

THE DETERMINANTS OF UTILIZING ICDS IN LAKHIMPUR DISTRICT OF ASSAM, INDIA

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INTRODUCTION:

Nutrition is a fundamental pillar of human life, health and development across the entire life span. Children are the most valuable asset of a nation; their good nutrition is the cornerstone for survival, health and development for current and succeeding generations which guarantee the sound and sustained economic development. Therefore improving child health and nutrition is not only a moral imperative but also a rational long term investment for sustained development. Realizing the importance of holistic child development India has launched the Integrated Child Development Scheme (ICDS) in 1975 which now become world's largest early childhood development programme. Integrated Child Development Services (ICDS) programme was expected to prevent the incidence of severe malnutrition of the country. But after 40 years of operation, the ICDS is yet to have an impact on the poor nutritional status of children. According to Programme Evaluation Organization a division of NITI AAYOG during 2015 moderately malnourished and severely malnourished children are 17% and 4.2% respectively in India. In Assam the child health indicators are not better than most of the states of the country after 40 years of operation of ICDS. According to Annual Health Survey 2011-12, under-5 mortality rate in Assam is 87/ 1000 live births in 2009 as compared to the all India figure of 64/ 1000. Thus it is high time to examine the efficacy of ICDS in improving nutritional status of children in India as well as Assam.

Statement of the Problem:

The scenario of nutritional status of children in India shows that India as well as Assam is far away from achieving the Millennium Development Goal of eradicating malnutrition in India even after implementation of direct nutritional scheme ICDS. According to NFHS-4 the underweight rate of children under 5 years of age in India is 35.7% which was 42.5% in accordance to NFHS-3. In Assam, the child health is immense low as the infant mortality rate is 48 and underweight rate is 29.8% recorded by NFHS-4 (2015-16) which was 66 and 40.4% in

accordance to NFHS-3. Hence after 40 years of operation of ICDS India as well as Assam can reduce malnutrition level marginally. Although the ICDS programme appears to be well-designed there are several mismatches between the programme's design and its actual implementation that prevents it from realizing its potential. In this context the researcher tries to study the various determinants that affect on utilization of ICDS.

About ICDS

India has launched the Integrated Child Development Scheme (ICDS) in 1975 which is one of the centrally funded flagship programmes of the Government of India and now become world's largest and unique programme for childcare and early childhood development. According to Programme Evaluation Organization a division of NITI Aayog during 2014-15 the ICDS programme covers 8.4 crore children of age below 6 years and 1.91 crore pregnant and lactating mothers through 7,066 projects and 13.42 lakh operational AWCs. This is against a total number of 16.45 crores children in the age group 0-6 years (2011 Census). ICDS, therefore, reaches only around half of the children in this age group. It is notable that Government of India partners with the international agencies like United Nations International Children' Emergency Fund (UNICEF), Cooperative for Assistance and Relief Everywhere (CARE), World Food Programme (WFP) to supplement interventions under the ICDS. UNICEF has helped in launching the ICDS programme and continues to provide financial and technical assistance along with the World Bank.

The Integrated Child Development Scheme (ICDS) came under the purview of the Ministry of Women and Child Development (MWCD) in 2006. National Institute of Public Cooperation and Child Development is one of the autonomous organizations under MWCD for child development. The following are the objectives of ICDS.

- To advance the nutritional and health standard of children in the age-group 0-6 years.
- To reduce the rate of mortality, morbidity, malnutrition and school dropout.
- To support the mother for providing the necessary nutritional and development needs of the child and aware of her own needs during pregnancy through proper health and nutrition education.

The scheme aims at providing an integrated package of services. These services include supplementary nutrition, pre-school non-formal education, nutrition & health awareness, immunization, medical check-ups, referral services.

In Assam, ICDS scheme was introduced in the year 1975 in Dhakuakhana Development Block, on experimental basis, along with 32 other blocks in the country. According to annual report 2014-15 of MOWCD, the total number of AWCs sanctioned for the state was 62,153 (including 5,425 Mini-AWCs) under 231 projects. According to the report the total child beneficiaries for SNP are 3310885 and for PSE are 1801441 in December 2014.

Review of literature:

Different literature has been developed regarding the efficacy of ICDS. Different studies have been conducted about the implementation of ICDS in India. Some of them are discussed as follows.

