

SUPOSHAN

A Study on the Nutritional Status
of Mahadalit Children
and Women in Bihar

BASELINE SURVEY REPORT
2019



March 2019

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(Data collection & processing: September-October '18/Nov-March '19: Analysis & Report writing)

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ACRONYMS

ANC	Ante-natal Care
ANM	Auxiliary Nurse and Midwife
BCG	Bacille Calmette Guerin
CMAM	Community Management of Acute Malnutrition
DPT	Diphtheria, Pertussis and Tetanus
EBF	Early Breast Feeding
EIBF	Early Initiation of Breast Feeding
HDD	Household Dietary Diversity
ICDS	Integrated Child Development Scheme
IFA	Iron Folic Acid
IMR	Infant Mortality Rate
IYCF	Infant and Young Child Feeding
JSY	Janani Suraksha Yojna
MAM	Moderately Acute Malnutrition
MGNREGS	Mahatma Gandhi National Rural Employment Guarantee Scheme
MMF	Minimum Meal Frequency
MMR	Maternal Mortality Rate
MSF	Médecins Sans Frontières
MUAC	Mid Upper Arm Circumference
NFHS	National Family Health Survey
SAM	Severely Acute Malnutrition
SD	Standard Deviation
TPDS	Targeted Public Distribution System
TT	Tetanus Toxoid
WASH	Water, Sanitation and Health
WDD	Women Dietary Diversity

Director's Message

“Nutrition Our Right” should be the mantra for the dialogue of life, as it is intrinsically linked with the Right to Life. The concerns around health and nutrition improvement in India have been longstanding. To respond to the issues of hunger and malnutrition among the poorest and marginalised communities, the Government enacted legislations to make the right to work, health and nutrition justiciable, and fundamental human right connected with the Right to Life in the Indian Constitution. Programmes like MGNREGA, Public Distribution Scheme, Midday Meals in schools and supplementary nutrition under Integrated Child Development Schemes were adopted to strengthen livelihood and nutrition security of rural poor, with special focus on children and women of underprivileged communities. These commitments were further reinforced with the adoption of the Sustainable Development Goals (SDGs) in 2015. The SDGs are interdependent, and require integrated yet multi-sector approach to achieve Zero Hunger (Goal 2) and Good Health and Well-being (Goal 3). Yet, despite a rapidly economy and the largest anti-malnutrition programme, India ranked 103rd among 119 countries on the Global Hunger Index in 2018.

Bihar is India's third highest populated state with nearly 89% of its population living in rural areas. It remains one of the critical states for intervention on food and nutrition security. At Caritas India, hunger and nutrition is seen and understood from the viewpoints of its impact on children and women. It is through community centred, child rights based and empowerment approaches that Caritas India strives to rid society of the pangs of hunger and malnutrition. Likewise, Caritas India has been supporting nutritional interventions in other parts of the country with Tribal communities. In Bihar, Caritas India has been implementing programmes integrating education on healthcare and nutrition among the Mahadalit communities since 2013.

The civil society has remained in the forefront raising concerns and demands for just implementation of existing public measures for livelihood and food security for poorest communities of Bihar. The lack of information on nutritional status of SC sub-castes for a targeted response encouraged Caritas India to conduct a baseline survey to understand the scenario for Musahar (Mahadalit) community. Although, the issue of good health and nutrition is critically contingent on food and agriculture sovereignty, for the SC/Mahadalit communities in Bihar, functioning of existing programmes have a vital role to play in their development given persisting landlessness among them.

I am grateful to the communities for participating in the study. We are also thankful to UNICEF-Bihar for providing technical inputs to the survey design and tools. Sincere appreciations for the support of the Patna University and students of social work for joining the survey. Lastly, I thank our partners, Muzaffarpur Diocesan Social Service Society and Purnea Social and Education Society and Prayas Gramin Vikas Samiti for their leadership and programme implementation.

I am happy to share this baseline survey report with you, hoping that it will encourage strategic interventions and multi-stakeholder convergence to wipe off hunger and malnutrition from Mahadalit and other marginalised communities in Bihar, as envisioned under the state's Poshan Abhiyan. Caritas and her partners are committed to this mission to make a difference in the life of the communities.



Fr. Paul Moonjely

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Baseline Fact Sheet

Key Indicators	Araria (in %)	Madhepura (in %)	Saharsa (in %)
1. Access to Healthcare Services			
1.1. Institutional Delivery	55.0	36.0	61.0
1.2. >=4 ANC	15.2	6.9	3.0
1.3. IFA during Pregnancy	56.8	63.5	71.2
1.4. Calcium during pregnancy	7.4	15.8	36.4
1.5. Knowledge about minimum number of ANC (4 ANC)	60.4	88.3	85.4
1.6. Knowledge on effects of Iron deficiency during pregnancy	76.7	36.3	40.7
1.7. Knowledge on Iron rich foods	68.7	37.8	79.5
1.8. Knowledge on number of TT	34.5	5.5	12.4
1.9. Knowledge on Iodized Salts	18.2	3.6	5.4
2. IYCF			
2.1. EIBF (within 1 hr.)	49.4	54.7	60.6
2.2. EBF	35.0	22.1	63.8
2.3. Weaning	61.9	30.0	26.7
2.4. Knowledge about Colostrum feeding	84.5	73.5	82.6
2.5. Deworming	45.4	33.6	41.7
2.6. Knowledge about Albendazole	41.9	5.9	7.0
2.7. Availability of Immunization Card (Observed)	49.8	57.3	55.6
2.8. Full Immunization	15.1	11.8	35.5
3. Child Anthropometry (0-5 years)			
3.1. Weight for Length (<-3SD)	11.8	15.1	14.6
3.2. Length/Height for Age (<-3SD)	11.8	4.5	8.3
3.3. Weight for Age	5.9	7.4	20.9
3.4. MUAC for Age	20.0	3.4	20.0
3.5. BMI for Age	17.1	12	14.3
3.6. Height for Age (Male)	16.7	11.1	4.2

3.7.	Height for Age (Female)	6.3	0	16.7
3.8.	Weight for Age (Male)	10.5	12.1	25.0
3.9.	Weight for Age (Female)	0	2.9	13.3
3.10.	BMI for Age (Male)	20	17.5	15.4
3.11.	BMI for Age (Female)	13.3	7	12.5
3.12.	MUAC for Age (Male)	25	0	22.2
3.13.	MUAC for Age (Female)	12.5	5	16.7
4. Water and Sanitation				
4.1.	Unsafe Drinking Water	7.8	43.5	30.7
4.2.	No Toilet Facility	89.1	90.1	72.8
4.3.	Use of Toilet Facility (in houses with toilet)	66.7	42.9	15.0
Key Indicators		Araria (in %)	Madhepura (in %)	Saharsa (in %)
5. Household level Dietary Diversity and Women Dietary Diversity				
5.1.	Kitchen Garden	27.2	7.91	0.78
5.2.	Livestock	56.4	50.5	31.9
6. Access to Social Benefit Schemes and Entitlements				
6.1.	TPDS Beneficiary	61.2	63.2	56.8
6.2.	Migrant HHs	89.8	83.1	53.1
6.3.	Mean duration of migration (in months)	6	6	5
6.4.	Mean income per day (in Rs.)	270.00	343.00	348.00
6.5.	Availability of MGNREGS Job Card	89.2	56.7	72.3
6.6.	JSY Benefits	44.9	26.3	53.5
6.7.	Widow Pension	5.9	5.5	7.0
6.8.	Old Age Pension	6.3	6.7	10.5
6.9.	AWC Enrollment	28.5	33.3	29.8

Executive Summary

Bihar is one of the nine states under the Empower Action Group identified by poor demographic transition, and highest infant mortality rates in the country. The NFHS-4 report for Bihar showed an overall improvement in health and nutrition indicators from last NFHS findings. Contrary to the overall scenario, district and community wise indicators for SCs and STs remained far from encouraging. The Rishidev, Manjhi, Saday communities, identified officially as Musahars (hereafter Study population), are one of the 21 Mahadalit communities in Bihar, that continue to live on with minimal assistance from public programmes, as revealed by this Baseline Survey in select blocks of Araria, Saharsa and Madhepura districts.

The survey revealed that about 78% of the household heads were found to be illiterate. 81% of the respondents lived in kucha houses. The average age at marriage for women was found to be 17.8 years; with prevalence of girl child marriages at the age of 10 years. This naturally resulted in early pregnancies at the age of 11 years, 13 years and 14 years; while women reported their first pregnancies at an average age of 19.7 years. Moreover, only 9% women secured required number of ante natal care (ANC) check-ups. Iron Folic Acid (IFA) and calcium tablet received during lactation period were found to be much lower than the recommended dosage, and lesser than what was received during pregnancy.

Institutional delivery is an important intervention to improve maternal mortality and infant mortality rates. However, about 35% of deliveries were attended by Dai /midwives in the study population. Therefore, the knowledge about ANC check-ups and essential vaccines like tetanus, was found to be missing among the women. This has a direct correlation with the low percentage (41.6%) of women in the study population that availed financial assistance under the Janani Suraksha Yojana.

The WaSH indicators were found to be very low in the study population. About 37% households consumed water directly from the handpump, without treating or storing it appropriately, and 84% didn't have a toilet facility at home. Among these households, about 51% opted for open defecation. Only 11% women shared the right practices on treating child faeces. This explained the cause for 46.4% under-5 children suffering diarrhoea. The study found that 61% women reduced breastfeeding the child during diarrhoea and 54% reduced the quantity of fluid to the child during diarrhoea.

A high prevalence of moderate and severe child under-nutrition is revealed by the survey. prevalence of severe stunting among children aged 0-5 years i.e. between -3SD was 28.3%, 20.2% and 26.7% for Araria, Madhepura and Saharsa districts, respectively. Community level child growth monitoring was found to be missing in many anganwadi centres for lack of basic equipment. Most common illnesses in the study population were found to be fever (57%) and anaemia/ weakness (18.6%), and to treat the illness, about 60% households preferred private health facility over a public facility.

Overall, 58.7% women were found to be unaware about the benefits of feeding the infant their first milk (colostrum) after child birth. 50.9% of breastfed children 6-8 months of age were found to qualify minimum meals frequency, while for non-breast-fed children it was found to be as low as 1.8%. A constant drop of vaccine coverage with age progress across the district was found to be a cause of concern. 58% reported worrisome levels of food scarcity across the at any point of time within a month.

The study population is predominantly landless, for whom the effective implementation of social security schemes can reverse the trends of hunger and malnutrition. However, the survey showed that only 30.6% children aged 0-5 years were enrolled in Anganwadi centres under the ICDS scheme. Only 29.5% households could access work under the MGNREGA, which could explain the cause for 96% of the study population migrating out for work. Overall, only 6.1% households were found to be the beneficiaries of widow pension scheme, and 7.8% availed old age pension. Lack of proper documentation, delays in disbursements of financial assistance, and AADHAAR linking with bank account were reported among the barriers to realisation of the social security schemes.

The study is an effort in the direction to usher in needs based programmes and policy advocacy for the improvement of nutritional status of the deprived Mahadalit community in Bihar by identifying the areas of intervention. The findings are being presented to the concerned actors working in the field of food and nutrition security to inform policy, programmes and budgets to make food and nutrition security for Mahadalit communities a reality in Bihar.

1. Introduction

The Musahar community, derided as rat eaters, is one of the 21 Mahadalit communities within Scheduled Castes (also known as Dalits) in the state of Bihar. The community occupies the lowest rung of over 900 Dalit sub-castes in India. Musahars account for 16.45% of the 16% Dalit population in Bihar (Bihar Dalit Vikas Mission). A very high percentage (96.3%) of them are landless and most (92.5%) work as farm labourers.

Historically, and till date, the community has been involved in weeding and harvesting work in the fields, once the forest dwellers. However, rapid mechanization of these activities has drastically affected their livelihood, and basic food security from the left overs in the field. Forced by circumstances, they migrated to other states and even within the state, working for a pittance as uneducated and unskilled labourers. The women of the community continue to face challenge finding work even as domestic help in the state's capital according to media reports. To add to their woes, the legal ban on the sale and consumption of country liquor in the state in 2016 gave a major setback to their only alternative source of income, in the absence of other livelihood options. Chronic poverty, lamentable literacy rate, early marriages and inadequate dietary intake have adversely affected the health of the community, of women and children in special ways. Chronic hunger has affected their overall growth and development.

Though, Bihar has progressed considerably in improving health indicators and services in the last one decade, the State needs to go several miles in eradicating malnutrition, IMR and IMR, prevalence of water and sanitation borne diseases etc. With 46% child population in the age group 0-17 years, over 40 % of children under 5 years of age are underweight; 48.3 % are stunted, and about 20.8% are wasted due to chronic malnutrition. 63.5% children being anaemic, and only 25.2% households use improved sanitation facility and only 17.8% households use clean fuel. The figures are worrisome for Scheduled caste (SC) and Scheduled Tribe (ST) communities of the state (NFHS-4).

Maternal and child under-nutrition is a serious problem among the study population given the livelihood insecurity and landlessness. All these explain the causes for prevalence of Severely Acute Malnutrition (SAM), and Moderately Acute Malnutrition (MAM) among under 5 children of SCs, and prevalence of anaemia, particularly among women and girl children of the community.

2. Rationale

The NFHS-4 data reveal higher rate of infant mortality for SCs (60 per 1,000 live births), and undernutrition particularly common in the younger age groups, in rural areas, and among the SC women. Early childhood mortality rates are higher for SC, with 60.2% infant child mortality, 13.6% Child mortality and 73% for under-five mortality. This signals to a grim picture for the study population in Bihar. In the absence of data on social development, health and nutrition, and sanitation related performance indicators for the study population in public domain, NFHS-4 data for the study districts of Araria, Madhepura and Saharsa on Scheduled Caste were considered for analysis.

2.1. Overall objectives

- To present a comprehensive picture of the current nutritional status and habits of the study population.
- To understand the income levels that have a direct bearing on the status of nutrition.
- To learn about the basic functionality of public systems of healthcare and nutrition in the study geographies
- To assess the awareness about and accessibility to social security entitlements related to food security, health, and nutrition among the study population.

2.2. Specific objectives

- To estimate the prevalence of underweight, wasting and stunting among children of 6-59 months' age group;
- To understand the Infant and Young Child Feeding practices in the study population;
- To determine household level food and nutrition security status of the study population;
- To assess the coverage and accessibility to social security entitlements related to food security, health, and nutrition among the study population.

2.3. Important Indicators in the Study

- Household level dietary diversity (HDD) and Women dietary diversity (WDDs)
- Child Anthropometry
 - Underweight and Stunting
- Mother and Child health
 - Access to antenatal and safe delivery services
 - Health seeking behaviour and IYCN practices during diarrhoea
 - Access to child immunization services
- Infant and Young Child Nutrition
 - Early initiation of breast feeding
 - Exclusive breast feeding
 - Introduction to Solid/semi solid food
 - Minimum dietary diversity, Minimum meal frequency Minimum acceptable diet
- Nutrition sensitive indicators, like WaSH (Water, Sanitation & Hygiene)
- Access to social benefits viz., Targeted Public Distribution System (TDPS), Old Age Pension, Widow Pension, Janani Suraksha Yojana (JSY), Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), and Integrated Child Development Services (ICDS)

3. Methodology

3.1. Study Design

A cross sectional survey was designed with pre-structured questionnaire to estimate the prevalence of health and nutrition status of the study population.

3.2. Study Population

The baseline survey covered the Musahar communities across 45 villages of 3 select blocks of Araria, Madhepura and Saharsa districts in Bihar. Households with children aged 0-5 years were selected as the study unit and detailed information on household, health and nutrition was collected.

3.3. Sampling and Sample Size

All 45 villages of 3 districts where Caritas India's SUPOSHAN programme is being implemented were taken as a sampling frame. Sample size was calculated using openepi, based on which the estimated total number of 0-5 years old children was arrived at as 2500. According to NFHS-4 study, in Bihar, prevalence of stunting is 48%, underweight 44% and wasting 21%. As per a MSF-CMAM study, which was the only study found geographically closer to the study population, prevalence of wasting among 0-5 years old children was 27%. Estimated prevalence of underweight was taken as 50% to arrive at the highest sample size.

Sample size was calculated through cluster sampling with margin of error of +/-5%, Confidence Level 95% and design effect of 2. Total sample size was calculated to be 735 and since there were total 45 clusters, the cluster size was arrived at 16.3=17; hence, the final sample size was calculated to be 765.

Sample Size for Frequency in a Population

Population size (0-5 Yrs Children) (for finite population correction factor or fpc)(N):	2500
Hypothesized % frequency of outcome factor in the population (p):	50% +/-5
Confidence limits as % of 100(absolute +/- %)(d):	5%
Design effect (for cluster surveys-DEFF):	2

Sample Size(n) for Various Confidence Levels

Confidence Level (%)	Sample Size
95%	667

Equation

Sample size $n = [DEFF * Np(1-p)] / [(d^2 / Z^2_{1-\alpha/2} * (N-1) + p(1-p)]$

Results from OpenEpi, Version 3, open source calculator--SSPropor

¹ MSF's Community Management of Acute Malnutrition (CMAM) programme

3.4. Data collection tools and processes

Pre-structured questionnaire was developed and translated into Hindi. The questionnaire was finalised after pre-testing in a similar field setting. The survey team comprised students of sociology/social work who were trained on the tools and research methodology prior to data collection.

Data was collected using a 24-hour recall method for household level dietary intake. Information on anthropometric measurements on weight, height, MUAC of index child and mother was collected. For children and adults, digital weighing machine was used, and height was measured in the standing position. For infants, infant weighing machine was used and height/length was measured using infant meters.

In each cluster, first household was chosen randomly by rolling a pen in the middle of the hamlet's centre point and subsequent households were selected based on availability of 0-5-year-old children till the cluster size was completed.

Informed consent from women was secured prior to enrolling them in the survey. Data was collected on hard copy, and then entered in Epicollect5 and analysed using Epi-info version.

3.5. Limitations of the Study

The baseline study focuses exclusively on the nutritional status of the Musahar community and findings cannot be extrapolated to the general population, or even the entire SC population, and other Mahadalit castes in the state. Also, the seasonality of dietary information and cost could not be assessed due to difficulties in 24-Hr recalling by the respondents.

3.6. Ethical Consideration

Prior informed consent was taken from the respondents after explaining the purpose of the survey in local language. Participation in this survey was completely voluntary, which meant that they could choose to respond or not respond to any enquiry. The confidentiality clause was also explained to the respondents. The children who were identified with severe under nutrition were connected to the with ICDS workers for referral to a healthcare facility after counselling the parents of the children.

4. Survey Results

4.1. Socio-demographic profile of the Study Population

The study was done in Musahar community, which is mostly a homogenous population with respect to socio-cultural practices.

Head of Household

Total 770 households were studied in three districts, and 5 additional samples were added to the sample of 765 to counter non-responses. 96% of the household heads were male in study population.

Occupation of Household Heads

The occupation of the household heads was predominantly non-farm labour (41%) and agricultural labour (33%). Only 1% of population had some petty business and were in services

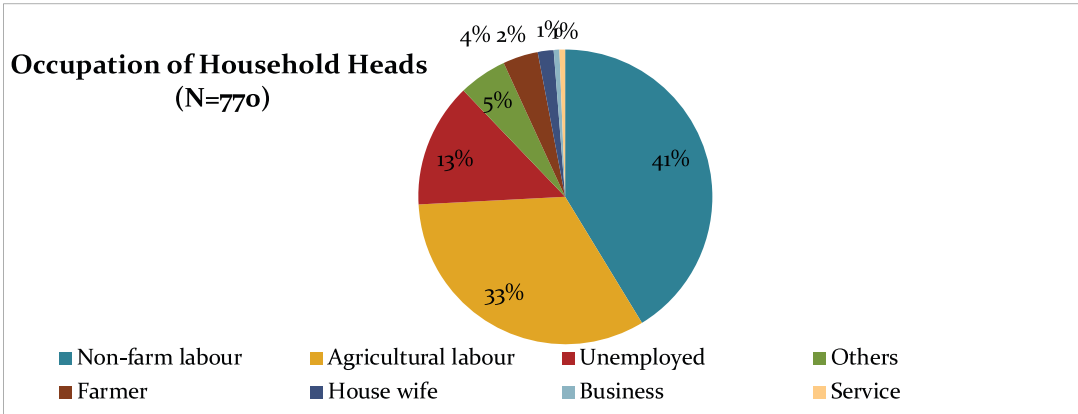


Figure 1: Occupation of household heads, Suposhan baseline survey, Bihar, 2018

Education of Head of Household

About 78% of the household heads were found to be illiterate and 17% were literate up to the primary level. Only 1% of household heads were educated up to higher secondary and graduation levels. (Annexure-A)

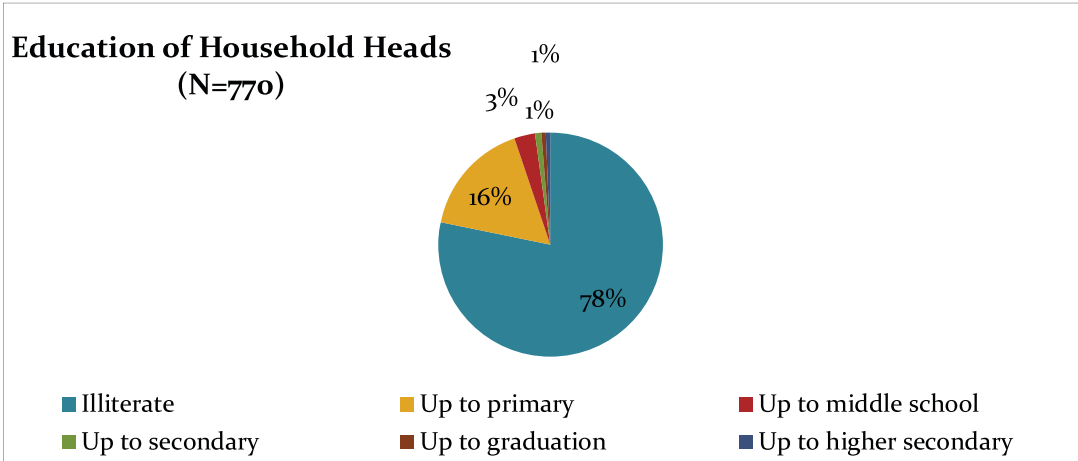


Figure 2: Education level of head of the household, Suposhan baseline survey, Bihar, 2018

Occupation of women

The occupation wise classification of women showed that most (37%) of them were house wives. However, a significant percentage of women (23%) or roughly one in every four women worked as agriculture labourer.

