4	889	73.5	200	72.3	3,612	66.4	9,322	68.2	13,132
Northeast	74.0	154	(83.3)	18	66.5	747	69.2	1,101	68.3	1,866
West	75.0	1,829	50.6	83	47.8	2,466	38.3	1,928	43.7	4,477
South	75.9	2,779	63.5	463	63.3	3,893	55.0	2,350	60.4	6,706
Religion										
Hindu	78.8	5,501	67.7	772	65.7	14,200	62.7	20,622	64.0	35,595
Muslim	77.0	1,568	58.3	199	74.7	2,653	71.7	4,046	72.5	6,898
Other	71.6	419	(61.5)	13	73.1	1,057	45.8	834	61.1	1,906
Caste										
OBC	76.8	3,216	66.3	511	69.5	8,109	68.6	10,231	68.9	18,851
SC/ST	71.2	1,621	68.5	324	58.4	3,578	58.0	10,339	58.4	14,241
Other	83.7	2,652	57.4	148	70.1	6,224	65.0	4,933	67.7	11,306
Mother's education										
No education	74.2	1,539	70.1	636	71.0	5,925	67.0	18,811	68.0	25,371
Primary	70.0	979	54.7	181	65.8	2,799	55.2	3,463	59.8	6,443
Secondary	78.3	3,979	60.5	167	64.6	8,283	52.8	3,194	61.3	11,643
Higher	90.7	992	NA	NA	75.7	905	(69.4)	36	75.5	942
Age of child (year)										
1	81.2	1,141	72.5	138	73.1	3,050	68.0	4,129	70.2	7,316
2-3	77.7	2,463	66.0	312	65.7	5,863	61.6	8,218	63.4	14,393
4 +	77.3	3,885	63.7	534	66.7	8,999	63.5	13,156	64.8	22,688
Sex of child										
Male	79.3	3,964	63.5	498	68.1	9,473	64.2	13,103	65.8	23,073
Female	76.6	3,525	67.9	486	66.7	8,439	63.0	12,400	64.6	21,325
Birth order										
1	80.1	3,032	65.3	271	67.3	6,397	60.8	5,834	64.2	12,501
2	78.4	2,501	62.2	254	66.1	5,470	61.0	5,774	63.5	11,497
3	76.0	1,049	62.1	169	67.1	2,892	62.1	4,493	64.0	7,553
4 +	72.2	906	71.4	290	70.5	3,154	67.7	9,403	68.4	12,847
Years since AWC was established										
< 6 years	76.4	1,158	71.6	81	72.9	4,152	71.0	6,226	71.8	10,459
6 or more years	77.3	5,711	62.8	771	64.9	12,792	59.8	17,493	62.0	31,059
All	**78.0**	**7,489**	**65.7**	**984**	**67.5**	**17,913**	**63.6**	**25,504**	**65.2**	**44,399**

Source: Computed from NFHS-3, 2005-06; NA: Not Applicable; ( ) Based on 10-49 unweighted cases.

and those with higher education. The unmet needs of the services show noticeable difference with different social classes among rural poor pregnant women. The latter living in north-eastern states are mostly deprived from the services (88.1 per cent). Even unmet need is the highest among pregnant Muslim women (87.9 per cent), and those without education, women living in rural area and falling in poor wealth index category. Overall, unmet need of ICDS is high among pregnant women living in northern India, and who are 35+ year of age. These data reveal a situation where women from a minority community are on higher side on unmet need of ICDS services. In addition, they are double burdened with living in lower economic strata and also belonging to a minority community.

ICDS services are also extended to lactating women to provide nutrition during the six months of exclusive breast feeding. Table 3 reveals that there are marginal differences across the social categories among urban non-poor. These sections of people do not utilize the services or they do not have knowledge of the available services. However, the unmet need is high as they belong to the socio-economic category of the society who do not avail of the services. Even the urban poor do not

take the services which has resulted in huge unmet need of ICDS services among lactating women who are urban poor. However, marginal differences can be observed within each social category in this particular wealth index, i.e., urban poor. Among rural non-poor section, lactating women from northern India reported lower utilization of the services resulting in the highest unmet need. Mothersô education, age of the women, and age and sex of the child show marginal differences in unmet need of ICDS among rural non-poor lactating women. Almost a similar pattern is observed among the rural poor.