Why people are not attending the AWC

The World Bank (2004) estimates that attendance is varied in accordance to age, gender, caste, household wealth and location. The report further shows that in all states the attendance rates of scheduled caste and scheduled tribe children are in line with or slightly better than that of other castes.

Ameya Et Al. (2005) found that the majority of ICDS buildings were in poor condition, without basic facilities. The AWC were not located within community areas and mothers had difficulty in sending and bringing back their children from ICDS centres. Parents were interested in sending their children to private crèches and schools because they thought that 'private' meant quality, and it was also a status symbol.

Final Report on ICDS performance (2008) has found that as the AWCs are themselves not functioning regularly particularly in Dhubri, Dibrugarh, Kamrup and East Khasi Hills, it would not be fair to expect the parents to be enthusiastic about sending their children to the Centre. AWCs are seen more as food distribution centers.

Deepali Sharma (2014) has found in her studies that as the prosperity increases (as defined by monthly income, standard of living etc.), there is a tendency to not register. She further found that the key reasons for not attending the program are the lack of seriousness in the minds of

respondents towards the program. She has found that at lower levels of education, mother's education is complementary to program, but more educated mothers who have completed higher secondary education implying a substitutive role of mother's education and program. She has found that SC and ST have higher tendency to attend as compared to general class. Education of parents is affecting the probability of registration. Educated parents tend to have lower rates.

Objectives:

The researcher has set some specific objectives. These are as follows:

1. To find the determinants of utilizing the ICDS.
2. To find out the reasons of not attending the AWC.
3. To find out the problems faced by the ICDS in Assam.
4. To find out some remedial measures for effective implementation of ICDS in Assam

Research Questions:

To fulfill the above objectives the researcher sets some **research questions**. These are as follows:

1. Does Quality of ICDS affect on attendance of children at AWC ?
2. Does mother education affect on attendance of children at AWC ?
3. Does living condition of children affect on attendance at AWC ?

Research Methodology:

The research work depends on both primary and secondary data. For collecting the primary data the researcher selects a sample size from Lakhimpur district of Assam by adopting the multistage random sampling and systematic sampling. In multistage sampling, **in first stage**, the researcher selects the Lakhimpur district of Assam as it was taken as model district for launching The ICDS in 1975. **In second stage**, among 9 development blocks of the district the Boginadi block is selected randomly. **In third stage**, Na- Kadamgaon Panchayat is selected randomly. **In fourth stage**, AWCs are selected from the panchayat. Since the total number of AWC in the block is 208, therefore the 10% of the total number of AWC i.e. 20 is taken as sample size for the study. The 20 AWCs are selected randomly in such a manner that it covers mother and children of all section of caste, religion and economic condition of the area. **In fifth stage**, the sample households are selected. The researcher has found the total number of children is 1217 as per

record provided by 20 AWC. Therefore to observe the socio economic condition of the households the researcher has selected 10% of total children i.e.120 (for convenience) by applying systematic sampling and purposive sampling. The sample household size is also 120. One child from each household is taken as sample. The researcher has selected the beneficiary households by applying systematic sampling. In each selected AWC the researcher select the beneficiary households at an interval of every 10 beneficiary households. The researcher has selected the households who are registered but not attended the AWC in last two months by applying purposive sampling. They are considered as sample children who are not attending in AWC. The researcher has collected data from AWC and beneficiaries mother by adopting direct investigation method on the basis of well-structured questionnaires. The information about monitoring and administration is taken from the supervisor and ICDS officials through proper discussion.

Data Analysing Technique:

The collected data are arranged scientifically in a tabular form. For better explanation about the determinants of utilizing the ICDS the binary logistic regression model is applied. The logistic models controls for relevant socioeconomic variables like maternal education, household standard of living, social background of household such as caste which have the probability of affecting on attendance in AWC. In the binary logistic method we have used the co-efficient to explain the likelihood of being attendance associated with different characteristics. We make meaningful explanation on the basis of p value. For analyzing the determinants of utilization of ICDS the researcher assume the attendance as dependent variable and age and sex of child, mother's education, caste, living condition and quality of ICDS as independent variable. For estimating the use of ICDS services, a linear model that relates one of the outcome variables to a set of explanatory variables plus error terms is $Y = \beta_1 X_i + \beta_2 C_i + \beta_3 Z_i + \beta_4 Q_i + e_i$

where the dependent variable is attendance for the i th respondent ($i = 1, 2, \dots, N$). X indicates the child specific characteristics such as age and sex of the child, C indicates mother education, Z indicates the socio-economic characteristics such as caste and living condition and Q indicates quality of ICDS. In all cases the outcome variable is dichotomous which means that linear regression methods are not appropriate. We use the logistic regression method for all estimations.