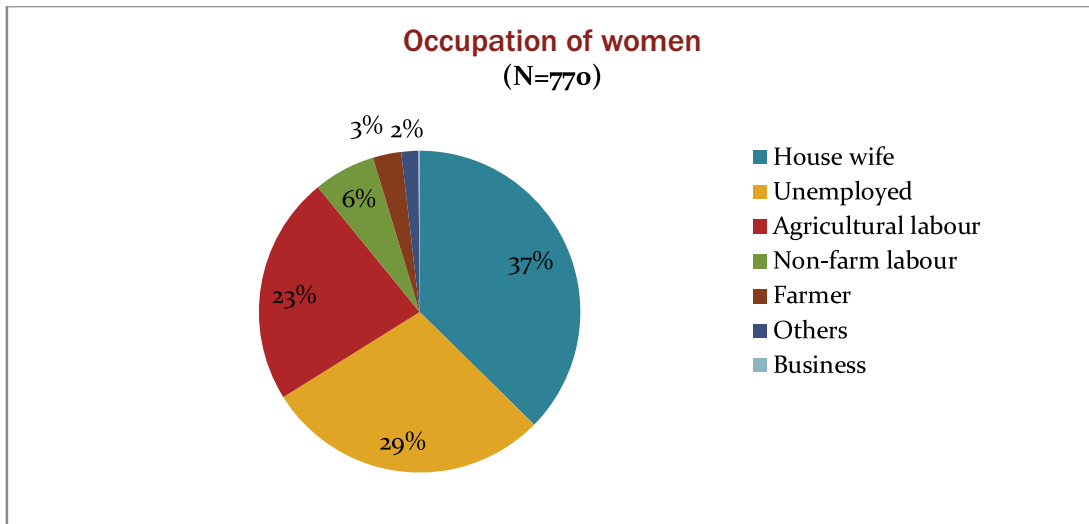


Figure 3: Occupation of mothers, Suposhan Baseline Survey, Bihar, 2018

Education of women

Education has a direct relation with health and nutritional outcomes of a family. The study found that most of the women were illiterate (87%), while very few (11%) had studied up to the primary level. The study population lacked members with education up to the higher secondary level or above. This explains an overall backwardness of the community.

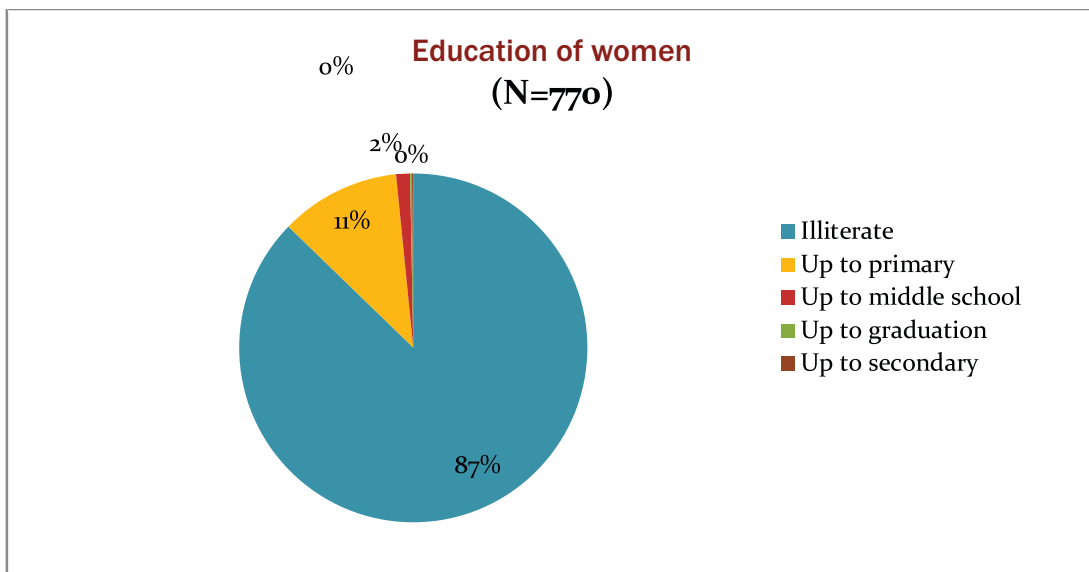


Figure 4: Education of mother, Suposhan Baseline Survey, Bihar, 2018

Socio-economic status of the households

Type of house

Type of housing is an important indicator of the standard of living of people. The study revealed a whopping 81% of houses to be kuchha (hutments), while 14% were semi pucca (semi-concrete) houses. Only 4% families live in pucca houses.

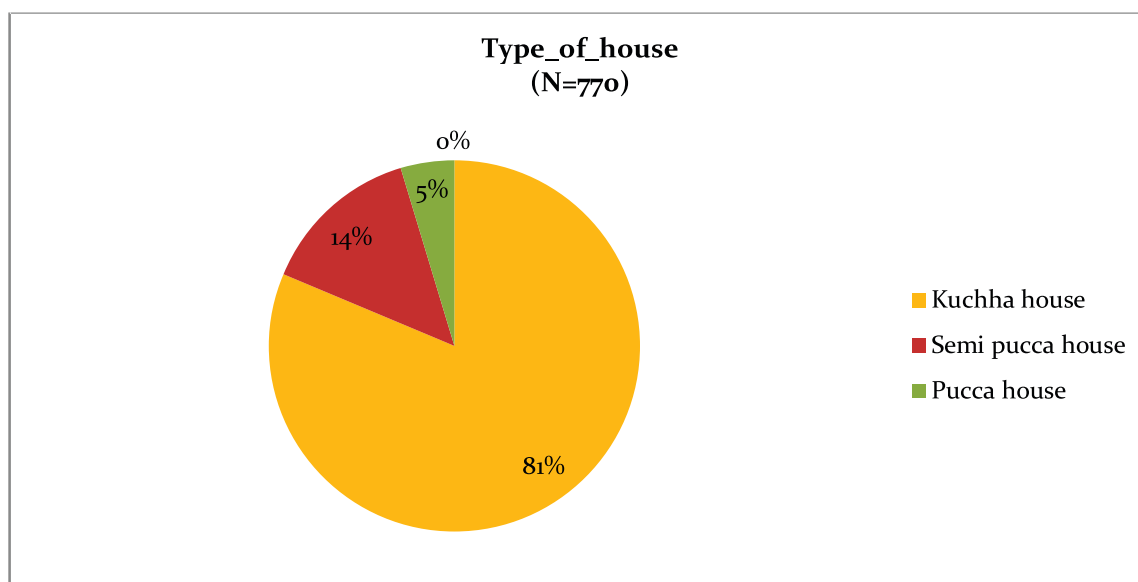


Figure 5: Type of house, Suposhan Baseline Survey, Bihar, 2018

Main source of light

Most of the households were found to have electricity supply as main source of light, while a few used kerosene (11%) and only 1% used solar energy.

Household Assets

The data was captured for possession of television, radio, mobile phones, car, two wheelers, bicycle, refrigerators, pressure cookers, and computers etc. by the study population. Among the household assets, mobile phone (feature) is the most common asset found in 78% of the households. About 14% of households denied having any assets from the list.

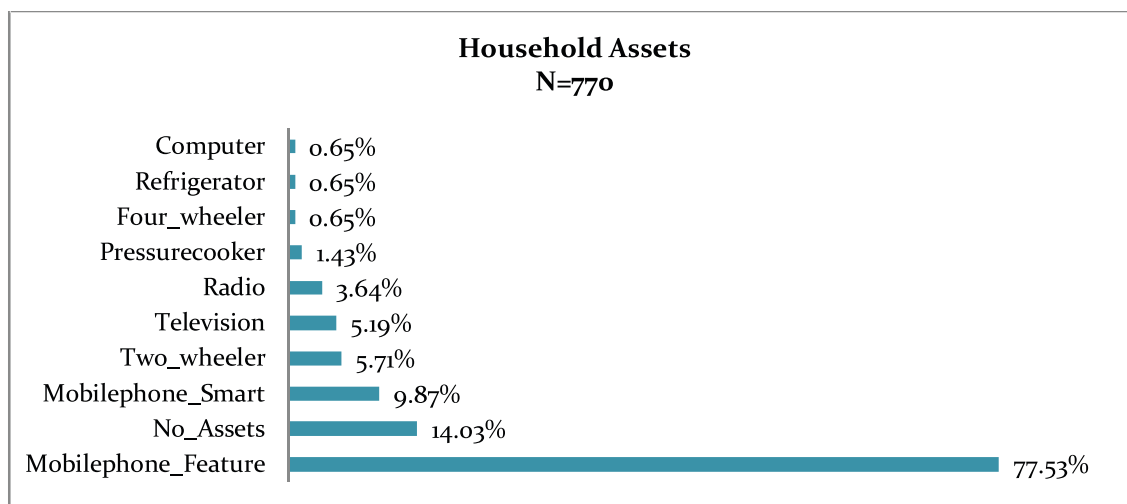


Figure 6: Household Assets, Suposhan Baseline Survey, Bihar 2018

Type of family

Most of the study population was found to be living as a nuclear family (63%) while few were living in joint families (37%).

District-wise Socio-Economic and Demographic Profile

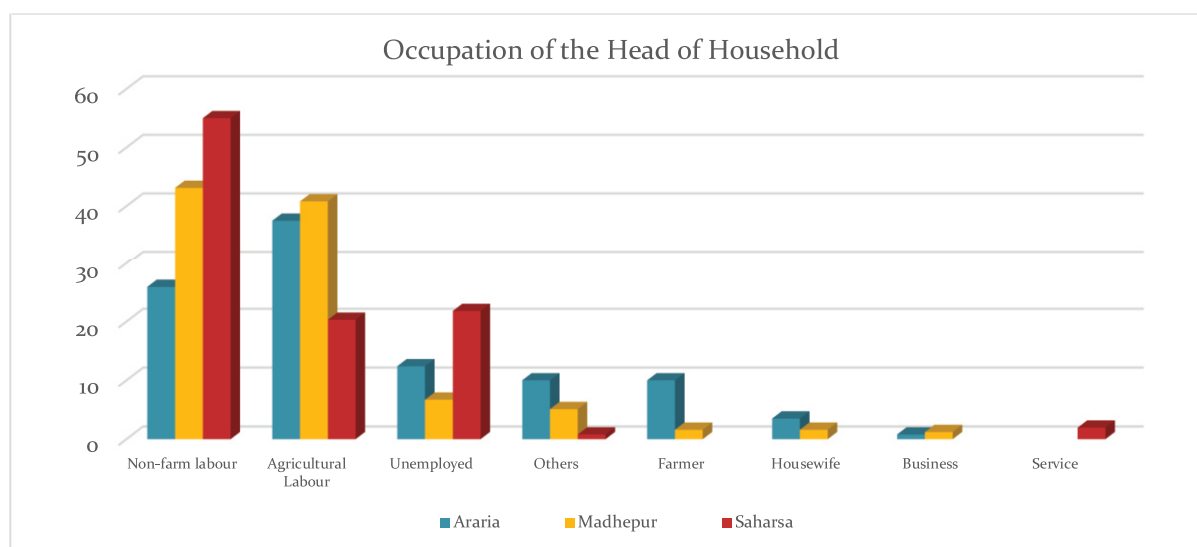


Figure 7. District-wise percentage distribution of household heads based on occupation, Suposhan Survey, Bihar 2018

A district-wise, comparative analysis of socio-economic and demographic indicators was also undertaken. The analysis revealed that in Madhepura and Saharsa more than 40% heads of households were working as non-farm labourers as compared to only around 25% in Araria. The percentage of household heads undertaking agricultural labour was significantly higher in Araria and Madhepur, than Saharsa. The analysis revealed that the percentage of unemployed household heads was comparatively higher in Saharsa. As far as farming was concerned, the percentage of farmers heading households was highest among all the study districts.

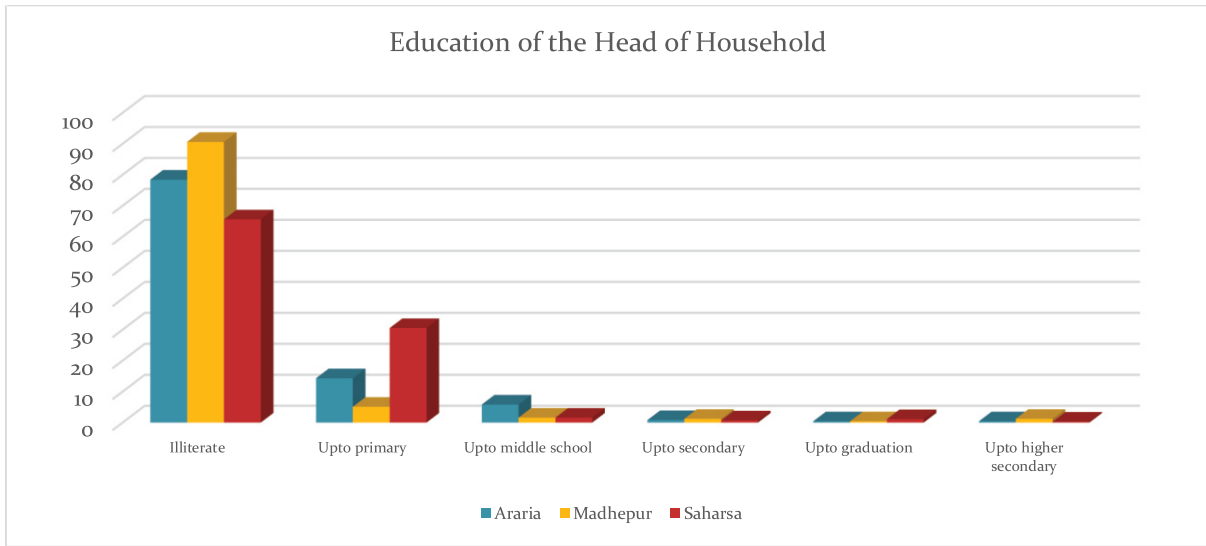


Figure 8. District-wise percentage distribution of head of HHs as per level of education, Suposhan Survey, Bihar 2018

Among the study districts, Madhepura reported a highest percentage of illiterate household heads, followed by Araria and Saharsa. Comparatively, Saharsa showed higher percentage of household heads with at least primary level of education, followed by Araria and Madhepura. Therefore, as far as education was concerned, the status of Madhepura was significantly critical.

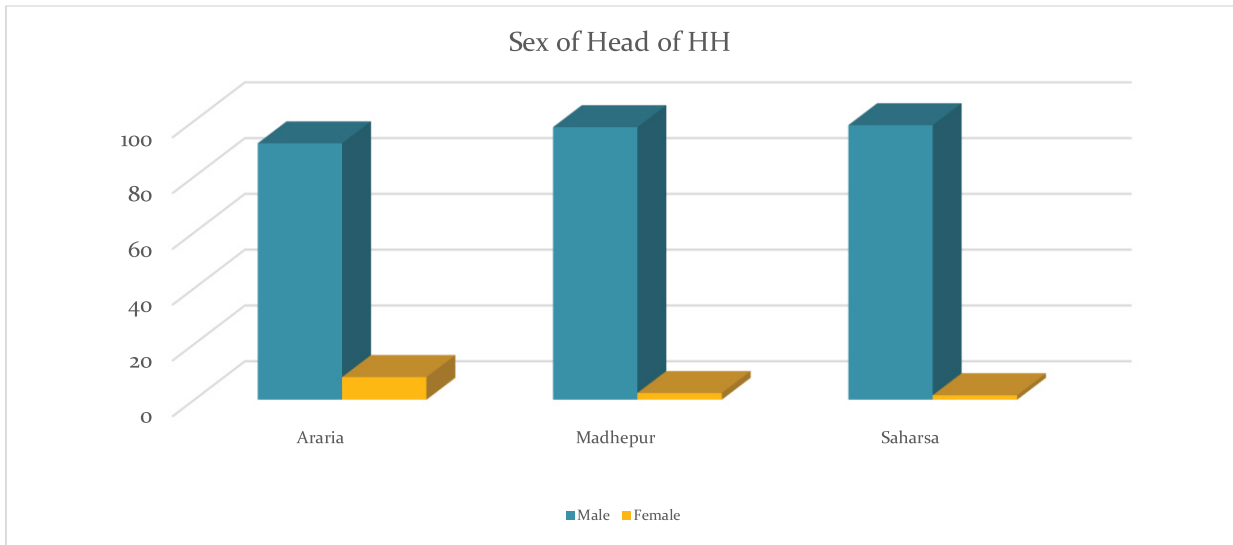


Figure 9. District-wise percentage distribution of heads of HHs as per Sex, Suposhan Survey, Bihar 2018

As per the findings of the study, the percentage of women headed households was comparatively higher in Araria. In Araria almost 8% households were headed by women compared to Madhepura and Saharsa, where less than 3% households were headed by women.

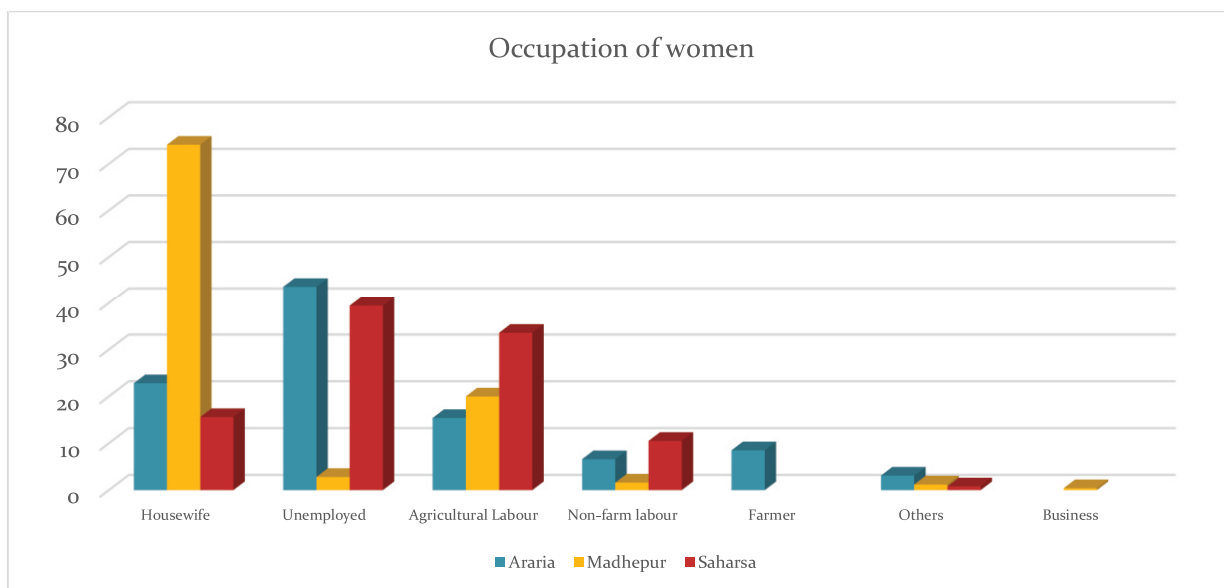


Figure 10. District-wise percentage distribution of HHs as per occupation of women, Suposhan Survey, Bihar 2018

As per the findings of the study, around 30% women in Saharsa were involved in agricultural labour followed by Madhepura and Araria districts. The percentage of women working as non-farm labourers was also comparatively higher in Saharsa. This indicated that a sizeable percentage of women were engaged in gainful employment in Saharsa, while most male household heads were found unemployed in the district. In Madhepura, more than 70% women were house-wives, which is higher than any other study districts. Around 8% women in Araria were found to be working as women farmers. This is the only study district which reported presence of women farmers.

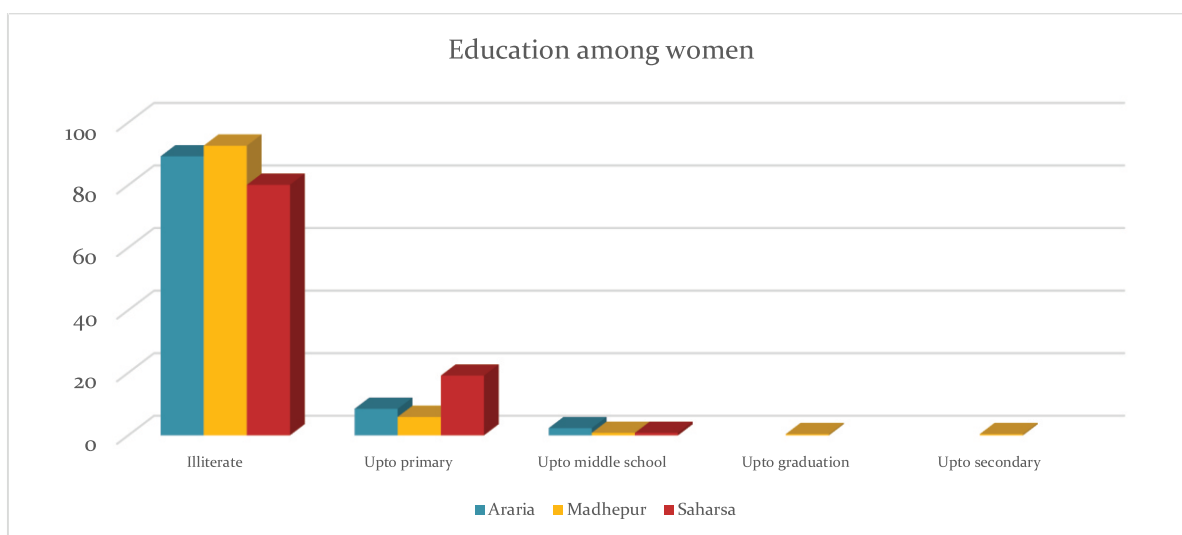


Figure 11. District-wise percentage distribution of HHs as per education among women, Suposhan Survey, Bihar 2018

While most of the women were found to be illiterate across the three study districts, a silver lining can be seen in Saharsa where almost 19% women reported to have received up to primary level of education. In other two districts, less than 10% women reported to have received education till the primary level.