Table 2: Unmet need of ICDS among pregnant women by wealth index and selected background characteristics, India

(%)

Background characteristics	Wealth Index									
	Urban non-poor		Urban poor		Rural non-poor		Rural poor		Rural and urban poor	
Region										
North	96.5	736	(85.7)	21	83.8	3,160	81.9	2,021	83.0	5,202
Central	85.8	1,215	70.6	218	84.7	4,509	77.4	9,860	79.6	14,588
East	90.8	924	81.6	212	86.1	3,818	78.3	10,096	80.5	14,127
Northeast	82.5	160	(95.0)	20	84.0	786	88.1	1,197	86.6	2,003
West	86.8	1,903	71.3	87	67.9	2,594	65.1	2,090	66.7	4,772
South	79.1	2,857	65.3	493	65.3	4,082	59.9	2,489	63.4	7,064
Religion										
Hindu	85.6	5,741	71.2	831	76.3	15,019	74.5	22,415	75.2	38,265
Muslim	84.6	1,622	69.7	208	88.0	2,827	87.9	4,420	87.4	7,455
Other	80.7	431	(85.7)	14	80.9	1,103	56.1	918	69.7	2,034
Caste										
OBCs	83.3	3,349	74.2	550	78.6	8,613	80.1	11,060	79.3	20,223
SCs/STs	79.6	1,680	66.4	345	67.9	3,833	68.8	11,296	68.5	15,475
Others	90.6	2,766	70.7	157	84.1	6,502	82.8	5,398	83.4	12,058
Mother's education										
No education	85.4	1,632	76.5	684	82.9	6,403	78.8	20,591	79.7	27,678
Primary	80.1	1,025	63.6	195	75.2	2,970	69.0	3,752	71.5	6,916
Secondary	84.1	4,126	59.0	173	75.5	8,646	67.3	3,372	73.0	12,191
Higher	94.0	1,012	NA	NA	83.2	931	(60.0)	40	82.3	971
Age of women										
15-19	81.5	249	71.6	81	74.5	1,019	75.2	1,938	74.9	3,039
20-24	83.1	2,498	68.3	369	76.6	6,846	73.1	8,877	74.5	16,092
25-29	85.5	3,023	69.5	338	79.2	6,844	75.6	8,697	77.0	15,879
30-34	88.5	1,438	73.9	142	79.7	2,817	77.2	4,931	78.0	7,890
35 +	84.5	587	80.3	122	82.4	1,423	84.0	3,312	83.4	4,857
Children ever born										
< 2	85.6	5,069	65.1	421	76.3	10,243	70.8	9,399	73.5	20,064
3-4	83.7	2,114	75.4	395	79.3	6,259	75.9	9,924	77.2	16,578
5 +	86.3	611	74.7	237	84.3	2,447	82.0	8,431	82.4	11,114
Years since AWC was established										
< 6 years ago	89.8	1,216	80.2	86	83.7	4,441	84.9	6,803	84.4	11,330
> 6 years ago	83.1	5,940	66.9	821	75.8	13,480	71.4	19,006	73.1	33,306
All	**85.1**	**7,795**	**71.1**	**1,053**	**78.3**	**18,949**	**76.0**	**27,754**	**76.8**	**47,756**

Source: Computed from NFHS-3, 2005-06; NA: Not Applicable; Based on 10-49 unweighted cases.

Studies on economic classification of respondents and utilization of ICDS services are limited in number. A study conducted at Ghaziabad district among 367 children shows more immunization in urban areas than rural areas under ICDS (Singh & Gupta, 2016). However, no such significant effect was found on enrolment of children at AWC between respondents living in upper lower economic strata in rural area (61.8 per cent) as well as in urban area (59.1 per cent). It revealed that participation at ICDS from lower economic classes was low in rural as well as in urban areas, which translated to higher unmet need.

Table 3: Unmet need of ICDS among lactating women by wealth index and selected background characteristics, India

(%)