The logit (L) is the log of the odds ratio and can be expressed as follows: $L = \ln [\Pr(Y=1)/\Pr(Y=0)] = X\beta$

Where β is a vector of parameters for x explanatory variables. The left hand side of the equation represents the log odds of the outcome associated with the explanatory variables in question. The logit model is used to estimate the probability attendance using the following econometric specification:

$$\text{Logit}(Y_{ij}) = \beta_1 X_{ij} + \beta_2 C_{ij} + \beta_3 Z_{ij} + \beta_4 Q_{ij} + e_i$$

The analysis is performed using STRATA software.

The quality of ICDS as well as AWC is assessed on the basis of index value computed from the composite index constructed by using infrastructure index and Quality of AWW Index by applying the formula of UNDP Human Development Index. The variables considered for infrastructure Index are ICDS owned building, sufficient space, weight machine, PSE kits, Medical kits, play material, storage facility, sitting arrangement, utensil, toilet and drinking water facility. For AWW quality Index the variables are education level of AWW, Training of Aww, NHE, SNP, Immunization, record keeping, growth chart preparation, meeting arrangement, House to House visit by AWW, Visited by supervisor, visited by ANM.

Determinants of the utilization of ICDS:

Numbers of factor are responsible in determining the utilization of ICDS. The quality of infrastructure of AWC, the quality of the AWW, the efficacy of the services, the child specific characteristics such as gender, age, the parental education, the socio-economic factor of the beneficiaries, Awareness and knowledge of the beneficiaries, the political interference on the services, the community participation, the location of the AWC, the road connectivity to the centre etc. Some of them which are considered as independent variables are concerned in the study as determinants of the utilization of ICDS.

Profile of the area:

Lakhimpur district is one of the oldest district of Assam. According to 2011 census the total population of the district is 10.42 lakhs. Among them 15.6 thousands are children under 6 years. Boginadi block is situated in the east of the Headquarter of Lakhimpur district. The block consists of three gaonpanchayats. The people of the area is of different communities such as mishing, nepali, kachari, tea tribes, sc, minorities, general etc. Most of people depend on agriculture for their livelihood. The Boginadi bazar support the local farmers for marketing their products.

The ICDS was launched in the block in 1982. The total number of AWC is 208 and only three supervisors are there for monitoring the AWC. The performance of ICDS of the block as a whole is not satisfactory. Since the road connectivity to the remote area is very poor, therefore AWW, the ICDS officer, supervisor and medical officer has faced lots of problems for which service delivery is not satisfactory. Moreover political pressure will affect the smooth functioning of the ICDS.

Study area:

The study area consist of 20AWC which covers 26 villages and different types of communities such as general including OBC, mishing, kachari, tea tribes and minorities. The total population covered by 20 AWC is 16841 of which 8614 is male and 8227 is female. The children 6m-3y is 466 of which 257 is male and 209 is female. The children 3y-6y is 751 and among them 405 is male and 346 is female . The children are divided on the basis of different caste for convenience of the study. Accordingly the general including OBC children is 326, Mishing&Kachari is 289, Minority is 372, SC is 100 and Tea tribes is 130. Therefore the researcher selects the sample size as 10% of each community to verify the impact of caste on utilization of the ICDS.

Findings of the Study:**Status Of AWC:**

The status of the AWC depends on the infrastructural facilities, Quality of the AWW, Service delivery and monitoring. These are discussed as follows-

Infrastructure of AWC:

House: The infrastructural facilities are not so good in the area. Among the 20 AWC 5 has no house. One AWW has to build the house in her own land and 2 AWW arrange the day to day activities at Namghar and 3 AWW arrange nearby Primary School during the morning hour from 7 to 8-45. The house is not sufficient for cooking meal, teaching and playing simultaneously. All AWW have claimed the requirement of separate Kitchen room.

Drinking Water & Toilet: No drinking water facilities are there. Only three AWC use the drinking water from the LP School and others use the water from the house of local people.

Hence cooking meal becomes a hard work for the helper in absence of drinking water.No toilet facilities are there.

Weighting Machine: The machine is available, but in all the centers except one the machine is defective. Therefore the AWW has to weight at nearby Health Centre. Some of them weight the children after three months, but fill up the growth chart monthly. This growth chart is prepared on the basis of assumption.