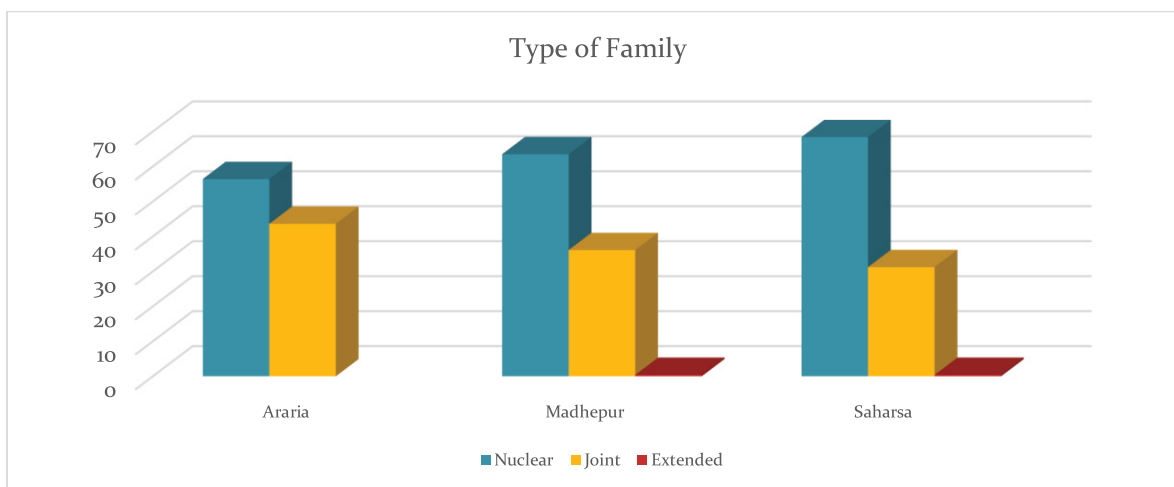


Figure 12. District-wise percentage distribution of HHs as per Type of Family, Suposhan Survey, Bihar 2018

A comparatively higher percentage (44%) of households in Araria lived in a joint family set up followed by Madhepura and Saharsa. However, presence of this support system in the form of joint family did not seem to translate into economic independence for women in Araria. On the contrary, Saharsa with higher percentage of nuclear families has comparatively higher percentage of women who were gainfully employed.

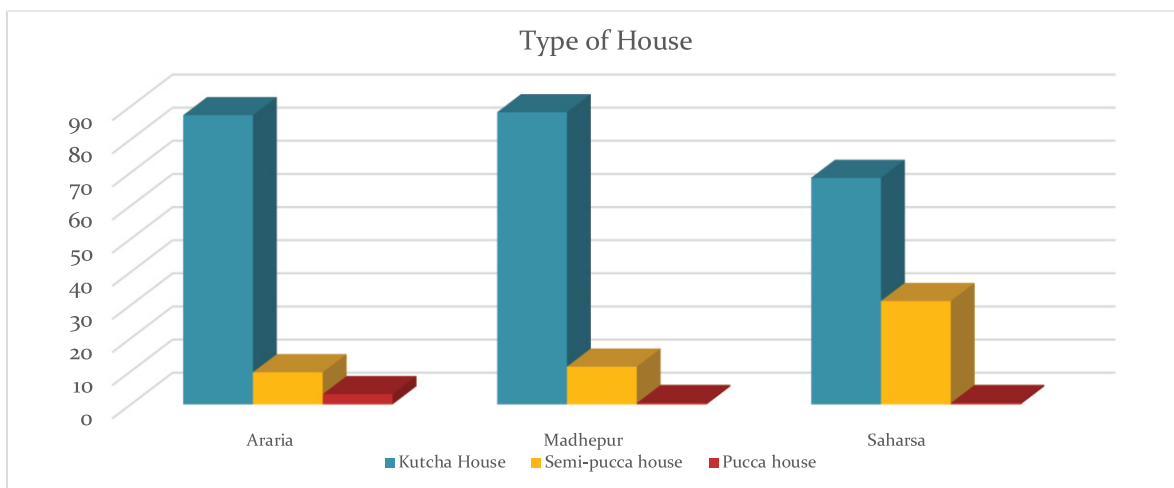


Figure 13. District-wise percentage distribution of HHs as per Type of House, Suposhan Survey, Bihar 2018

Comparatively, a higher percentage of families lived in kutcha houses in Madhepura and Araria than Saharsa. Interestingly, around 31% families in Saharsa lived in semi-pucca houses, which is almost three times more than percentage of families living in semi-pucca houses in Araria and Madhepura. This can be seen in relation to the higher percentage of households where women were involved in economic activity in Saharsa.

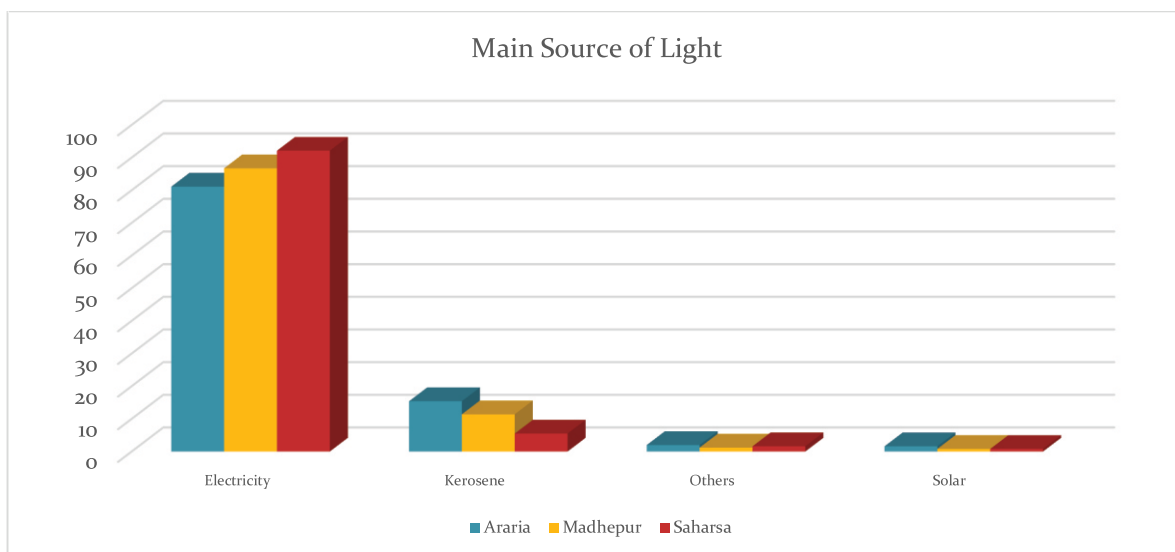


Figure 14. District-wise percentage distribution of HHs as per Type of House, Suposhan Survey, Bihar 2018

The main source of light in most of the households across the three study districts was electricity. However, the percentage of households using electricity as the main source of light is significantly higher in Saharsa (92.1%), as compared to Madhepura (86.7%) and Araria (81.1%). Further, kerosene is still used in around 15% households in Araria and around 9% households in Madhepura, which indicates potential danger to their health and well-being due to burning of fossil fuels such as kerosene.

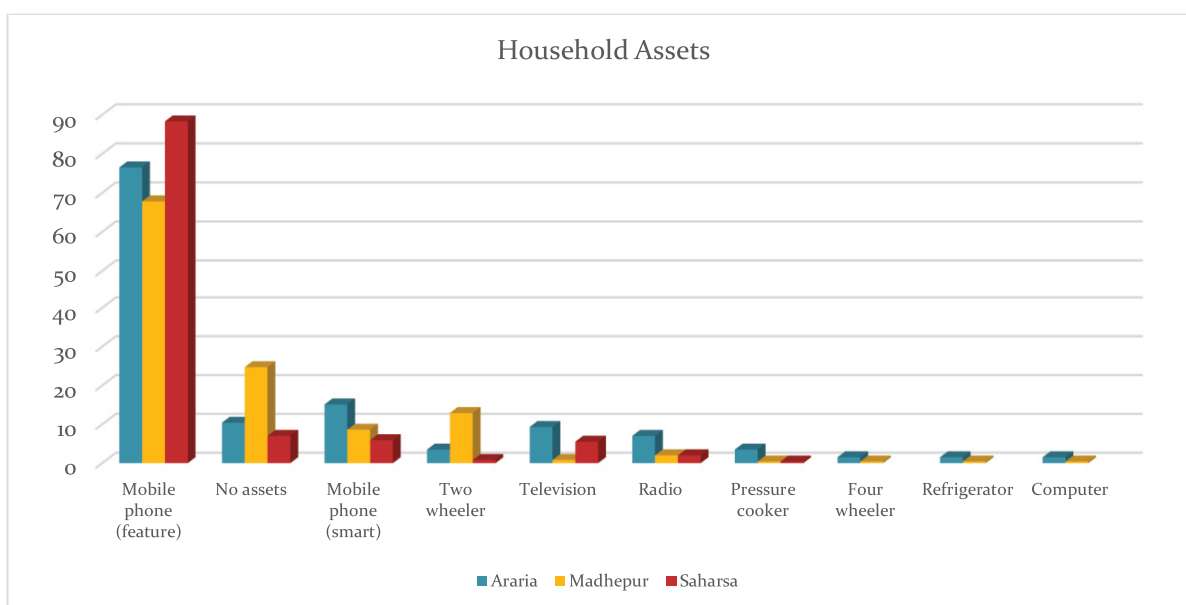


Figure 15. District-wise percentage distribution of HHs as per Household Assets, Suposhan Survey, Bihar 2018

As per the findings of the study, a significantly higher (25%) percentage of households in Madhepura reported that they did not own assets. This can be interpreted as one out of four households reported to be living without any asset. Ironically, Madhepura is also the district which boasts of comparatively the highest percentage of households (13%) in possession of a two-wheeler as a household asset.

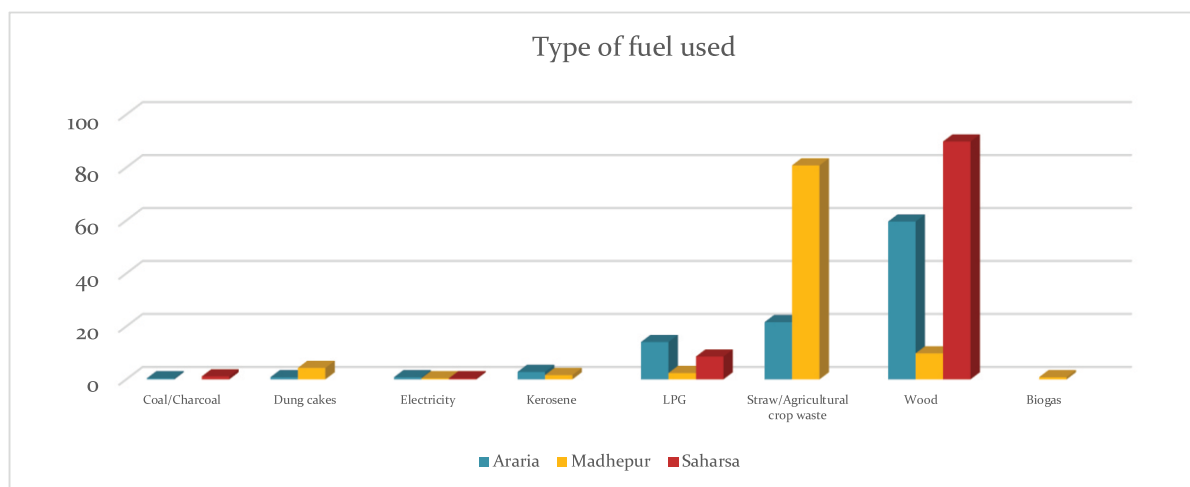


Figure 16. District-wise percentage distribution of HHs as per Household Assets, Suposhan Survey, Bihar 2018

An interesting finding from the analysis of data on the type of fuel used by study population is that a very high percentage (81%) of households in Madhepura used straw and agricultural crop waste as a source of fuel. This indicates serious health implications for mothers and infants or younger children, who spend extended time indoors. Another interesting finding is that a significantly higher percentage of households (90%) in Saharsa reported to be using wood as source of fuel, again with harmful effects to health. Despite comparatively higher level of education of women and better economic condition in Saharsa, the increased use of wood as source of fuel indicates lack of awareness regarding health or access to clean fuel alternatives such as LPG.

4.2. Maternal Health and Nutrition

Reproductive health status of women

To understand the reproductive health status of women, data was collected and analysed for age at marriage, age at first pregnancy, frequency of pregnancy, number of live births and any spontaneous or induced abortions underwent. The birth outcomes of pregnancy, like the history of number of still births, was analysed.

Age at marriage and first pregnancy

For women, average age at marriage was found to be 17.8 years; whereas the minimum age was 10 years, with maximum age as 40 years. Prevalence of child marriage was noticed in each district. The average age of women at first pregnancy was found to be 19.7 years. Early pregnancies at the age of 11 years, 13 years and 14 years were also revealed by the study, in the districts of Saharsa, Araria, and in Madhepura, respectively (Annexure B).

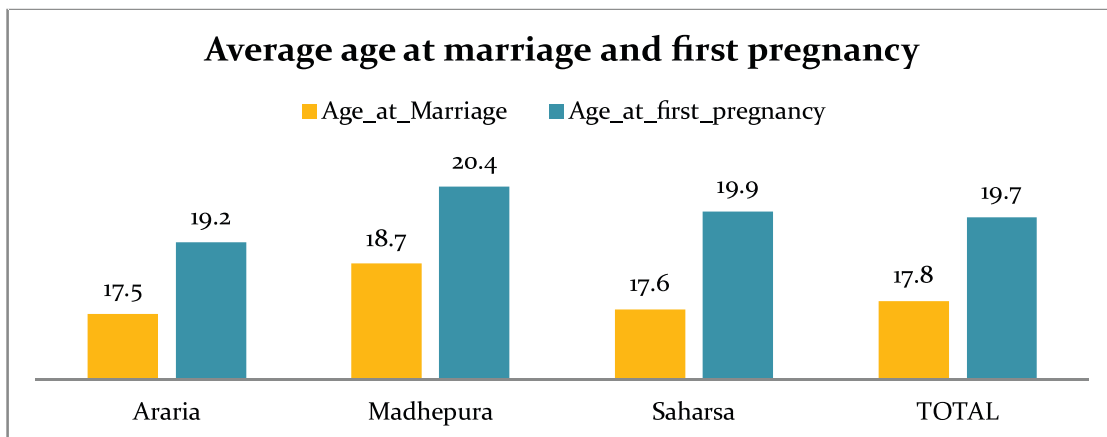


Figure 17: Average age at marriage and first pregnancy, Suposhan Baseline Survey, Bihar, 2018

Number of pregnancy, current pregnancy and live birth

Women in the study population had an average pregnancy of 3.6 times in lifetime, till the commencement of the baseline survey. During the survey, about 13% of the women were found to be pregnant, with 16% in Araria alone. Overall, the average number of live births was 3.2 times, which was 3.5 times in Araria, 3.2 times in Madhepura and 3 times in Saharsa.

Previous history of still birth and abortions

Overall, 10.5% women reported a previous history of still birth and 12.2% reported a history of abortion. Out of total abortions, 85% were spontaneous and 17% abortions were induced. Induced abortion was analysed to be highest in Araria (42%). This indicates to the poor health status of women resulting in spontaneous abortions, while also warrants an enquiry into reasons for induced abortions.

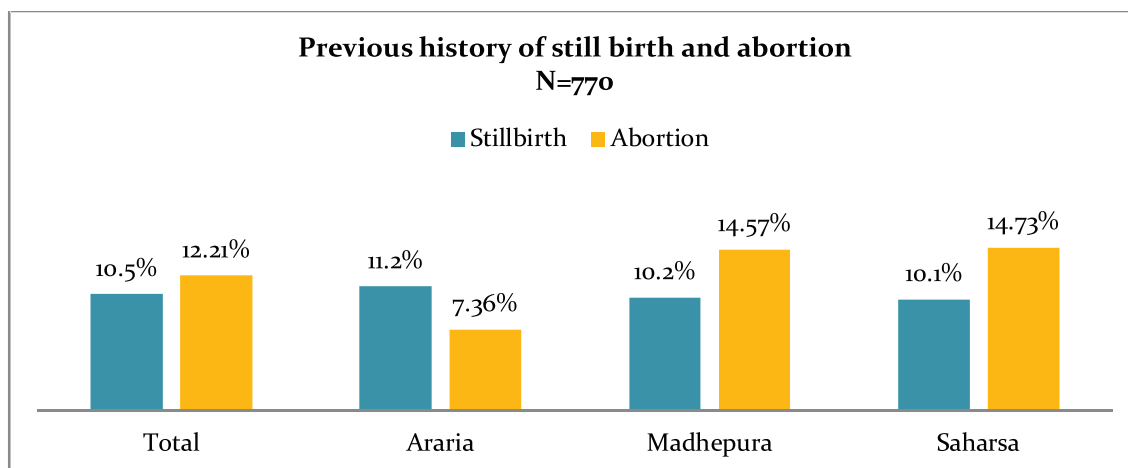


Figure 18. Previous history of still birth and abortion, Suposhan Baseline Survey, Bihar, 2018

Access to antenatal care and care during pregnancy

Early registration of pregnancy and access to antenatal care (ANC) influence pregnancy outcomes. The survey found ANC check-up during the first trimester to be 16%, second trimester 23% and during third trimester it was 12%. Further, almost one in two women (49%) failed to recollect the time of first ANC check-up.

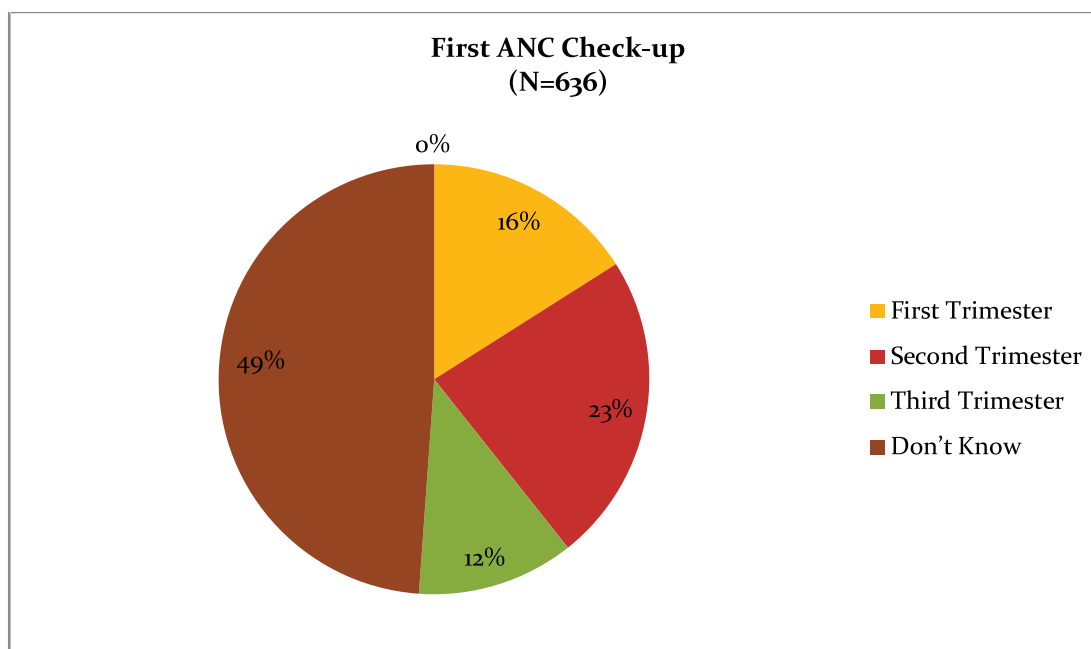


Figure 19. First ANC, Suposhan Baseline Survey, Bihar, 2018

Early registration for antenatal care is an important indicator for early detection of high risk pregnancy or delivering antenatal care services to pregnant women. Delay in first ANC indicates late registration/ low access to or utilization of antenatal care and services. About 75% women had received 1-3 ANC check-ups and only 9% women had more than or equal to 4 ANC check-ups in previous pregnancies.