Background characteristics	Wealth Index									
	Urban non-poor		Urban poor		Rural non-poor		Rural poor		Rural and urban poor	
Region										
North	97.3	700	(94.7)	19	88.6	2,997	85.9	1,834	87.6	4,850
Central	85.8	1,137	75.0	200	87.4	4,191	81.0	8,967	82.9	13,358
East	93.4	884	86.4	198	87.9	3,611	80.3	9,308	82.5	13,117
Northeast	85.6	153	(94.4)	18	84.2	747	88.0	1,100	86.5	1,865
West	92.3	1,829	83.1	83	81.1	2,466	77.8	1,926	79.7	4,475
South	82.6	2,772	74.5	463	74.8	3,888	69.3	2,345	72.8	6,697
Religion										
Hindu	88.7	5,492	79.6	770	82.3	14,187	79.1	20,615	80.4	35,573
Muslim	87.3	1,565	74.2	198	91.6	2,654	89.3	4,032	89.8	6,884
Other	85.2	420	(76.9)	13	86.9	1,058	60.0	834	75.0	1,905
Caste										
OBCs	85.4	3,211	79.6	511	84.6	8,102	84.3	10,229	84.3	18,842
SCs/STs	84.4	1,620	74.6	323	75.2	3,573	73.4	10,335	73.9	14,231
Other	93.9	2,645	82.6	149	88.2	6,222	85.5	7,917	86.9	11,289
Mother's education										
No education	87.2	1,538	82.3	634	87.9	5,918	82.4	18,798	83.7	25,350
Primary	82.2	978	70.2	181	82.5	2,799	74.3	3,459	77.7	6,438
Secondary	88.1	3,973	73.1	167	81.3	8,279	73.0	3,189	78.9	11,635
Higher	96.1	991	NA	NA	86.9	901	(66.7)	36	86.1	937
Age of women										
15-19	85.8	239	84.0	75	83.7	926	80.4	1,762	81.6	2,764
20-24	86.5	2,393	73.4	349	83.5	6,457	78.1	8,039	80.4	14,845
25-29	87.9	2,893	82.2	309	84.0	6,516	79.6	8,085	81.6	14,911
30-34	92.5	1,391	76.1	134	83.6	2,678	80.8	4,562	81.7	7,374
35 +	87.3	559	83.3	114	86.8	1,322	85.5	3,032	85.8	4,467
Age of child (year)										
1	87.6	1,141	78.1	137	82.5	3,049	78.3	4,129	80.1	7,315
2-3	87.8	2,454	77.4	310	83.1	5,855	79.2	8,213	80.8	14,378
4 +	88.7	3,881	79.2	534	85.0	8,994	81.2	13,140	82.7	22,668
Sex of child										
Male	88.9	3,956	77.3	498	84.9	9,467	80.2	13,095	82.1	23,060
Female	87.4	3,519	79.5	484	83.0	8,432	79.9	12,386	81.1	21,302
Children ever born										
< 2	88.6	4,920	73.7	396	82.1	9,831	76.1	8,721	79.2	18,949
3-4	87.3	1,991	82.9	369	85.3	5,862	79.9	9,179	82.0	15,410
5 +	87.8	564	79.3	217	88.6	2,206	85.0	7,581	85.7	10,002
Years since AWC was established										
< 6 years ago	92.1	1,158	91.3	80	87.6	4,147	87.6	6,226	87.6	10,453
> 6 years ago	86.6	5,700	75.0	768	82.3	12,789	76.3	17,472	78.7	31,028
All	**88.2**	**7,476**	**78.5**	**981**	**84.0**	**17,900**	**80.1**	**25,481**	**81.6**	**44,362**

Source: Computed from NFHS-3, 2005-06. NA: Not Applicable. ( ) Based on 10-49 unweighted cases.

Similar results from logistic regression analysis (Table 4) show among children, the likelihood of unmet need of ICDS services is significantly lower in all other regions than in northern region. Likelihood increases significantly in unmet need with increase in mothersô educational level and birth order. Similarly, pregnant women who reside in eastern, central, western and southern regions have significantly less likelihood of unmet need than women living in northern India among urban poor and all rural compared with urban non-poor. Pregnant women belonging to Other Backward Classes (OBCs) and other social categories have a significantly higher likelihood of unmet need than pregnant women from SCs/STs. Age of pregnant women did not show any significant effect on utilization of ICDS services. Similar scenario prevails among lactating mothers as among pregnant women.

Table 4: Logistic regression results of unmet need of ICDS among children (0-71 months), pregnant women and lactating mothers by wealth index and selected background characteristics, India

Background characteristics	Urban poor and all rural					
	Children (0-71 months)		Pregnant women		Lactating mother	
	Exp (B)	Sig.	Exp (B)	Sig.	Exp (B)	Sig.
Region						
North @						
Central	0.538	0.000	0.640	0.000	0.529	0.000
East	0.591	0.000	0.664	0.000	0.514	0.000
Northeast	0.614	0.000	1.153	0.069	0.800	0.008
West	0.234	0.000	0.410	0.000	0.562	0.000
South	0.470	0.000	0.364	0.000	0.383	0.000
Religion						
Hindu @						
Muslim	1.202	0.000	1.491	0.000	1.415	0.000
Other	0.949	0.321	0.834	0.001	0.802	0.000
Caste						
SC/ST@						
OBC	1.585	0.000	1.798	0.000	1.905	0.000
Other	1.453	0.000	2.136	0.000	2.246	0.000
Mother's education						
No education @						
Primary	0.716	0.000	0.682	0.000	0.701	0.000
Secondary	0.830	0.000	0.804	0.000	0.774	0.000
Higher	1.625	0.000	1.473	0.000	1.394	0.001
Age of child (year)						
1@						
2-3	0.713	0.000	N.A	N.A	N.A	N.A
4 +	0.750	0.000	N.A	N.A	N.A	N.A
Age of women						
15-19@						
20-24	N.A	N.A	1.062	0.246	1.311	0.000
25-29	N.A	N.A	0.960	0.154	1.060	0.073
30-34	N.A	N.A	0.931	0.051	0.889	0.003
35 +	N.A	N.A	1.181	0.001	1.078	0.170
Sex of child						
Male @						
Female	0.943	0.006	N.A	N.A	N.A	N.A
Birth order						
1@						
2	0.958	0.132	N.A	N.A	N.A	N.A
3	0.935	0.039	N.A	N.A	N.A	N.A
4 +	1.059	0.058	N.A	N.A	N.A	N.A
Children ever born						
< 2@	N.A	N.A				
3-4	N.A	N.A	1.132	0.000	1.200	0.000
5 +	N.A	N.A	1.314	0.000	1.466	0.000
Years since AWC was established						
< 6 years @						
6 or more years	0.684	0.000	0.582	0.000	0.574	0.000
-2loglikelihood	5169.91		46225.78		38333.00	
Nagelkarke R^2	0.075		0.098		0.077	
All	31325		33446		31300	