Utensils:Utensils are available, but not qualitative. The cooking vessel is very poor condition and therefore 25% Of AWW has purchased the cooking vessel from her salary. There is no storage facilities.

Medical Kits, Playing and Pre-School Kits:The playing and Pre-School kits are available. Although medical kits are available, it is not sufficient. Only paracetamal, deworming, and some antifungal powder is provided. No fast aid is given in medical kits. 40% AWW claimed that fast aid is required in medical kits.

Quality of AWW:

The quality of AWW is measured on the basis of Education , nutritional knowledge , training, record keeping, growth chart preparing, SNP, NHE programme, meeting arrangement, visiting the beneficiaries houses and Immunization.

In the study it is found that the 18 AWW are matriculate and two are higher secondary passed. Only five have knowledge about the nutritional norms. All the AWW has taken job training of one month and only two has taken refresher course of 7days on medical kits. All can properly maintain the growth chart. But NHE programme is not in right direction as the 90% cannot arrange the class once in a week due to non-attendance of mother. The SNP has smoothly conducted when the food is available. Of course 25% AWW specially in minority area informs that the distribution of nutritional food become uncontrollable as the attendance is more during the distribution time. All the AWW inform that Village Health Nutritional Day (VHND), Nutritional Health Education (NHED),Early Child Education (ECE) and circle meeting must be arranged monthly. Immunization programme is conducted with the help of ANM properly. But visiting to house to house is difficult task for them. Only 3 AWW report that they visit the beneficiaries' house every 15 days. Thus it depicts that the quality of AWW is almost good in the area.

Visiting the AWC by supervisor and CDPO ANM:

Timely visiting is one of the injecting elements in proper functioning of AWC. The study shows that 75% of AWC is visited by Supervisor monthly and 25% AWC is visited once in two months. All AWW inform that ANM visits monthly. 40% of AWW inform that CDPO visits once in four months and 60% of AWW inform that CDPO visits once in six months.

According to composite index value, 70% AWC are low category, 25% are medium category and only 5% are very high category in the sample area.

Living Condition:

The living condition of sample households depend on the monthly average income, sanitation, drinking water, electricity, gas, house etc. The living condition is determined on the basis of composite index constructed on the following variables by applying UNDP Human Development Index.

Table 1: The living condition of sample households

caste	Hig h inco me	Low inco me	electr icity	No electri city	Pu cca ho use	Cu tch a ho use	Ga s	N o ga s	Go od wa ter	Bad wat er	Goo d sanit atio n	Bad sanita tion	Hi gh livi ng	Lo w livi ng
gener al	18	14	17	15	18	14	13	1 9	18	14	12	20	16	16
teatri bes	0	13	2	11	o	13	0	1 3	1	12	2	11	1	12
Plain tribes	14	14	15	13	12	16	10	1 8	12	16	10	18	12	16
SC	4	6	4	6	3	7	2	8	2	8	1	9	3	7
Mino rity	9	28	12	25	12	25	9	2 8	15	22	9	28	11	26

Source: Field Survey

From the above table it is clear that the 43 number of children are in a good living condition 77 remain in a bad living condition. The govt. and private pipe water and private filtered ring well

and tube well is considered as good water. The govt. provided sanitation and private pit flash and sewerage system is considered as good sanitation.

Determinants of utilizing ICDS:

The following table reflects the various determinants of utilizing the ICDS.

Table2 : various factors that affect on attending AWC

Factors	Classification	Total 120	Attending 75	Percentage (62%)	Not Attending 45	Percentage (38%)
Age of the child	36m-48m	55	37	67.2	18	32.8
	49m-60m	41	28	68.2	13	31.8
	61m-71m	24	10	41.6	14	58.4
Sex	Male	65	43	66.1	22	33.9
	Female	55	32	58.2	20	61.8
Living Condition	High living	43	20	37.7	23	62.3
	Low living	77	53	68.8	24	31.2
Caste	Minority	37	27	73	10	37
	General	32	15	48	17	52
	Tea tribe	13	8	61.5	5	38.5
	Plain tribe(ST)	28	19	67.8	9	32.2
	SC	10	6	60	4	40
Mother Education	Illeterate	49	32	65.3	17	34.7
	Primary	26	20	76.9	6	23.1
	Middle	25	16	64	9	36
	High and above	20	7	35	13	65
ICDS Quality	High Quality	40	30	75	10	25
	Low Quality	80	45	56.3	35	43.7

Source: Field Survey

The above table reflects the various factors affect on attending Anganwadi Centre (AWC).The factors are explained below:

Child specific Characteristics: We study the child specific characteristics by examining the variation of attending behavior in accordance to variation in age and sex of the child. From the table it shows that as

child age increases up to 5 years the rate of attendance is increasing. But after completion of the 5 years the attendance rate is declining. Because most of the students choose to attend the primary school after the completion of 5 years. The attendance behavior is marginally changed in accordance to difference in sex.