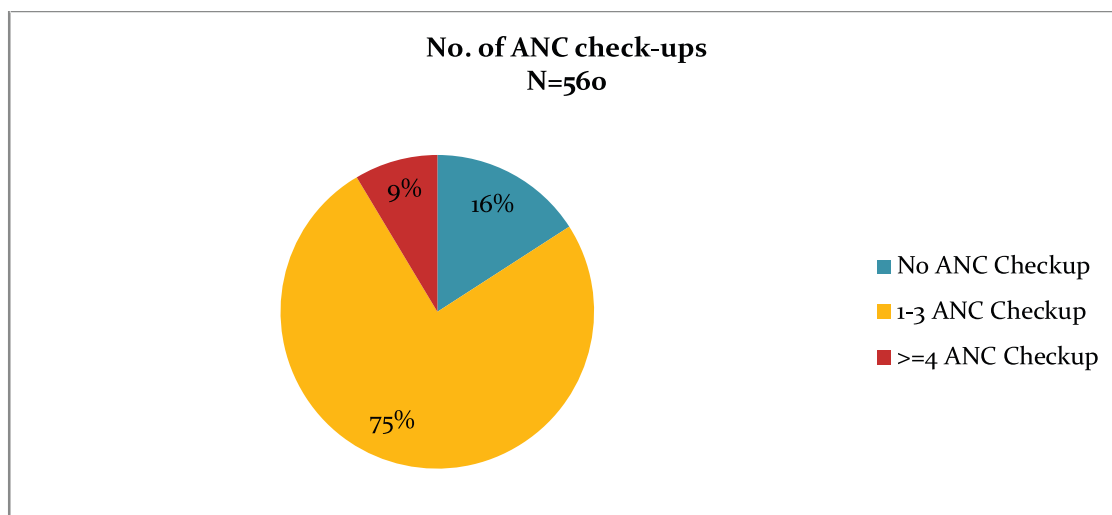


Figure 20. Number of ANC Check-up, Suposhan Baseline Survey, Bihar, 2018

IFA and calcium supplementation and de-worming tablet during pregnancy

About 64% women replied that they received Iron-Folic Acid (IFA) tablet during pregnancy. IFA helps in preventing anemia or low bloodlevels during pregnancy. In Araria, 56.8% women, 63.5% in Madhepura and 71.2% in Saharsa reported to have received IFA, calcium supplementation and de-worming tablets. Average number of IFA tablets received during pregnancy was much lower than the current recommendation of 180 tablets. In Araria, average number of IFA tablets received was 48.4%, in Madhepura 27.5% and in Saharsa 24.3%. Only 19.9% women had received calcium tablet during previous pregnancy. De-worming tablet was received by 25.8% women during their last pregnancy. Coverage of de-worming tablet in Araria was 38.4%, in Madhepura 19.3% and in Saharsa it was 19.8%.

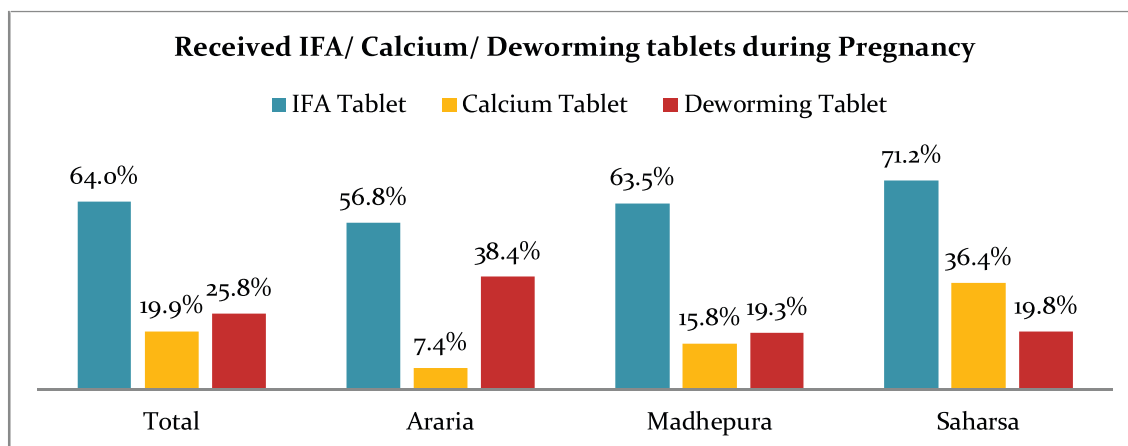


Figure 21. Received IFA/ Calcium/ De-worming tablet during pregnancy, Suposhan Baseline Survey, Bihar, 2018

IFA and calcium tablet received during lactation period was much lower than the recommended dosage, and lesser than what was received during pregnancy. Average number of IFA received during lactation in Araria was 15.2 tablets, in Madhepura it was 32.6 tablets and in Saharsa, 20.8 tablets. About 38% women reported bad taste and 20% nausea, as main reasons for low consumption of IFA tablets, while a significant proportion of respondents were found to be unsure.

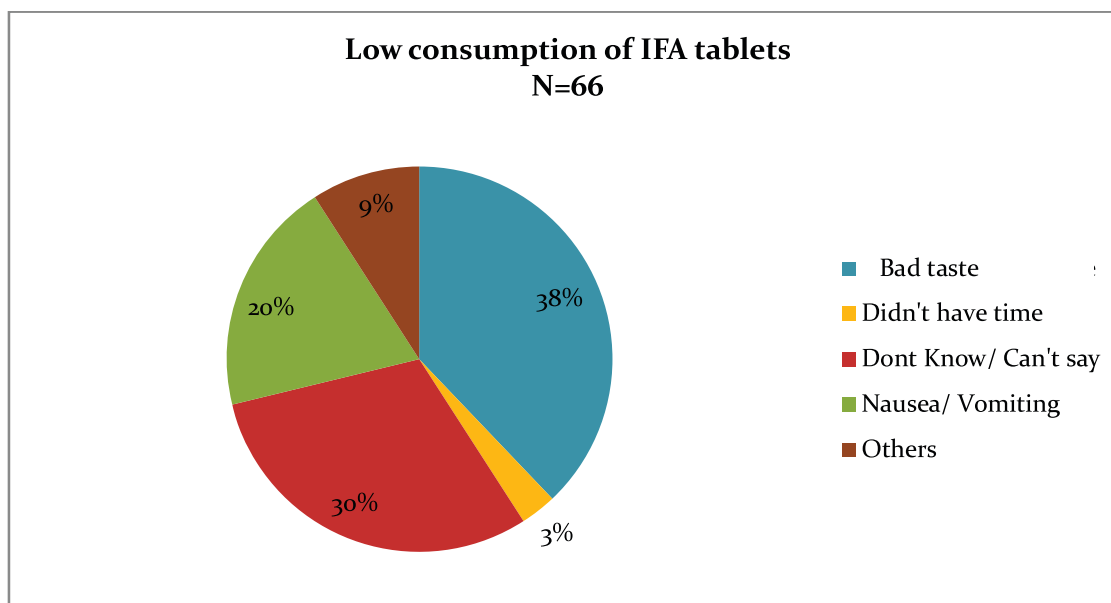


Figure 22. Reason for lesser consuming of IFA tablets during pregnancy, Suposhan Baseline Survey, Bihar, 2018

Access to institutional delivery and services

Access to safe delivery services and skilled birth attendant is essential for improving maternal health and child health. Institutional delivery is an important intervention to improve MMR and IMR since launch of National Rural Health Mission and introduction of Accredited Social Health Activist (ASHA). About 50.5% of women had delivered their last child in a public health facility. However, about 45% women preferred to deliver at home during their last pregnancy. In Araria, 55% women preferred institutional delivery whereas 36% in Madhepura and 61% in Saharsa preferred to give birth in a medical institution. About 62% women in Madhepura preferred delivery at home which calls for an urgent intervention.

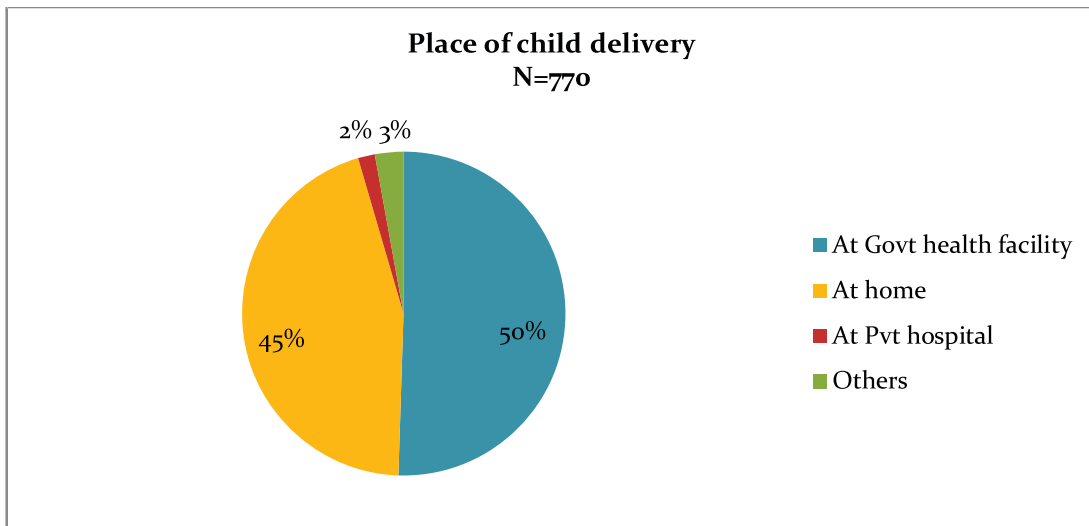


Figure 23. Place of child delivery during last pregnancy, Suposhan Baseline Survey, Bihar, 2018

Only 23% of child deliveries were attended by a doctor and 35.5% deliveries were attended by an Auxiliary Nurse Midwife (ANM)/Staff Nurse. Though deliveries by Dai or traditional midwives are no longer promoted by the Government, about 35% of deliveries were attended by them in the study population. In Madhepura, 54% of deliveries were attended by traditional midwives; this was 24% and 27 % respectively for Araria and Saharsa.

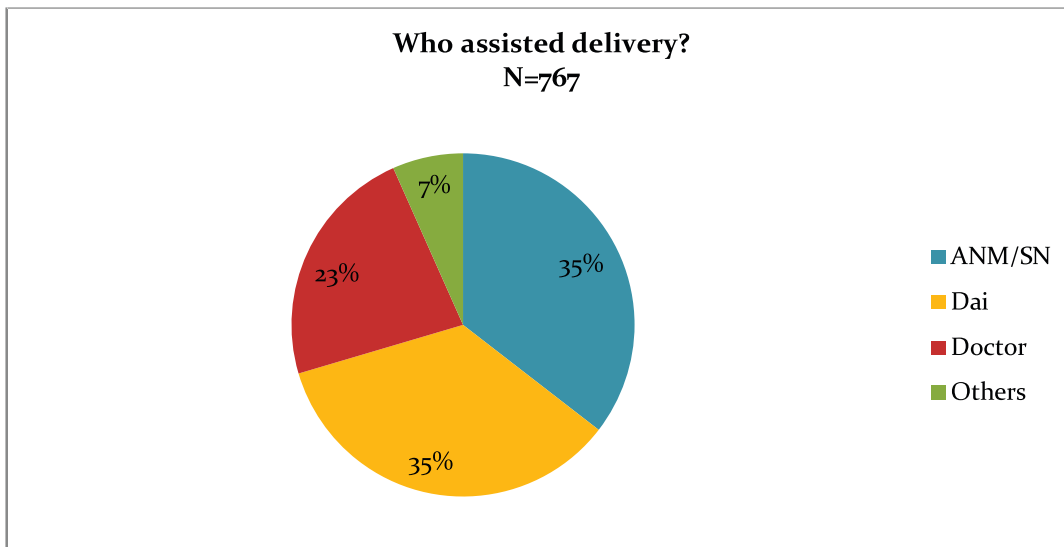


Figure 24. Assistance at birth, Suposhan Baseline Survey, Bihar, 2018

Knowledge of mother about health, nutrition and care during pregnancy

Knowledge on Tetanus vaccination during pregnancy

Only 17.5% women were found to be aware of the frequency of tetanus vaccination, which is twice, while a clear majority (66.5%) showed lack of awareness about the same.

Knowledge about minimum number ANC

A clear majority the women (78%) showed lack of awareness about the required number of ANC check-ups. Only 2.7% women knew about the minimum requirement of four ANC check-ups, of which, 5% were in Araria, followed by 2.9% and 0.4% in Madhepura and Saharsa, respectively.

Knowledge of women on the effects of iron deficiency during pregnancy

Regarding the knowledge of women about the effects of iron deficiency, 48% women mentioned about weakness, 2.4% shared about the effects on foetal growth, and 1.3% it increased the chance of infection. About 50.7% women showed lack of awareness about the ill-effects of iron deficiency. Awareness level on ill-effects of iron deficiency was found to be better among women in Araria (69%), followed with low level of knowledge in Madhepura (34.7%) and Saharsa (33.5%) districts.

27% women also shared about consuming IFA tablet, green leafy vegetable (44%) and iron rich food (13.4%) as ways of acquiring iron sufficiency. Overall, about 28% women exhibited knowledge on gaining iron sufficiency, of which a sizeable number (62%) were in Madhepura. When asked about iron rich food, overall 53% women mentioned green leafy vegetable and 12% mentioned about meat/liver as rich sources of iron.

Awareness about benefits of iodised salt

A little over half the study population (53%) was found to be unaware about iodised salt and 38% women lacked awareness about the benefits of iodised salt. A miniscule percentage (3%) of women spoke of its requirement for brain development of the foetus.

Food intake during pregnancy

About 79% women stated that a higher quantity of food was required during pregnancy in comparison to other times. 8.4% women stated the usual quantity of food was sufficient during pregnancy, and 12% women lacked the knowledge about it. Women in Araria (91%) were found to be more aware about right eating during pregnancy, followed by Saharsa (85%) and Madhepura (60.6%).

When enquired about the food that needs to be consumed during pregnancy, 60% women mentioned dal, 53% green leafy vegetable, 36.5% milk and milk product, 30% Seasonal fruits, 18% meat and 8% mentioned eggs.

4.3. Water, Sanitation and Hygiene

Access to safe drinking water

In the study population, hand pump (93%) was found to be the main source of drinking water and tube well or bore well (3.9%) was the next common source of drinking water.

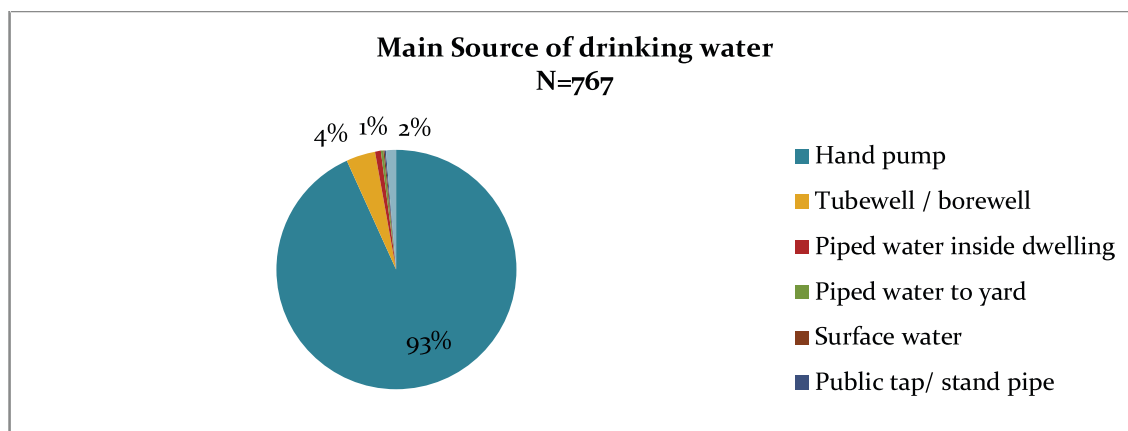


Figure 25. Main source of drinking water, Suposhan Baseline Survey, Bihar, 2018

On an enquiry pertaining to safe drinking water, about 68% respondents considered they consumed safe water. About 23% households treated water to make it safe, of which 39% were in Araria, 4% in Madhepura and 25% in Saharsa. About 26% households reported to be storing water in a container with cover; and a significant proportion of population (37%) drank water directly from the handpump. 19% households stored water in a container without cover and about 10% households did not store water at all.

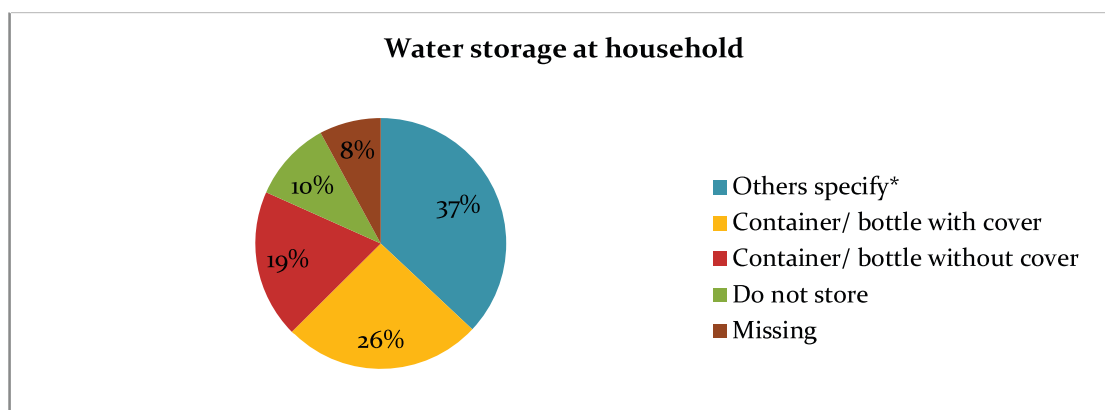


Figure 26. Storage of water at household, Suposhan Baseline Survey, Bihar, 2018

* (Others Specify) Most of the households used water directly from the hand pump

Availability of toilet facility

Availability of toilet facility at the household level is crucial to household sanitation and hygiene. Besides, it has been an important component to Swachh Bharat Abhiyan. The study revealed that about 84% households in the study population didn't have a toilet facility. Only 9% of households had toilet facilities, of which 78.6% households have the facility used by all members of the household. This calls for a review of efficacy of the scheme for the study population. Also, the interviews revealed that lack of land to construct a toilet and initial cost inputs acted as barriers to realisation of the scheme for the study population.

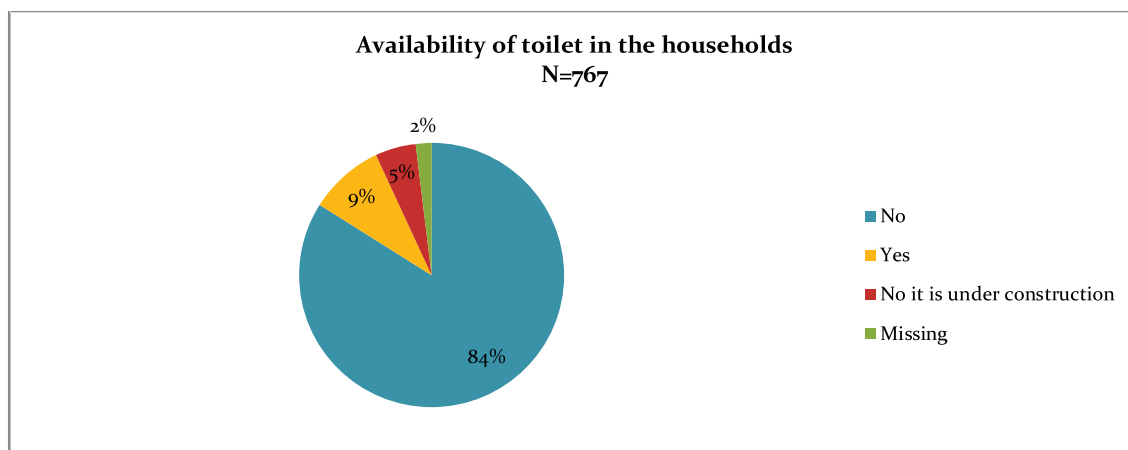


Figure 27. Availability of toilet in households, Suposhan Baseline Survey, Bihar, 2018

Among the households that did not have a toilet facility, about 51% family members preferred open defecation in agricultural fields, 44% used open spaces and 5% preferred road side/railway track for defecation.

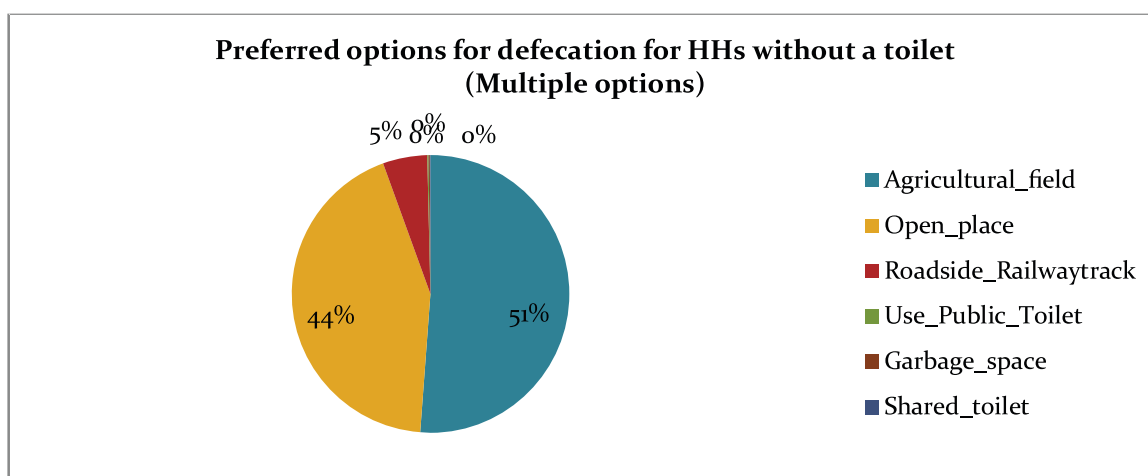


Figure 28. Preferred options for defecation for households without a toilet, Suposhan Baseline Survey, Bihar, 2018

To a question on disposal of child faeces, only 11% respondents shared about the safe practices viz., disposal into toilets and/ or burial of faeces in the soil after defecation. Inappropriate and unsafe disposal of child faeces poses high risk of transmission of diarrheal diseases in the community.

Hand wash and personal hygiene

When asked about how they washed hand after defecation or handling child faeces, most (75%) women reported using soap and water. 11% used only water, 7% used ash and water, and 6% used mud/dust and water, which are unsafe handwashing practices.