Note**: @:** Reference category**;** NA: Not applicable.

Overall, programmatically if the AWC has been established more than six years ago, unmet need is lower for all social categories. Newly established AWCs are not utilized by the target population to the optimum. There may be many factors associated with lower utilization of the

services. Results from a study in Visakhapatnam Municipality Corporation in Andhra Pradesh show absence of basic facilities in AWCs (Helena, Madhavi & Srinivas, 2014). Only one-third of AWCs have toilet, one-fifth have water supply and less than half have kitchen. AWWs reported of work overload and no reimbursement of the money spent on rent and community meetings.

V. Conclusion

Under-nutrition is high among children in the country with low utilization of services under ICDS scheme and existence of significant inequalities across regions/states and other social indicators along with economic status. The study shows that two-thirds of the children (68.1 per cent) did not receive any services from AWC. Similarly, 77.5 per cent mothers during pregnancy and 82.6 per cent during lactation period were not provided care by AWCs. The unmet need of ICDS is high in urban areas, among OBCs and Muslims. Mothers with higher education, who belong to upper castes, urban area, and richer section of the society were significantly less likely to utilise the ICDS compared with illiterate mothers who belong to SCs/STs, rural areas and poorer section of the society. To reduce this unmet need, one should focus on the reasons for people with higher education and those belonging to upper strata of society not utilising the ICDS services. The purpose of ICDS programme is to reach every section of the society with well acceptance and provide proper services to masses. There must be some gap in the programme implementation which might make it not acceptable to all concerned and create a cavity of unmet need.

Unmet need is the highest in northern India among rural and urban poor children and lactating mothers. This part of India needs more attention to ensure full implementation of ICDS programme for improvement in human resource development. The study is mainly targeted at weaker sections in the society and it is observed that Muslims and children from marginalised groups are neglected. Children with illiterate mothers and those belonging to urban as well as rural poor sections did not get benefits from the programme. The latter should increase awareness among them about the benefits of ICDS. A study by Gragnolati et al. (2006) also mentioned that the poorest states and states with highest malnutrition tend to have lower coverage of ICDS services in addition to smallest government budgetary allocation. Women with higher age and parity also don't utilise the benefits of ICDS. But they are more vulnerable from health point of view and, therefore, the programme should pay more attention to them. The condition of urban poor is more challenging than the rural poor. Therefore, ICDS programme should cater to their needs to enhance their nutritional and health conditions. It is more 'child centred and child focused', and it should be 'family-the woman-the mother'-oriented to reap off full benefits. MGDs proposed to halve the underweight children by 2015 and eradicate extreme poverty and hunger but we are still far off from the goal. However, the ray of hope is that early childhood development is included in Sustainable Development Goals and mentioned in the target 4.2 as 'by 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education'. This is also supported with early childhood care and education policy in 2013 and National Food Security Act, 2013. Overall the goal of ICDS is to make a healthy nation with supplementary food, health check-ups, immunization to children and education of mothers regarding feeding and proper health care for their children, particularly among weaker sections, and hence full implementation of ICDS alone can fulfil this dream. A recent programme review of the scheme suggested modifications in the health and nutrition component of the scheme to improve the programme implementation and efficiency (Kapil, 2002). Government of India's *Economic Survey of 2016* recommended that 'India needs to invest more in improving nutrition among children to capitalize on the demographic advantage offered by its young population. More spending on maternal and child health care needs to be at faster pace'. Finally, to combat under-nutrition, the programme should meet the unmet need of the targeted population and it be implemented in an efficient and equitable manner.

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