Socio-economic Condition: The study also examines the background characteristics of the child by considering socio-economic condition of the sample households. The table represents that there are significant different in attendance of the child in response to difference in **living condition**. The rate of the attendance of the child of low living condition households is higher than high living condition. It is because most of high living households prefer to send their child to better institution.

Caste is considered as social factor which may affect on the attendance in AWC. From the table it is evident that there is partial variation in attendance due to difference in caste. The children belonging to Minority class have the higher rate of attendance than other caste. On the other hand the children belonging to general class have lower attendance. Some of the parents of general caste have felt that ICDS is not beneficial for them. Therefore they are reluctant to send their child to AWC.

Mother Education: The table shows that mother education has significant impact on attendance. The children whose mothers have primary education have higher rate of attendance. But the children whose mothers have higher education have lower rate of attendance. Because the mothers having higher education prefer to send their child to better institution instead of AWC.

Quality of ICDS: The table depicts that the attendance behavior is varied in accordance to difference in quality of ICDS. The children belongs to the area under high quality of ICDS have higher rate of attendance than the low quality of ICDS.

Findings of the model:

The logit model used for the study has some significant outcomes which are discussed with the help of following table.

Table3: Results of the model

Independent variables	Attendance(Dependent variable)	Co-ef	St.error	Z	p> Z
Age	49m-60m	-.06309	.4439	-.14	.887
	61m-71m	-1.871802	.556	-3.36	.001
Sex	male	.822381	.386503	.21	.832
Living Condition	High living condition	-.7788879	.39026	-2	.046
Caste	Minority	.6400998	.6463	.99	.322
	General	-.3176153	.6412	-.50	.620
	Tea tribe	-.0746328	.7679	-.10	.923
	Plain tribe(ST)	.2736738	.68406	.40	.689
Mother Education	Illeterate	.94908	.5377	1.76	.078
	Primary(1-5)	1.5404	.6393	2.41	.016
	Middle	.8630	.6066	1.42	.155
ICDS Quality	High Quality	.84729	.4291002	1.97	.048

Source: Field Survey

Age: From the table it is clear that the negative sign of the coefficient indicates that the probability of attending is declined as the age of the child increases. The age group of 61m-71m children are statistically more significant variables. As the children completed 5 years the probability of attending in AWC is significantly decreasing. The sample households of this group perhaps expect that primary school is better than AWC.

Sex: Sex has no statistically visible impact on attending AWC.

Living Condition: Living condition has significant impact on attending AWC. The negative sign of coefficient reflects that the probability of attending in AWC is declined as the living condition is high which is significant at 4% level. The high living condition households perhaps prefer to send their child to better institution.

Caste: Caste has no statistically significant impact on attending AWC.

Mother Education: Mother education has significant impact on attending AWC. The probability of attending in AWC is statistically more significant at 1% level whose mothers have primary level of education. Regarding illiterate mothers the probability of attending the child in AWC is statistically

significant at 7% level. It depicts that the probability of attending in AWC is high whose mothers have primary education level. But probability of attending in AWC is very low as the mother education level increases primary onwards.

ICDS Quality: ICDS Quality is also statistically significant variable which affect on attending AWC. Higher the quality of ICDS, higher is the probability of attending AWC which is significant at about 4% level.

Reasons of not attending in AWC:

The following table reflects the various reasons of not attending in AWC. Since the total not attending children are 45, therefore to know the reasons researcher select the sample of 45 household whose children are not attended in AWC.

Table 4: Reasons of not attending

Low quality of AWC	Not aware about ICDS	Other school	Not beneficial
20 (44.4%)	6 (13.3%)	10 (22.2%)	9 (20%)

Source: Field Survey

From the table 4 it is clear that out of total not attending children 45, 44.4% households report that children are not attended in AWC due to low quality of AWC. 20% households consider AWC is not beneficial for their children. 13.3% households are not aware about the services of ICDS. Other 22.2% households send their children to better institution.