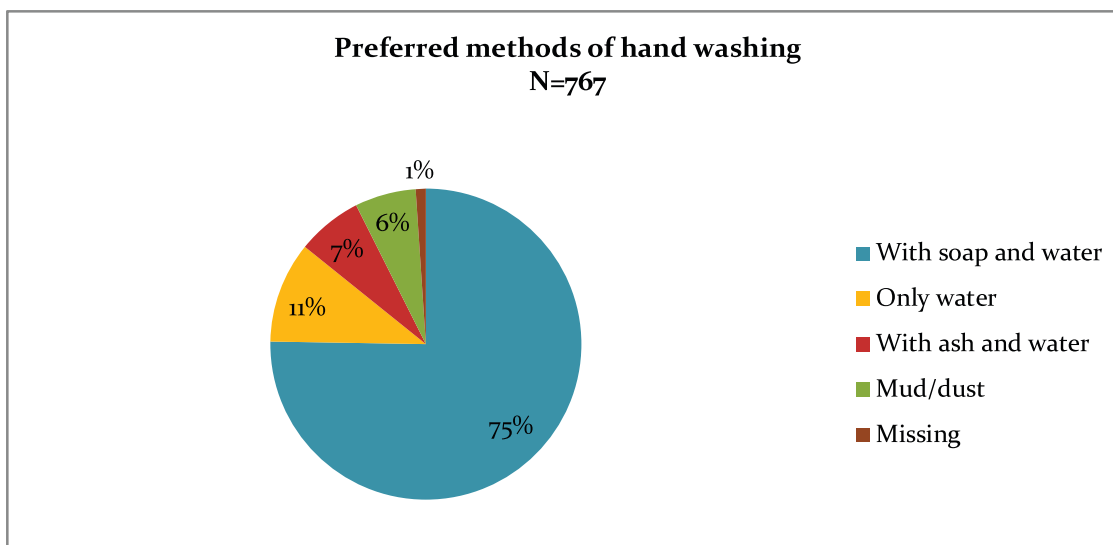


Figure 29. Preferred methods of hand washing, Suposhan Baseline Survey, Bihar, 2018

Analysis of information on hand washing after /before every activity revealed that most women washed hands after defecation (88.5%), after eating meals (94.4%) and after cleaning child faeces (82.9%) but only 20.2% women reported hand washing before feeding the child.

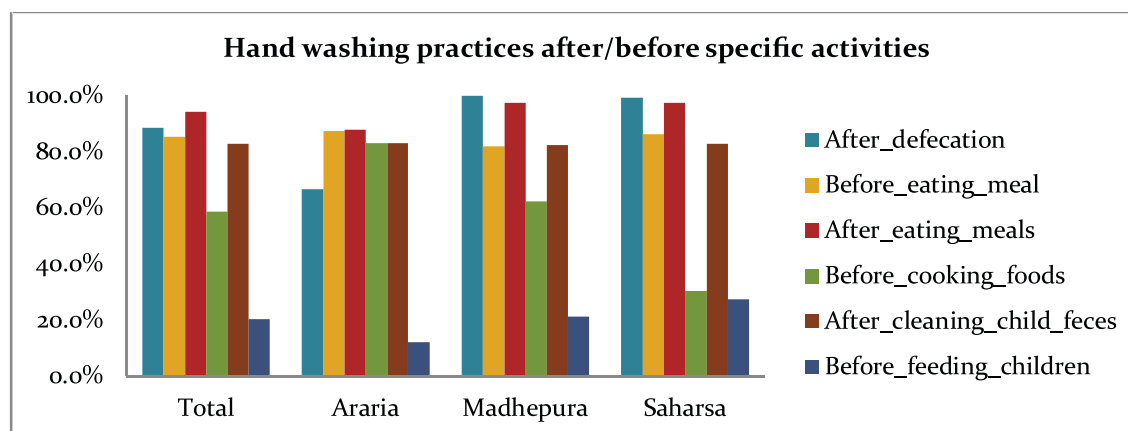


Figure 30. Hand washing practices, Suposhan Baseline Survey, Bihar, 2018

Frequency of bathing by adults and children

About 73% of adults were reported to be bathing every day; 22% bathed on alternate days and 3.3% bathed twice a week. About 77% children were reported to be taking bath daily, 15% on alternate days and 6.7% twice a week. Most adults (49%) and children (48%) were reported to be bathing in a tube well, which also is next common source of drinking water after hand pump.

Hygiene practices during menstruation

Personal hygiene of women during menstruation is an important aspect of women's health and dignity. Most of the women in study population reported the use old clothes (67%) during menstruation. Only 6% women used sanitary napkins.

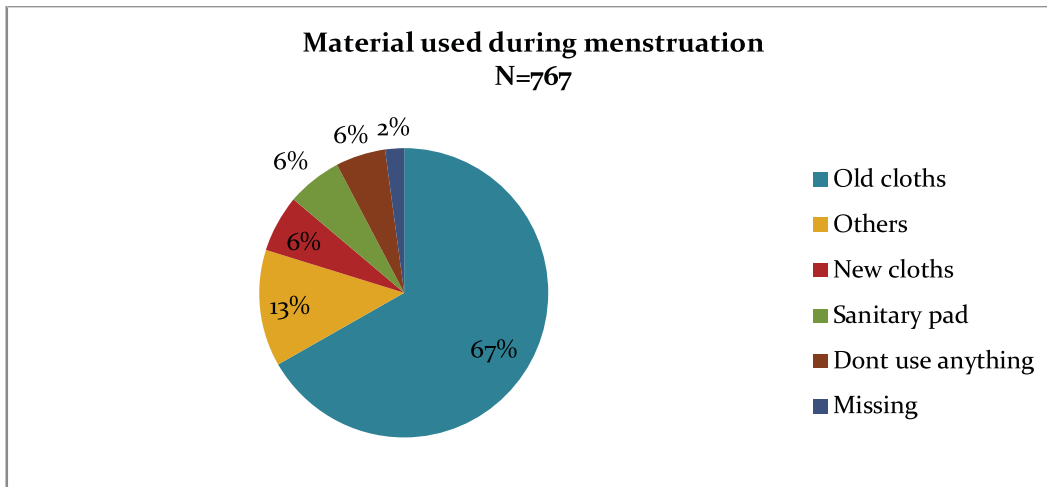


Figure 31. Type of material used during menstruation, Suposhan Baseline Survey, Bihar, 2018

However, most of the women (70%) used soap water and remaining (27%) only water to clean the genital area during menstruation.

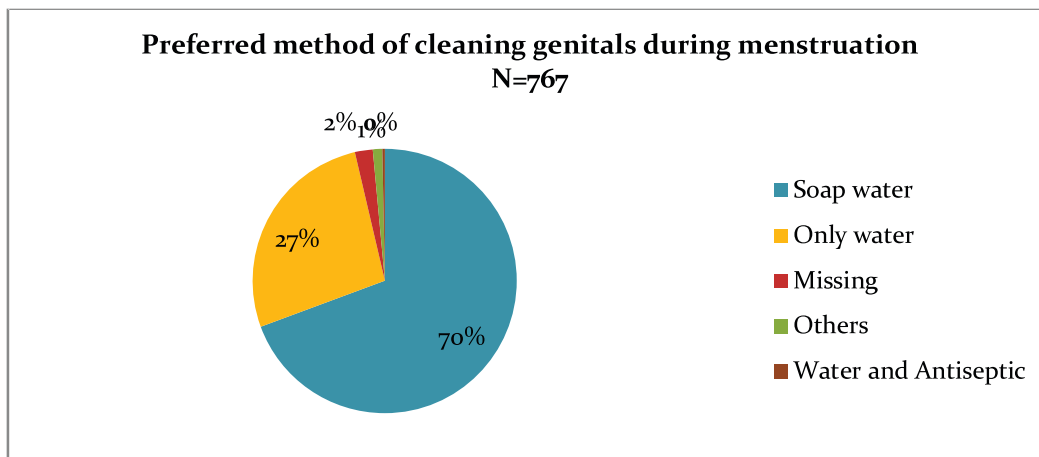


Figure 32. Preferred method of cleaning genitals during menstruation, Suposhan Baseline Survey, Bihar, 2018

Water, sanitation and personal hygiene are important nutrition sensitive interventions. The WaSH indicator performances were found to be very low in the study population. To improve health and nutrition indicators, water, sanitation and hygiene will need a women and girls' cluster based counselling and awareness sessions, along with general WaSH sensitisation to the community.

4.4. Child Health and Health Seeking Behavior

Child health

Information was collected on whether the index child² suffered from diarrhoea in past two week.

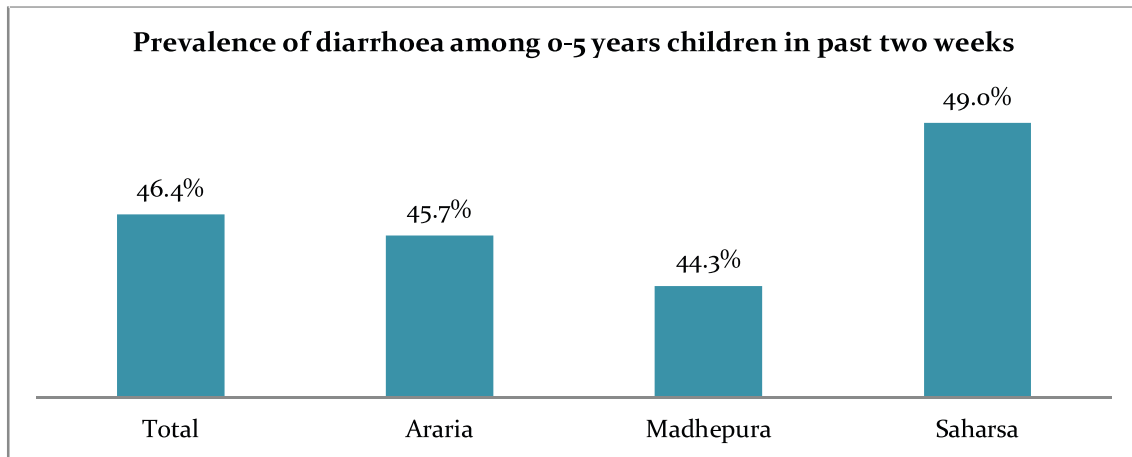


Figure 33. Prevalence of diarrhoea among children 0-5 years in past two weeks, Suposhan Baseline Survey, Bihar, 2018

Acute diarrhoea remains a threat to child's life, becoming a cause of morbidity and mortality. Among the study population, prevalence of diarrhoea under-5-year-old children was found to be close to be 46% in last two weeks from the baseline survey. The district wise prevalence hovered around the total, but was highest in Saharsa (49%). Of the total number of children who suffered from diarrhoea, 39% children were treated with Zinc, 23% were treated with oral rehydration solution/salts (ORS), 14% children were treated with injection of antibiotics (in cases of severe diarrhoea), and 14% children were treated with other tablet without zinc. A small percentage of children didn't receive any treatment for diarrhoea. The recommended treatment for diarrhoea, however, Zinc supplementation along with ORS to reduce the duration and severity of diarrheal episodes in children.

² Index child is the youngest child in the households for whom information was collected in this study

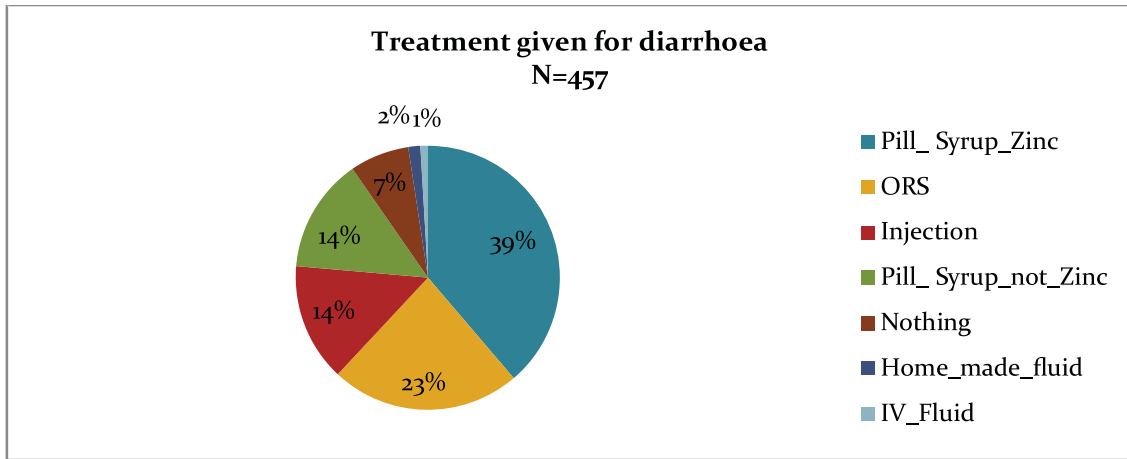


Figure 34. Types of treatment received during diarrhoea, Suposhan Baseline Survey, Bihar, 2018

Child feeding during diarrhoea was reported to be reduced from the normal frequency by 61% women, and 14% continued with regular breastfeeding to the child. About 6% women reported a complete discontinuation of breast-feeding to the child with diarrhoea.

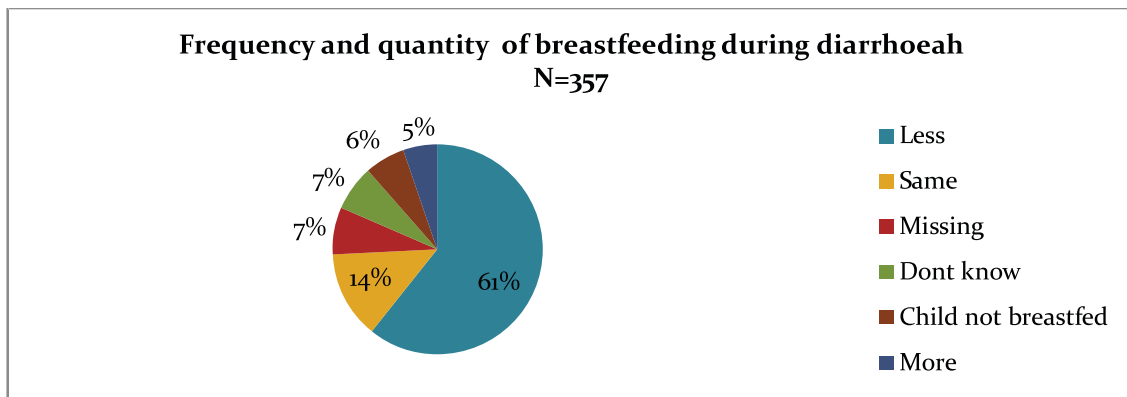


Figure 35. Frequency and quantity of breastfeeding to child with diarrhoea, Suposhan Baseline Survey, Bihar, 2018

The study shows that about 54% women reduced the quantity of fluid to the child during diarrhoea. About 18% women continued as before, while 10% women increased the fluid intake for their child during diarrhoea. The reduction and discontinuation of breastfeeding to the child with diarrhoea aggravate dehydration among children, of which the study population was found to be unaware.

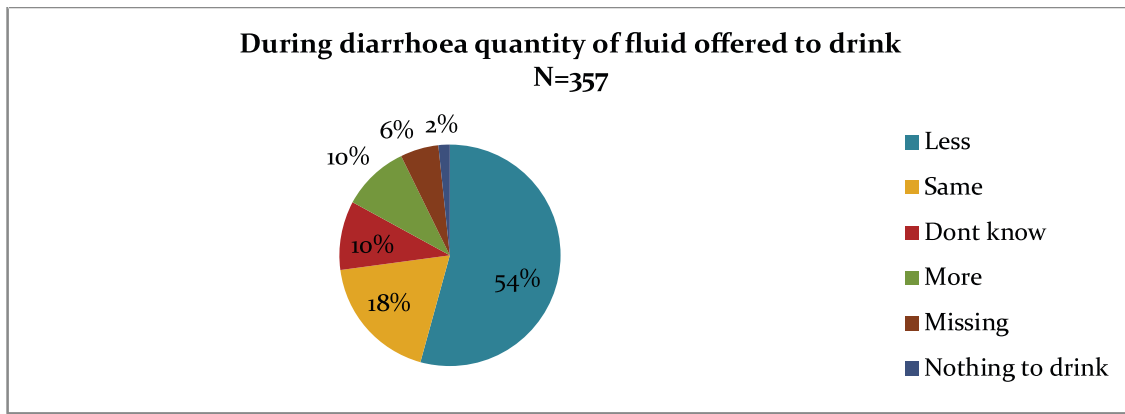


Figure 36. Quantity of fluid offered during diarrhoea, Suposhan Baseline Survey, Bihar, 2018

Regarding the quantity of food given to children during diarrhoea in last two weeks from the baseline survey, 54% women reported to have reduced the quantity of food offered to their child, and about 8% women completely stopped feeding the child during diarrhoea. Restriction or reduction of quantity of food to the children during diarrhoea increases the risk of under nutrition, and hence needs awareness creation among the women for improved health practices.

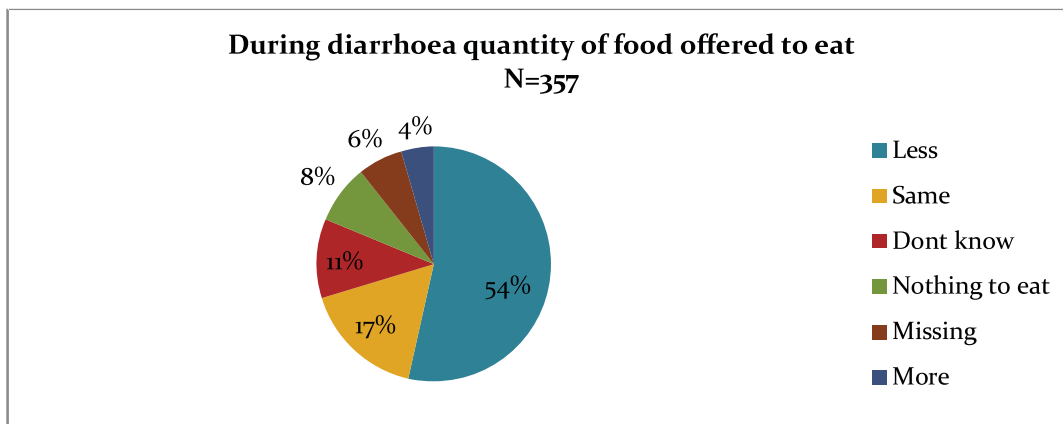


Figure 37. Quantity of food offered during diarrhoea, Suposhan Baseline Survey, Bihar, 2018

NFHS 4 data show Scheduled caste to have very high percentage of neonatal mortality (46.5), post neonatal mortality (13.7), infant mortality (60.2), child mortality (13.6) and under-5 mortality (73.0), greater than national averages. The analysis on prevalence, treatment and feeding practices of children with diarrhoea not only seemed to corroborate with the overall findings on SCs at state level, but also called for immediate interventions in the study population to reduce child mortality.

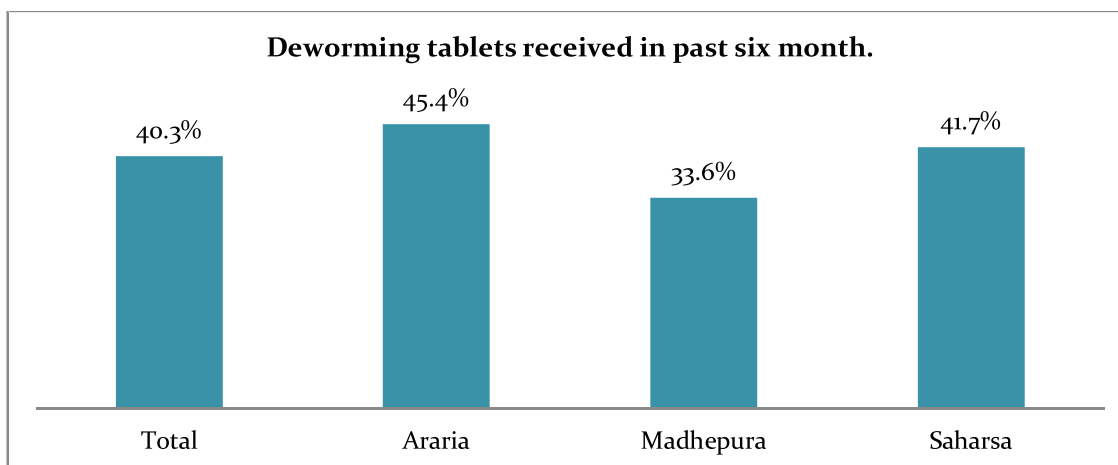


Figure 38. De-worming tablets received in last six month, Suposhan Baseline Survey, Bihar, 2018

Children between the ages of 1 - 14 years are at risk of parasitic intestinal worms in India also known as Soil-Transmitted Helminths (STH). STH can lead to anaemia, malnutrition, impaired mental and physical and cognitive development, and reduced school participation. The study shows that about 40% children received de-worming tablets in past six month from the time of baseline survey. Comparatively, Araria recorded a better coverage (45%) for deworming followed by Madhepura (33.6%) and Saharsa (41.7%).

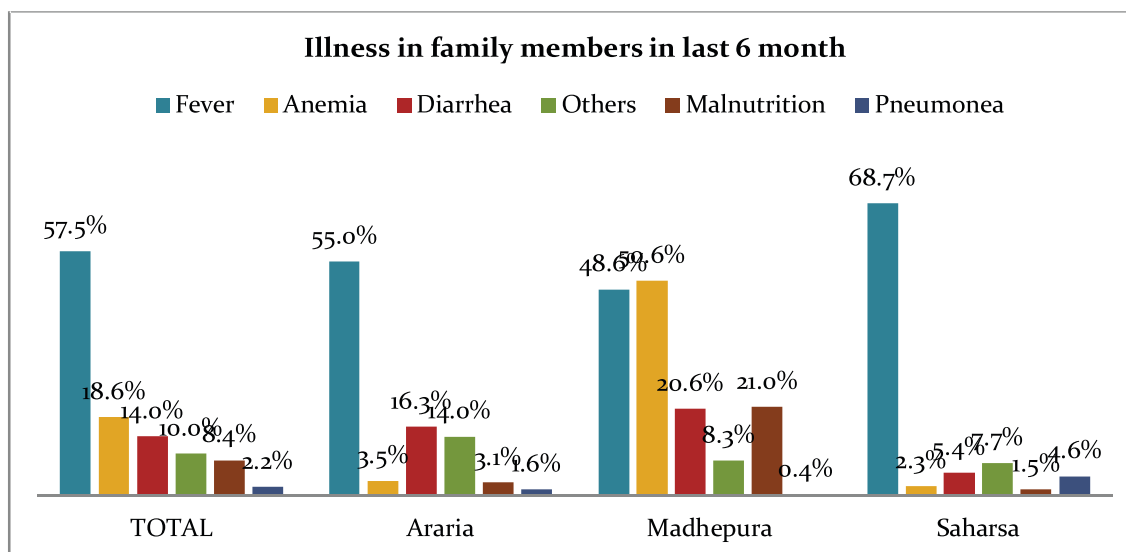


Figure 39. Prevalence of illness among family members in past 6month, Suposhan Baseline Survey, Bihar, 2018

Most common illnesses reported over past six months from the time of baseline study were fever (57%), anaemia/ weakness (18.6%) and diarrhoea (10%). Fever was found to be most common in Saharsa (68%) and most of the women from Madhepura (58%) reported weakness induced by anaemia. About 21% women from Madhepura also mentioned about malnutrition as a major health issue among household members.

³ https://www.nhp.gov.in/national-deworming-day_pg

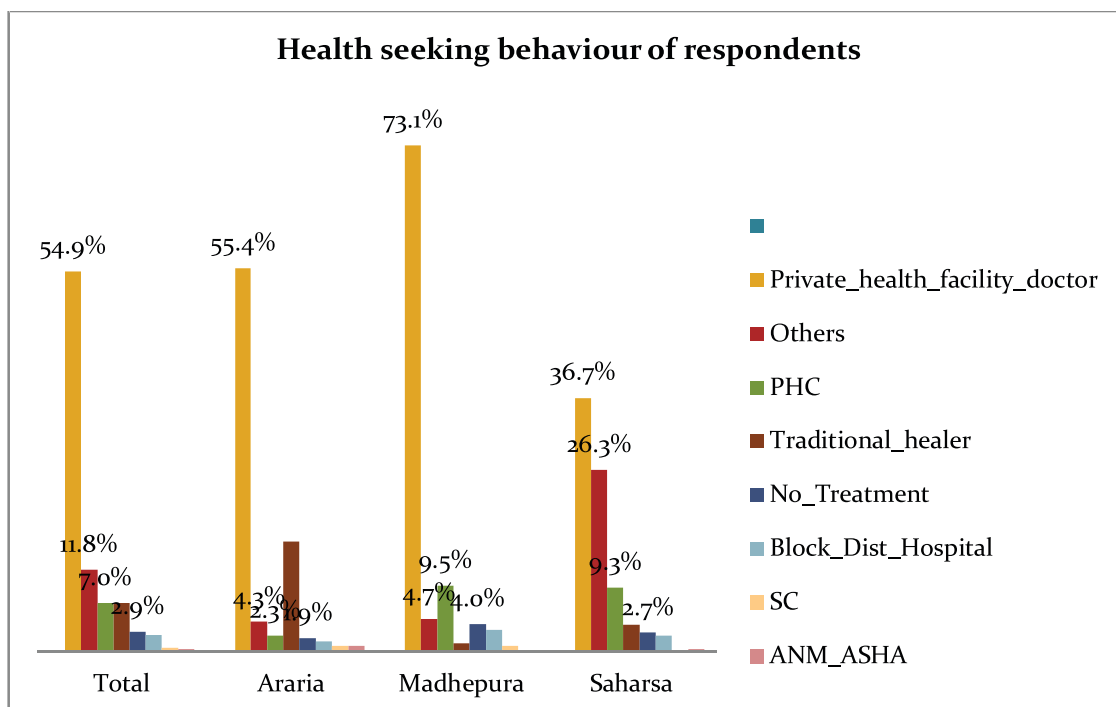


Figure 40. Household preference for seeking health services during illness, Suposhan Baseline Survey, Bihar, 2018

The data showed that in times of sickness, most of the households preferred private health facility (54.9%). In Madhepura, about 73% households preferred private medical facility, whilst only a small number of households (7%) preferred government hospitals for treatment. About 2.9 % households didn't seek any health care services during their past illness.

Child Anthropometry

Height for Age (Stunting)

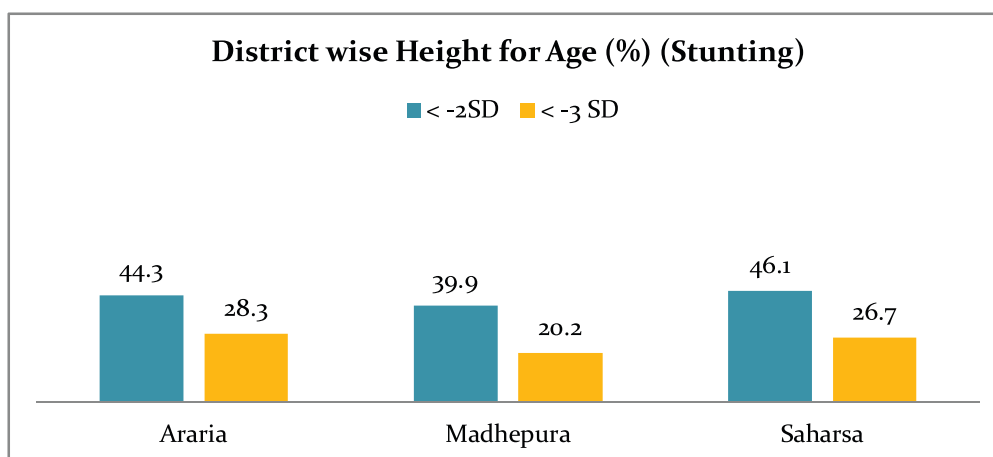


Figure 41. Height for age (%) (Stunting) of children 0-5 years, Sexes combined, Suposhan Baseline Survey, Bihar 2018

Stunting (low height for age), an indicator of acute malnutrition caused by long term insufficient nutrient intake and frequent infections. In this study, prevalence of severe stunting among under-5 children i.e. between -3SD to -2D, was 28.3%, 20.2% and 26.7% for Araria, Madhepura and Saharsa, respectively. About 46% of children in Saharsa were found to be moderately stunted, which is highest among the three districts, followed by Araria (44.3%) and Madhepura (39.9%). While stunting generally occurs before the age of two, with largely irreversible effects, it leads to delayed motor development, impaired cognitive functions and poor school performance. A high prevalence of moderate stunting with significant cases of severe stunting indicates the need for nutrition awareness and provisions to reduce the incidences of malnutrition.

Weight for Height (Wasting)

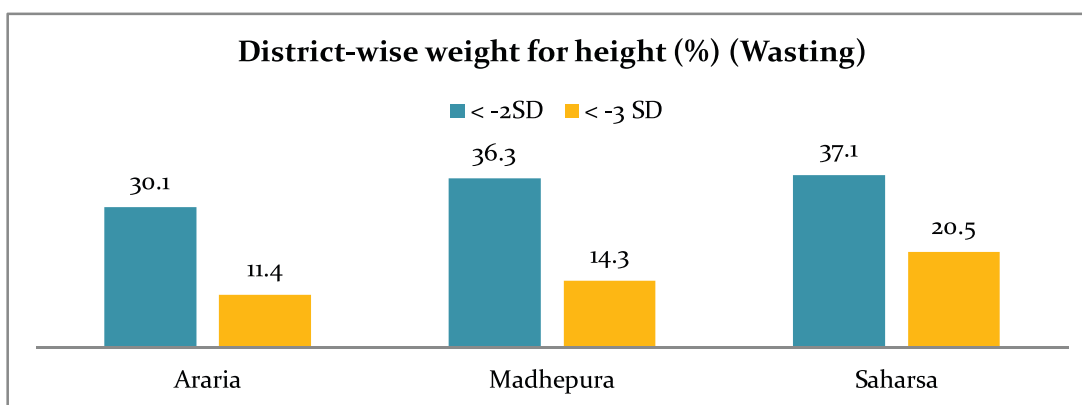


Figure 42. Weight for height (%) (Wasting) in 0-5 year children, Sexes combined, Suposhan Baseline Survey, Bihar 2018

Wasting (low weight for height) is an indicator of mortality among children under five. The study revealed higher percentage of wasted children in Saharsa with 20.5% children being severely wasted and 37% moderately wasted. About 14.3% children aged 0-5 years were found to be severely wasted and 26% moderately wasted in Madhepura. The findings point to acute significant food shortage and /or disease prevalence among the study population. The survey revealed about the shortage of food in study population in the following sections.

⁴ SD: Standard Deviation
 -3SD: Severe
 -2SD: Moderate
 -1 SD: Mild

Weight for Age

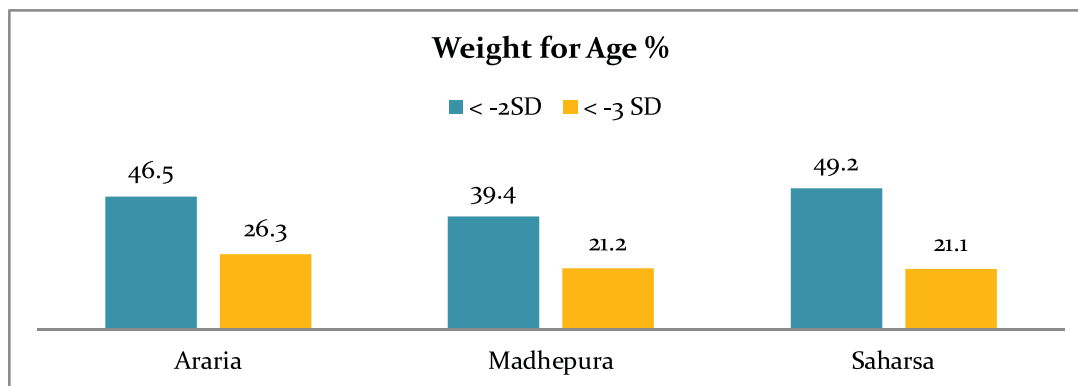


Figure 43. Weight for age (%) of sexes combined, 0-5 yrs children, Suposhan Baseline Survey, Bihar, 2018

Weight for age percentile plays an important indicator for tracking progress of child growth. In the study population, it was the issue of low weight that caused acute malnutrition among the children under-5. The study found 26.3% of under-5 children in Araria and 21% in Madhepura and Saharsa respectively were severely under-nourished. Saharsa was found to have a highest percentage (49%) of moderately malnourished children followed by Araria (46.5%) and Madhepura (39.4%).

MUAC for Age

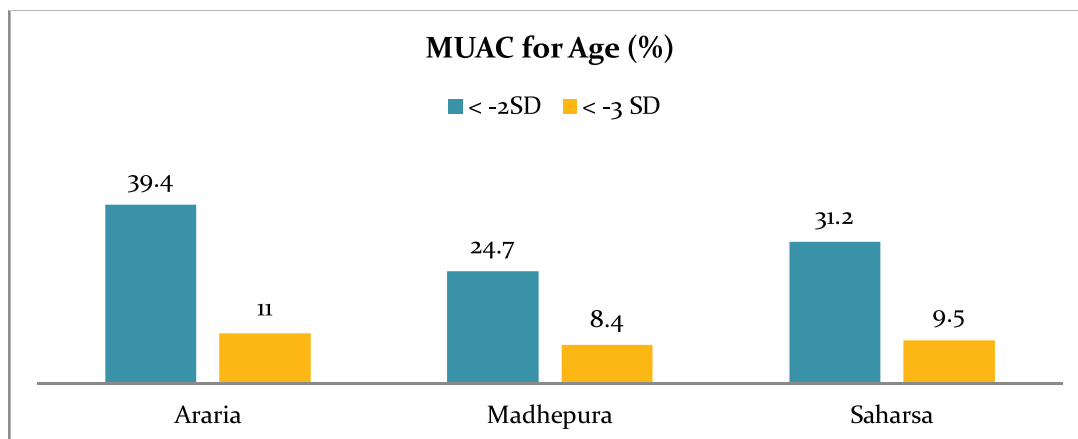


Figure 44. MUAC for Age (%), Sexes combined, 0-5 years children, Suposhan Baseline Survey, Bihar, 2018

Though the stunting and wasting were found to be higher in Saharsa, from the Mid Upper Arm Circumference (MUAC) measurement, about 39.4% children under-5 years in Araria were found to be moderately under-nourished and 11% were severely undernourished. In Madhepura, 24.7% children under-5 were found to be moderately undernourished and 8.4% were severely undernourished. In Saharsa, 31.2% were found to be severely undernourished and 9.5% children were moderately undernourished.

BMI for Age

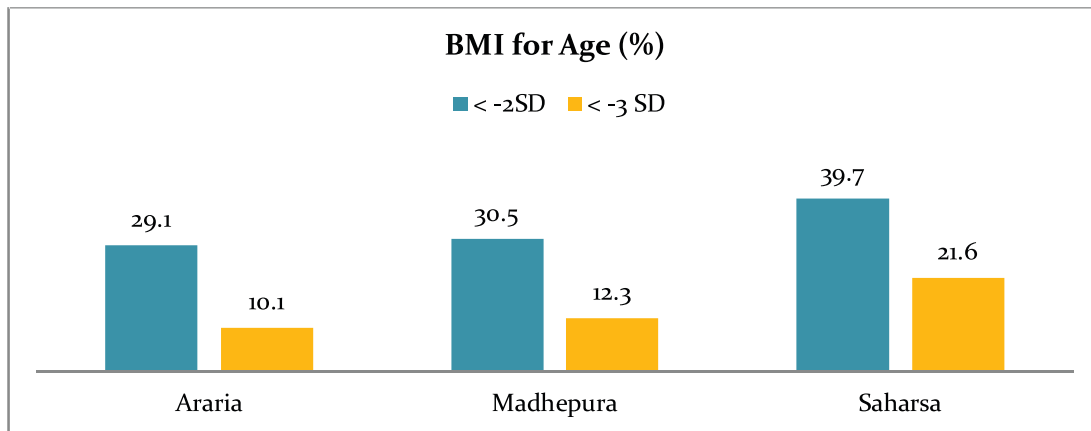


Figure 45. BMI for Age (%) Sexes combined, 0-5 Yrs children, Suposhan Baseline Survey, Bihar, 2018

From Body Mass Index (BMI) for age analysis, the study revealed that about 21.6% children in Saharsa were severely malnourished, which is highest among the three districts followed by Madhepura (12.3%) and Araria (10%). About 40% children of study population in Saharsa were found to be moderately malnourished based on BMI for Age, followed by 30.5% and 29.1% in Madhepura and Araria, respectively.

4.5. Infant and Young Child Nutrition Practices

Early Initiation of Breast Feeding (EIBF) and Exclusive Breast Feeding (EBF)

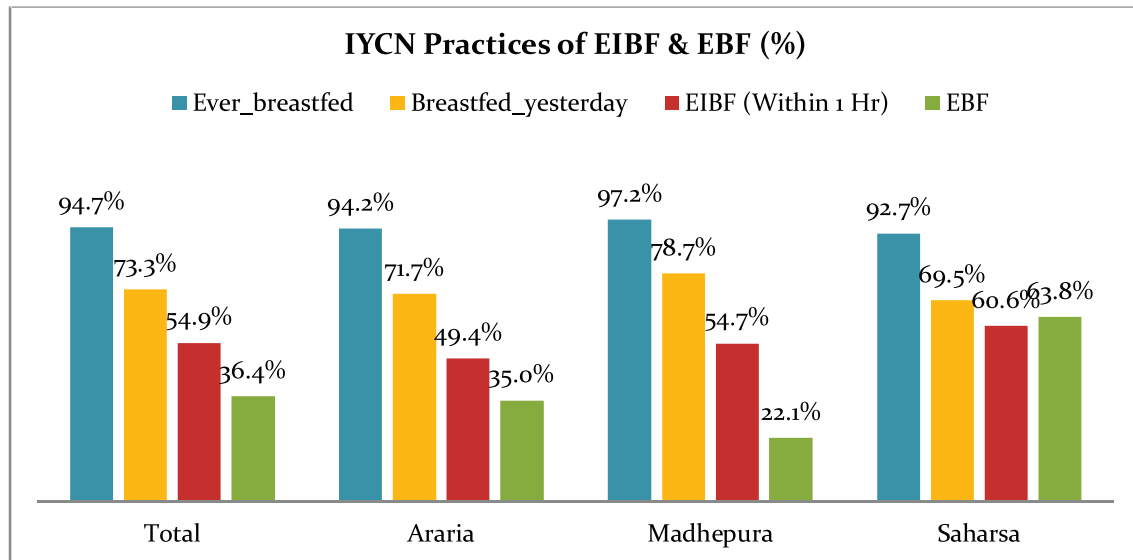


Figure 46. IYCN Practices of Early Initiation of Breast Feeding (EIBF)&Exclusive Breast Feeding (EBF) (%), Suposhan Baseline Survey, Bihar, 2018

Overall, 95% of children under-5 years of age were found to be breast fed, with highest percentage (97%) of breastfed under-5 children in Madhepura, followed by Araria (94%) and Saharsa (92%).

Early initiation of breast feeding within 1 hr is an important indicator for a healthy start with long term benefits of adequate nutrition of infant through breast feeding. Early initiation of breast feeding comes with many benefits for both the mother and child. Overall, 54% women were able to initiate breast feeding within 1 hour. With respect to EIBF, Saharsa showed a slightly better trend with 60.6% children followed by Madhepura (54.7%) and Araria (54.9%).

Exclusive breast feeding up to 6 month was one of the most important and widely promoted IYCF practices, yet, in the study population, the prevalence of EBF was found to be only 36.4%. EBF in Saharsa was found to be 63% followed by 35% in Araria and 22.1% in Madhepura.

4.6. Women’s knowledge on IYCN Practices

Knowledge on feeding colostrum to the baby

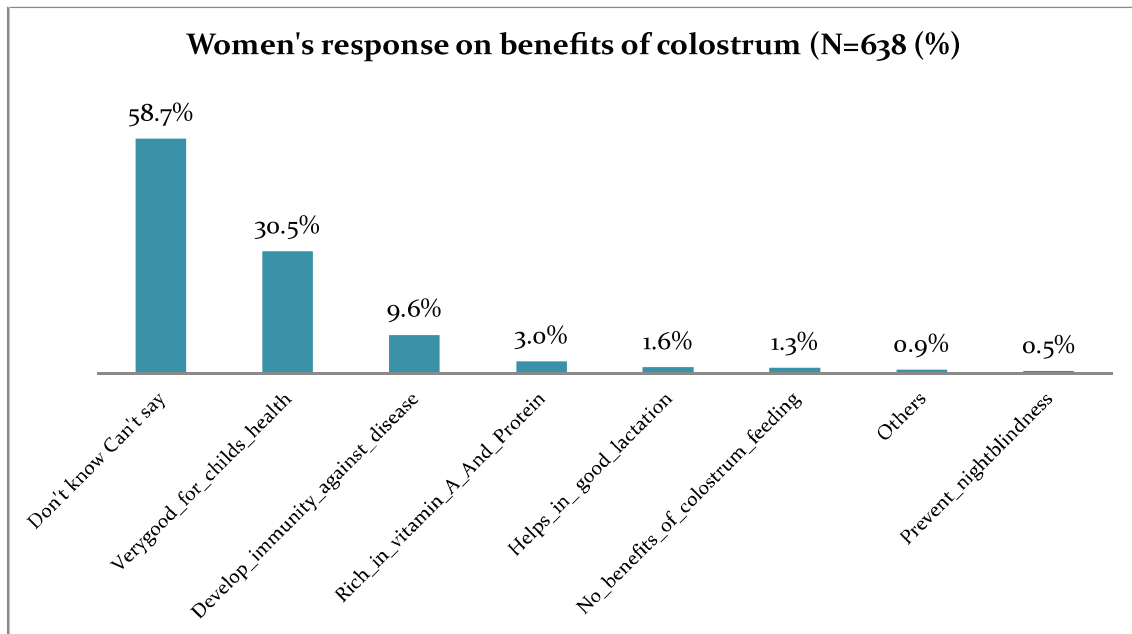


Figure 51. Women’s knowledge on benefits of colostrum, Suposhan Baseline Survey, Bihar, 2018

Colostrum or mother’s first milk is a nutrient rich fluid that build strong immune system of the baby, and is to be given to the baby in the first 24 hours of birth. Overall 58.7% women showed lack of knowledge about the benefits of feeding the infant their first milk after birth. However, about 30.5% women stated it was good for the child, 9.6% said it developed immunity against disease and 3% said it was rich in Vitamin A.

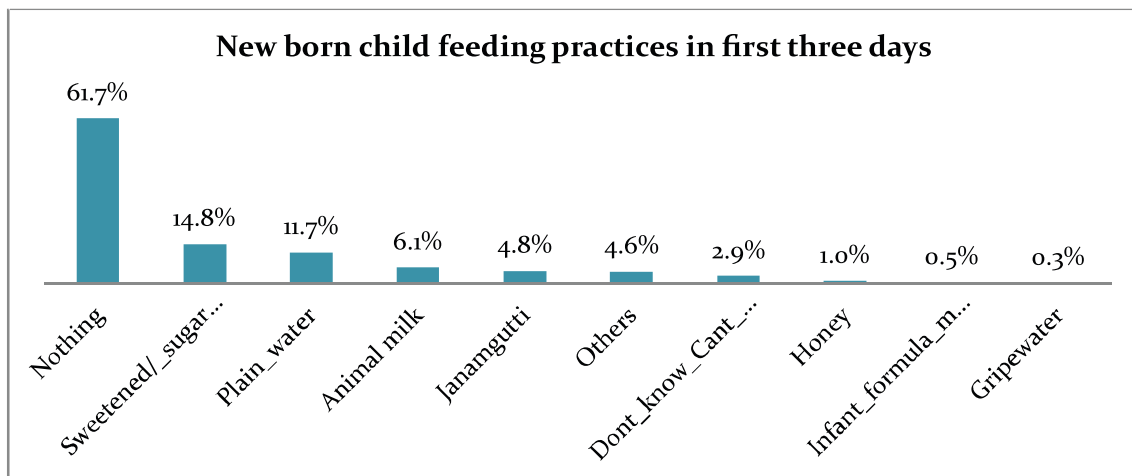


Figure 52. Practice of supplementary feeding in first three days to the new-born, Suposhan Baseline Survey, Bihar, 2018

While 61% mothers denied giving anything other than breast milk during first three days to the new-born, around 15% mentioned giving sweetened water, around 12% reported giving plain water, 6% animal milk and around 5% Janam Ghutti. Those who didn’t feed colostrum to the baby expressed they considered it “unfit and unclean” for the child.