Conclusion: From the study it may be concluded that the Quality of ICDS is very poor. Although some other factors like living condition of the household, mother education are major determinants of utilizing ICDS, yet quality of ICDS means AWC is a vital determinant of utilization of ICDS. If government and different stakeholders give more emphasize on overall development of ICDS and fit it as an actual child development centre, then obviously the attendance rate may increase. The reverse affect of high living condition, higher educated mother on attending AWC may change if quality of ICDS is improved.

Recommendations:

- ICDS should be designed and implemented in an attractive manner so that all are eager to attend the AWC.

- Efficient and well trained human resources are to be recruited in all stages of the system. Salary should be given on the basis of basic norms and workload.
- Improving the quality of food provided at the AWCs. ICDS food supplements must be highly nutritious, freshly cooked and attractive for children and must be available on daily basis.
- It is imperative that every Anganwadi is housed in a well-designed building of its own and not in a make-shift arrangement or a temporary hut. A Centre must have all the essential ingredients to make it attractive for children and their mothers. Clean drinking water, storage facilities, basic furniture such as proper benches, tables, cupboards, cooking utensils, weighing scales, medical kits, charts, toys etc. Sufficient places are required for playing. AWWs who maintain their Centres well and keep them neat and clean and who are innovative should be suitably rewarded. This will be an incentive for them to do better and make others also strive to do the same. .
- If a Centre is to function well then there should be at least 2 AWWs for each Centre. One of them can concentrate on children below 3 years and make home visits so as to make the home-based care a reality. The second AWW can be stationed at the Centre.
- A closer link and better integration between the Health Department and ICDS would enable villagers to access basic health services such as health check-ups, growth monitoring, detection of under-nutrition, mass de-worming, disease surveillance, supplementation of micro-nutrients, health education etc.
- The success of an ICDS programme depends a lot on the awareness levels of the stakeholders – in this case the mothers. Regular awareness for mothers, pregnant and lactating women need to be conducted at the Centre so that a kind of bond and rapport is built.

Bibliography:

1..Balsekar, Ameya Et Al. (2005) Thiruvananthapuram : Institute Of Social Sciences-Child Welfare and Community Participation: A Case Study Of The ICDS Program In Trivandrum District, Kerala. Published in Research on ICDS: An Overview (1996-2008) Volume 3,National Institute of Public Cooperation and Child Development, 2009.

2. Burman Nibha Rani, Assam Agricultural University, Faculty of Home Science, Department of Child Development and Family Relation, Functioning of Anganwadi Centres under ICDS Scheme: An Evaluative Study. Published in Research on ICDS: An Overview (1996-2008) Volume 3, National Institute of Public Cooperation and Child Development, 2009.
3. Final Report on Functioning Of Anganwadi Centers in Assam and Meghalaya (2006). Guwahati- Centre for North East Studies and Policy Research, Guwahati.
4. NCAER (2005), "Rapid Facility Survey of Infrastructure at Anganwadi Centres" National Council of Applied Economic Research, New Delhi, 2005
5. Paul, Dinesh, Et Al. (2003), Evaluation Of Medicine Kit Provided To Anganwadi Worker. New Delhi: NIPCCD. Published in Research on ICDS: An Overview (1996-2008) Volume 3, National Institute of Public Cooperation and Child Development, 2009.
6. Sampath, T. (2006) Chennai: Loyola College, Dept. Of Social Work -.A Study on Community Participation in Integrated Child Development Scheme (ICDS) In Chennai. Published in Research on ICDS: An Overview (1996-2008) Volume 3, National Institute of Public Cooperation and Child Development, 2009.
7. Sharma, Deepali (2014) Thesis on Evaluation of Integrated Program on nutrition and health estimates and evidence of ICDS JNU
8. Vinnarasan, A. (2007) Chennai: Loyola College, Dept. of Social Work -A Study on Factors Influencing Non Enrollment of Children in the ICDS Anganwadi Centers at Chennai Corporation. Published in Research on ICDS: An Overview (1996-2008) Volume 3, National Institute of Public Cooperation and Child Development, 2009.
9. World Bank Report (2004) on Evaluation Of ICDS.
10. NFHS III India (2005-06)
11. NFHS III Assam (2005-06)
12. Economic Survey, Assam 2013-14
13. NFHS IV