Knowledge on Exclusive Breast Feeding (EBF)

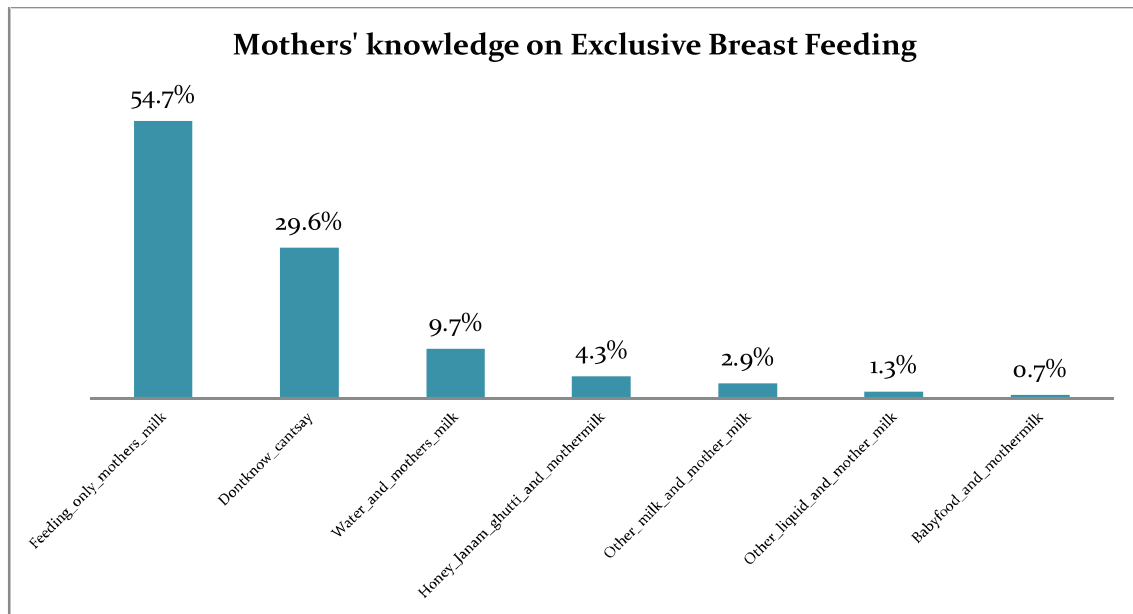


Figure 53. Knowledge on Exclusive Breast Feeding, Suposhan Baseline Survey, Bihar, 2018

The study revealed that about 55% women understood exclusive breast feeding, which prevented diarrhoea and common childhood illnesses such as pneumonia. But, 29.6% women were found to lack knowledge about EBF, and others reported practices of giving other liquids, such as water and honey/ghutti with mother's milk to the infant. Breastfeeding benefits both the mother and the infant, and is energy and nutrient sufficient for the baby through first 6 months. This means that the child needs to be fed mother's milk exclusively, with no other liquid and food, not even water (except ORS) till six months. However, this information was found to be missing among the nearly half the study population.

Moreover, 64.3% women shared about the benefits of EBF, as the child becomes healthy, 4% said it helped in building immunity and about 42% lacked knowledge. About 80% women also responded that the child should be fed when hungry (on demand), to the question of frequency of breastfeeding.

Women's knowledge on iron rich foods

Overall, 21.6% stated that iron deficiency would affect physical growth of child, 4.2% said it led to mental retardation, 9% said it affected the capacity to perform, and 61.8% expressed lack of knowledge on the effects of iron deficiency. To an enquiry on prevention of iron deficiency, the majority of women (46%) showed lack of knowledge. 16.9% women said it could be prevented by taking IFA tablets, 24.3% mentioned about green leafy vegetables, and about 6.4% mentioned eating iron rich food, like green leafy vegetables, meat and iron fortified food. However, a sizeable percentage of 37% women expressed lack of knowledge about iron rich foods.

4.7. Introduction to solid/ semisolid food

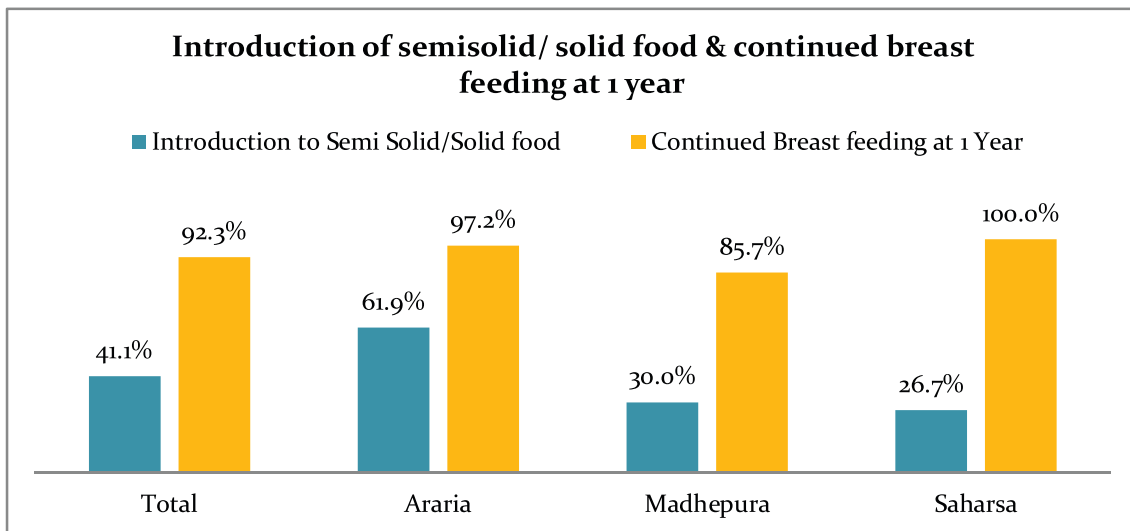


Figure 47. Introduction of semisolid/solid food and continuing breast feeding at 1 year, Suposhan Baseline Survey, Bihar, 2018

Introduction of semisolid and solid food is recommended on completion of six months to meet the nutritional requirement and optimal growth needs of the infant. Introduction to semisolid and solid diet after completion of sixth month was found to be only 41% in the study population. Introduction of semi solid and solid food was 61.9% in Araria, 30% in Madhepura and 27.7% in Saharsa.

Continued breast feeding at one year was found to be 92.3%. All women in Saharsa (100%), 97.2% women in Araria and 85.7% women in Madhepura reported breast feeding the child at 1 year of age.

4.8. Minimum Dietary diversity

With introduction of outside food, it is also essential to ensure diversity of foods to address both macro and micro-nutrient needs for the infant and young child.

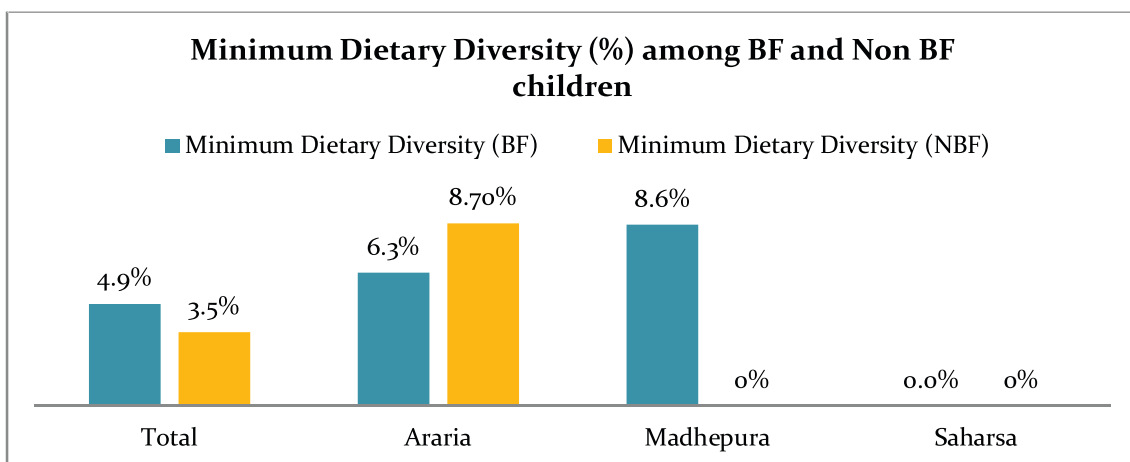


Figure 48. Minimum dietary diversity among Breast Feeding (BF) and Non-Breast Feeding Children (NBF) (%), Suposhan Baseline Survey, Bihar, 2018

Minimum dietary diversity (MDD) is a population level indicator to measure the dietary diversity among children of 6-23 months, who received diet from at least 4 or more food group out of 7 food groups (1. Grains, roots and tubers, 2. Legumes and nuts, 3. Dairy products (milk, yogurt, cheese), 4. Flesh foods (meat, fish, poultry and liver/organ meats), 5. Eggs, 6. Vitamin-A rich fruits and vegetables, 7. Other fruits and vegetables).

In the survey, dietary diversity both among breastfed and non-breastfed was looked at separately. Overall, dietary diversity among breastfed children was 4.9% and among non-breastfed children was 3.5%.

Among the districts, Araria was found to have a better dietary diversity compared to other districts with 6.3% among breastfed and 8.7% among non-breast fed children. In Madhepura, minimum dietary diversity among breastfed children is found to be 8.6%, while children among non-breast-fed category were found without a MDD. In Saharsa, no child was found to be receiving food with more than 4 food groups on previous day.

Mother's educational attainment and household monthly income have a direct association with minimum dietary diversity and child feeding practices. Dietary diversity has also to with the appropriate food habits. The findings on MDD need to be read with the findings on educational status of women in the study population, wherein 87% were found to be illiterate. Regarding income level, in Araria, average daily income was estimated Rs. 270, in Madhepura Rs. 343 and in Saharsa Rs. 348.

4.9. Minimum Meal Frequency

The Minimum Meal Frequency (MMF), is the proportion of children 6-23 months who received solid, semi-solid or soft foods the minimum number of times or more (but also including milk feeds for non-breastfed children). MMF in the study was calculated for breast fed and non-breastfed children separately. For breastfed children of 6-8 month, MMF was considered for those who received semi-solid/solid diet at least 2 times. The MMF was calculated for 8-23 months old children, who received semi-solid/solid diet at least 3 times other than breast feeding. Among 6-23 months' old non-breastfed children, MMF was found to fulfil the criteria of 4 times solid or semi-solid diet a day.

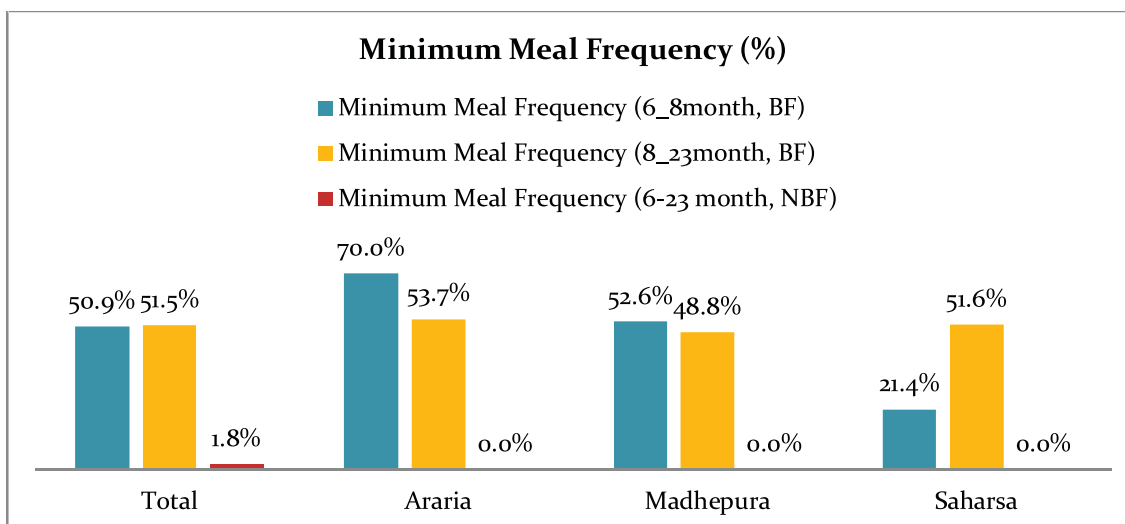


Figure 49. Minimum Meal Frequency (%) among 6-8 m & 8-23 m Breast feeding (BF) and 6-23 m Non Breast feeding (NBF) Children, Suposhan Baseline Survey, Bihar, 2018

Overall, 50.9% of the breastfed children 6-8 months of age were found to have desired minimum meals frequency, while for non-breast-fed children MMF was found to be 1.8%. Among the three districts, MMF for 6-8-month-old breastfed children was found to be 70% and 53.7% for 8-23 months old in Araria. Among the non- breastfed infants, no infant was found to meet the criteria for minimum meal frequency in any of the study districts.

4.10. Minimum Acceptable Diet

Minimum acceptable diet (MAD), is a composite indicator of minimum meal frequency and minimum dietary diversity of children 6–23 months of age who receive a minimum acceptable diet (apart from breast milk). MAD measures both the minimum feeding frequency and dietary diversity.

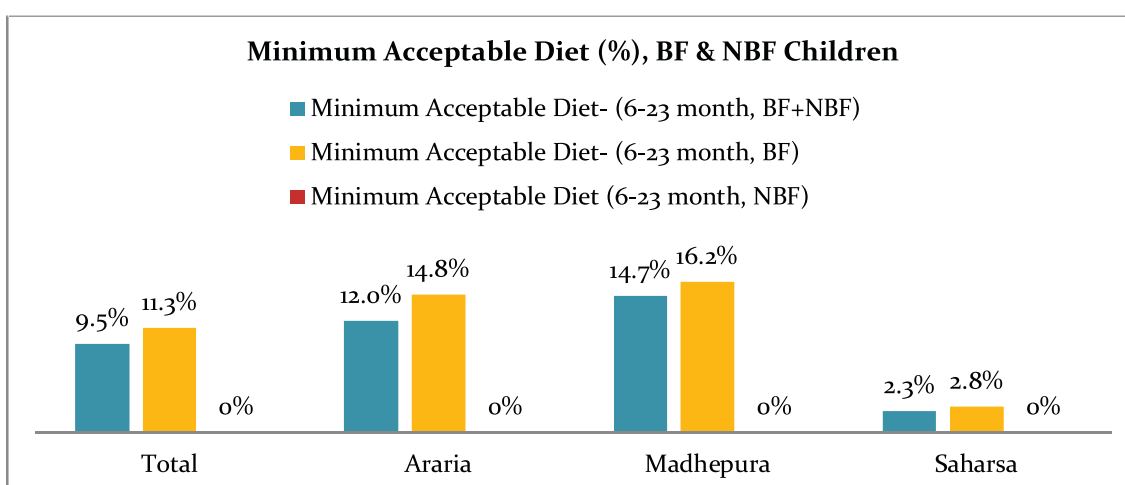


Figure 50. Minimum Acceptable Diet (%) among 6-23 m children among Breast Feeding, Non Breast Feeding and combined, Suposhan Baseline Survey, Bihar, 2018

For breastfed children diversity was calculated from 7 food groups while for non-breast-fed children, diversity was calculated for 6 food group. Overall minimum acceptable diet for 6-23 months old breastfed and non-breastfed children, combined was 9.5%, higher in Madhepura (14.7%), followed by Araria (12%) and Saharsa (2.3%).

Overall, the minimum acceptable diet for breastfed children 6-23 months old was arrived at 11.3%. Madhepura had the highest minimum acceptable diet (16.2%) followed by Araria (14.2%) and Saharsa (2.8%). No child was found to fulfil the criteria of minimum acceptable diet among non-breast fed children in any of the study districts.

4.11. Child Vaccination Status

Antigen-wise coverage and full immunization coverage

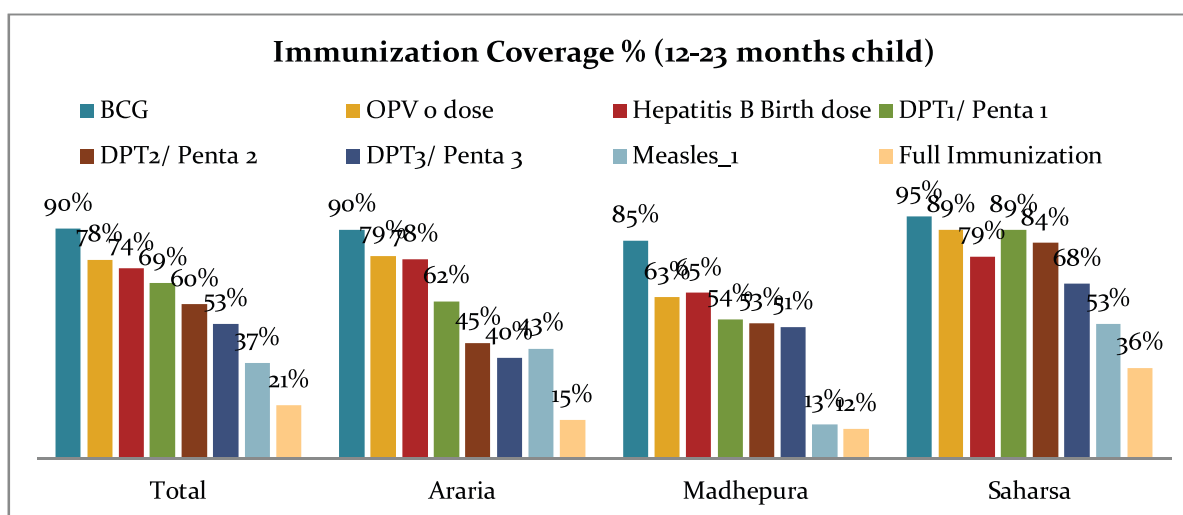


Figure 54. Immunization Coverage % (12-23 month children), Suposhan Baseline Survey, Bihar, 2018

Overall, BCG coverage was found to be 90% in the study population. Among the three districts, Saharsa showed the highest BCG coverage (95%), followed by Araria (90%) and Madhepura (85%). The coverage of DPT3/ Pentavalent3 vaccine was found to be 53%, with Saharsa showing highest (68%) coverage followed by Madhepura (51%) and Araria (40%). Measles-1 coverage was found to be 37%, with Saharsa district showing greater coverage (53%) followed by Araria (43%) and Madhepura (13%). Due to an overall low coverage of Measles-1 vaccine, coverage of full immunization also plummeted, which is 21%, with highest coverage in Saharsa (36%) followed by Araria (15%) and Madhepura (12%).

⁵ BCG is a vaccine given at the time of birth to prevent neonatal tuberculosis. It is an important coverage indicators for assessing the access to routine immunization services in a specific community.

⁶ Pentavalent vaccine provides protection to a child from 5 life-threatening diseases – Diphtheria, Pertussis, Tetanus, Hepatitis B (part of routine immunization in India), with Hib vaccine as a new addition.

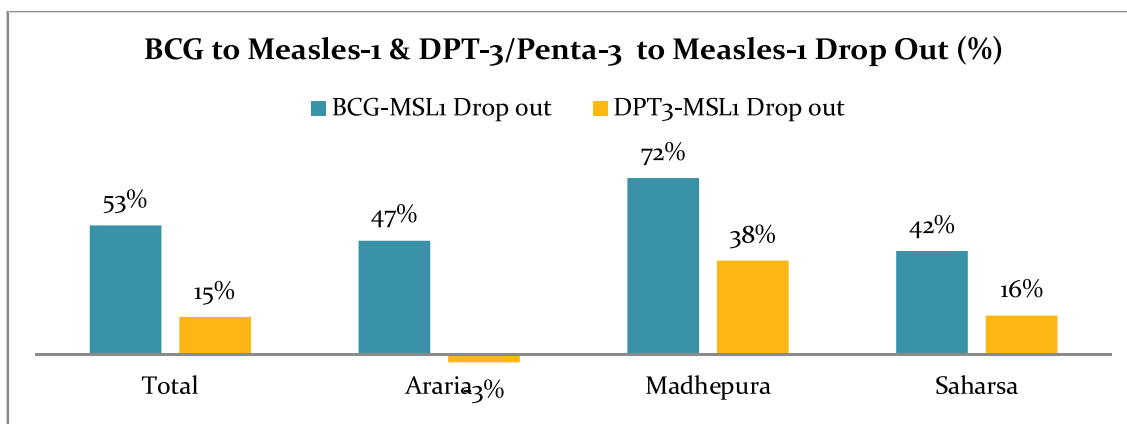


Figure 55. BCG to Measles-1 and DPT3-Measles-1 drop out % (12-23 month children), Suposhan Baseline Survey, Bihar, 2018

Overall, a 53% dropout between BCG to Measles-1 coverage was recorded that showed a highest percentage for Madhepura (72%), followed by Araria (47%) and Saharsa (42%). There was a constant drop of vaccine coverage noticed with age progress across the district.

4.12. Household food and nutrition security

Household level food security

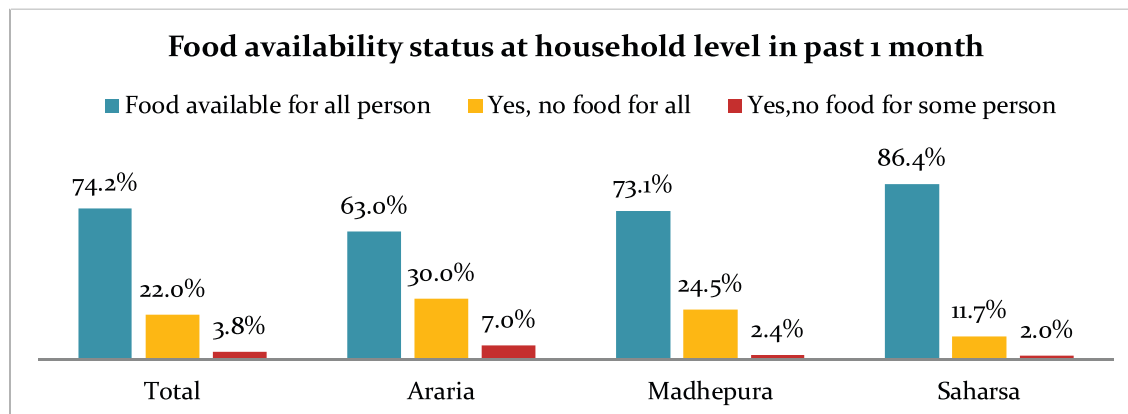


Figure 56. Availability of food at household level in past one month, Suposhan Baseline Survey, Bihar, 2018

An assessment of household level food availability in last one month from the day of baseline survey revealed 74% households had food for all the member of the family throughout the month. This food availability was highest in Saharsa (86.4%) followed by Madhepura (73%) and Araria (63%).

Across the study districts, 22% households reported food scarcity at some point of time in the month preceding the baseline survey. Araria reported higher responses on food scarcity (30%) followed by Madhepura (24.5%) and Saharsa (11.7%). About 3.8% households reported a complete lack of food for some members of the family at some intervals in the month preceding the survey.

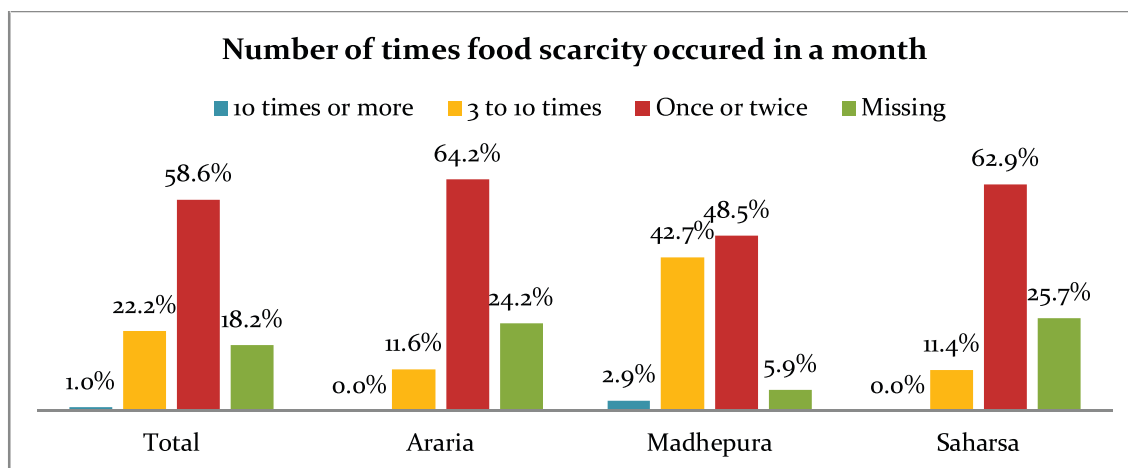


Figure 57. Frequency of food scarcity within a month, Suposhan Baseline Survey, Bihar, 2018

Of the households that reported food scarcity, 58% reported food scarcity one or twice a month, 22% faced it 3-10 times a month, and 1% reported such scarcity 10 times or more in a month. District wise analysis shows that the study population in both Araria (64%) and Saharsa (63%) faced food shortage ones or twice a month, while in Madhepura (42.7%), a significant portion of population faced serious food shortage 3-10 times a month, with 2.5% even facing the scarcity more than 10 times a month.

Household Dietary Diversity (HDDs)

Household dietary diversity is a qualitative measure of food consumption that reflects household access to a variety of foods.

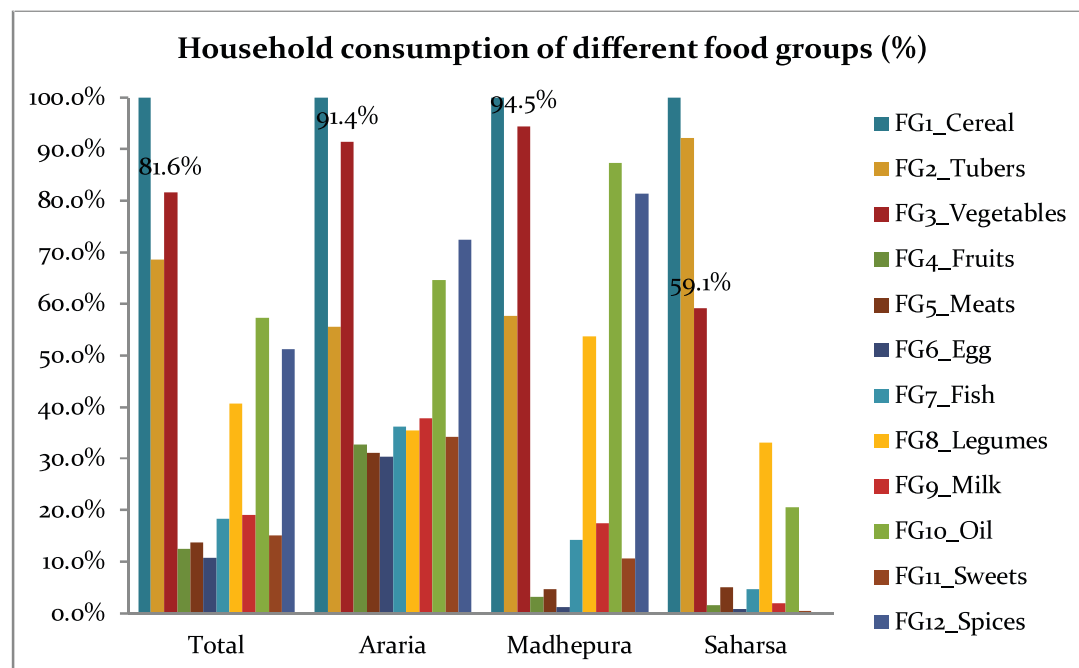


Figure 58. Household consumption of different food group (%), Suposhan Baseline Survey, Bihar, 2018

Household level dietary pattern was assessed based on the previous day dietary recall, and this was analysed for dietary diversity based on 12 food groups (cereals, white tubers and roots, vegetables, fruits, meat, eggs, fish and other seafood, legumes, nuts and seeds, milk and milk products, oils and fats, sweets, spices, condiments and beverages). All households across the study districts reported consuming cereals the day preceding enumeration. Next to cereal, vegetables were the second most commonly consumed food group item (81.6%). Vegetable consumption was highest in Madhepura (94.5%) followed by Araria (91.4%) and Saharsa (59.1%). Overall, 68.6% households also consumed Tubers with highest percentage in Saharsa (92.2%), followed by Madhepura (57.7%) and Araria (55.6%). Overall, fruits consumption was found to be very low (12.5%) among the study population.

However, 32.7% households in Araria consumed fruits on the previous day, while it is 3.2% and 1.6% respectively for Madhepura and Saharsa. Overall, meat consumption was found to be only 13.7% among the study population. This was 31% in Araria followed by Saharsa (5.1%) and Madhepura (4.7%). The consumption of egg was found to be 10.8%, of which 30.4% was reported in Araria, followed by Madhepura (1.2%) and Saharsa (0.8%). Fish consumption was 18.4% with highest consumption in Araria (36.2%) followed by Madhepura (14.2%) and Saharsa (4.2%). Overall, 40% households were consuming Dal, of which 53.8% consumption was reported in Madhepura followed by Araria (35%) and Saharsa (33%).

⁴ <http://www.fao.org/3/a-i1983e.pdf>

Household Dietary Diversity (District Wise)

A district wise 24-hour dietary recall (24HR) was conducted for the households among study population, to capture detailed information about all foods and beverages (all dietary supplements) consumed by the respondent in preceding 24 hours, most commonly, from midnight to midnight the previous day. Higher the dietary diversity better is the access to nutrition.

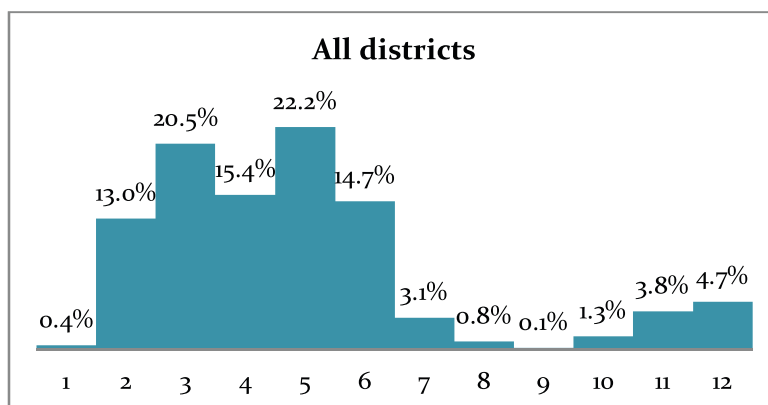


Figure 59. Dietary Diversity Score, All district, Suposhan Baseline Survey, Bihar, 2018

The graph represents the distribution of households based on the total dietary diversity score. Overall dietary diversity score among the study population was distributed mostly within 2-6 food groups, as it was found out based on one day dietary recall that a very few households consumed between 10-12 food groups (<http://www.fao.org/3/a-i1983e.pdf>, Pgs. 25 & 26).

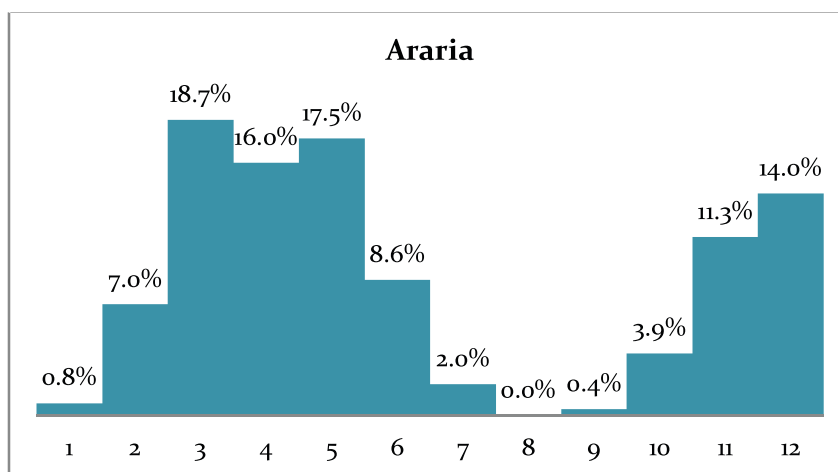


Figure 60. Dietary Diversity Score, Araria, Suposhan Baseline Survey, Bihar, 2018

Of the three districts, households among study population in Araria were found to have a better household dietary diversity with about 14% households consuming from 12 food groups, 11.3 % consuming from 11 food groups, and 3.9% consuming from 10 food groups.

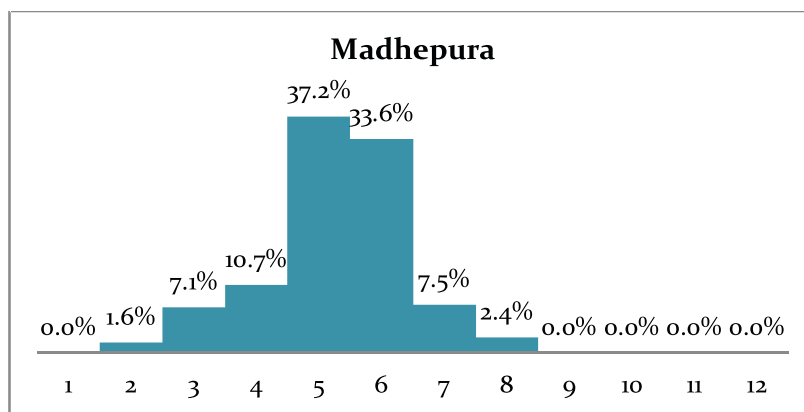


Figure 61. Dietary Diversity Score, Madhepura, Suposhan Baseline Survey, Bihar, 2018

In Madhepura, dietary diversity among the study population ranged from 2 to 8 food groups, of which 2.4% households consumed from 8 food groups and 7.5% households consumed from 7 food groups. Majority of the households, i.e. 33.6% and 37% consumed from 6 food groups and 7 food groups, respectively.

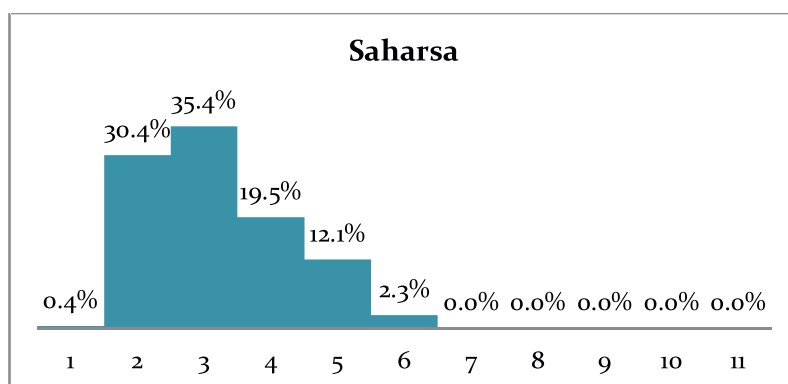


Figure 62. Dietary Diversity Score, Saharsa, Suposhan Baseline Survey, Bihar, 2018

Dietary diversity was found to be lowest among the study population in Saharsa district ranging from 2 - 6 food groups. It was found that most of the households consumed cereals and tubers, while very few household consumed meats, fish, egg or milk etc.

Women Dietary Diversity (Individual level)

WDD is a population level indicator, based on a recall period of a single day and night, developed to assess micronutrient adequacy of women's (aged 15-49 years old) diets. Higher the dietary diversity score better is the nutrition status, but the findings pointed to low dietary diversity among the women of study population.

Overall, 31% were found to be consuming green leafy vegetables across the study districts, which was found to be highest in Araria (54.9%), and lowest in Saharsa (10.9%). The consumption of Vitamin-A rich foods across districts was 12.4%, which is highest in Araria (30%), and abysmally low in Madhepura (0.8%) and Saharsa (6.2%). Fruits and vegetables was second most common food group after cereals from which the women consumed. Overall, 77% women consumed fruits and vegetable, which is highest in Araria (90.9%) followed by Madhepura (87.9%) and lowest in Saharsa (52.9%). Legumes are the third most common consumed food group (40.7%) for the study population, with highest consumption in Madhepura (53.8%), followed by Araria (40%) and Saharsa (33%).

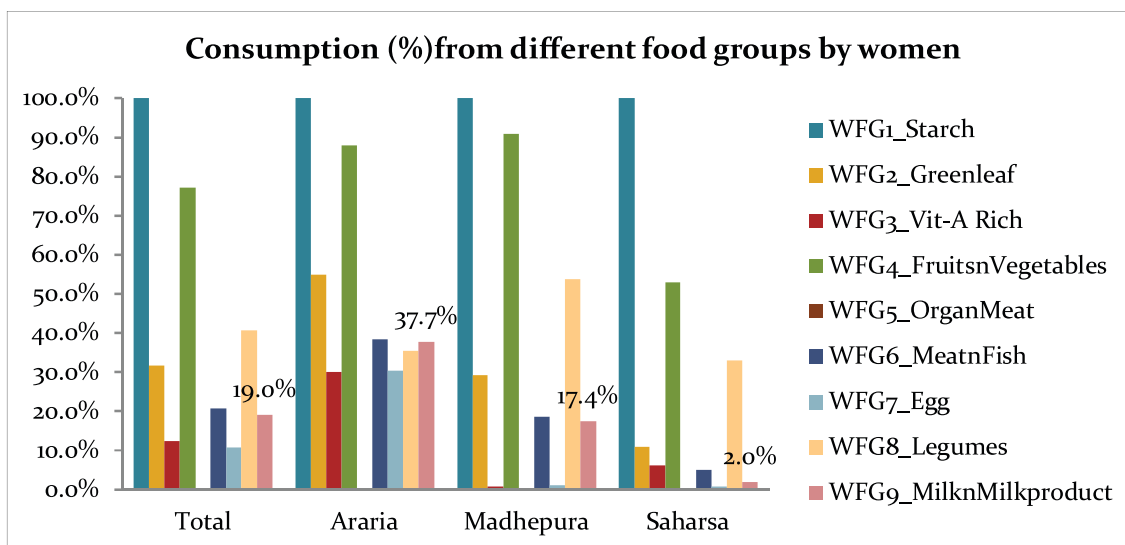


Figure 63. Consumption (%) from different food groups by women, Suposhan Baseline Survey, Bihar, 2018

The survey found that a complete lack of consumption of organ meat (liver, kidney etc.) by women across study districts. Overall, meat and fish were consumed by 20.7% women, which is highest in Araria (38.5%). Meat and fish consumption by women was found to be low in Madhepura (18.6%) and lowest in Saharsa (5.1%). Consumption of eggs was found to be 10.8%, with higher consumption reported in Araria (30.4%), with negligible consumption reported in Madhepura (1.2%) and Saharsa (0.8%). Similarly, overall consumption of milk and milk products was found to be higher in Araria (37.7%) followed by Madhepura (17.4%), and lowest in Saharsa (2%) out of the total 19% consumption across study districts.

4.13. Women's Dietary Diversity (District-wise)

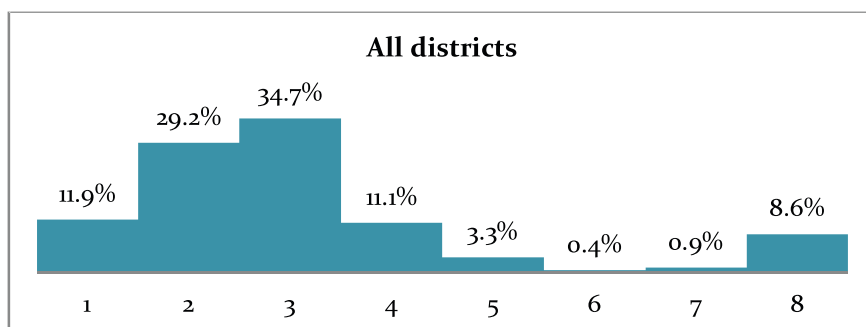


Figure 64. Women's dietary diversity score, All districts, Suposhan Baseline Survey, Bihar, 2018

To understand women's dietary diversity (WDD) pattern, a 24-hour dietary recall (24HR) based on recommended 9 food groups was conducted for three districts together as well as individual districts. Overall, it was found that women's dietary diversity score ranged from 1 to 8, where only 8.6% of women consumed from all 8 food groups, and less than 1% consumed from 7 food groups. A higher percentage of women were found to be consuming from a lesser number of food groups. 11.9% women consumed from one food group; 29.2% consumed from 2 food groups; and 34% women consumed from 3 food groups.

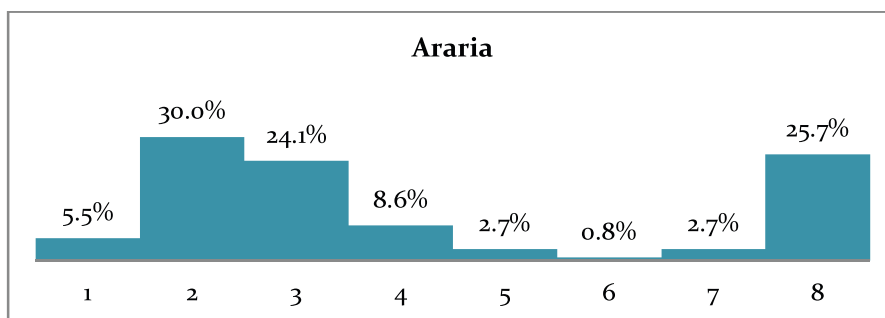


Figure 65. Women's Dietary Diversity Score, Araria, Suposhan Baseline Survey, Bihar, 2018

Among the districts, Araria showed a better dietary diversity among women, which ranges from 1 to 8 and about 25.7% women consumed from all 8 food groups. However, a higher percentage (30%) of women consumed only from 2 food groups.

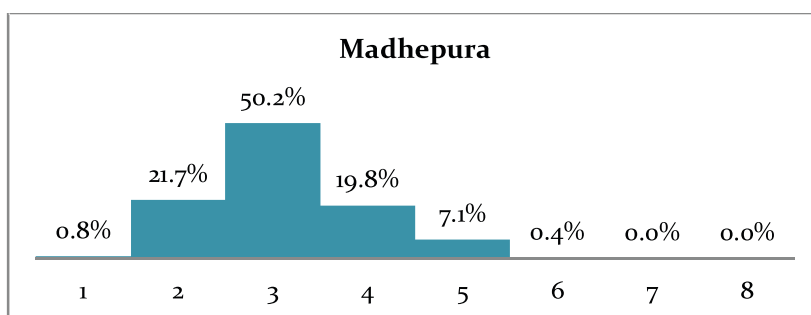


Figure 66. Women's Dietary Diversity Score, Madhepura, Suposhan Baseline Survey, Bihar, 2018

Women respondents in Madhepura were found to have a very low dietary diversity, which ranged from 2 to 5 food groups. 50% of the women consumed only from 3 food groups, with only 7% consuming from 5 food groups. No one was found to consuming from more than 5 food groups, while for 21.7% and nearly 20% women WDD ranged from 2-4 food groups.

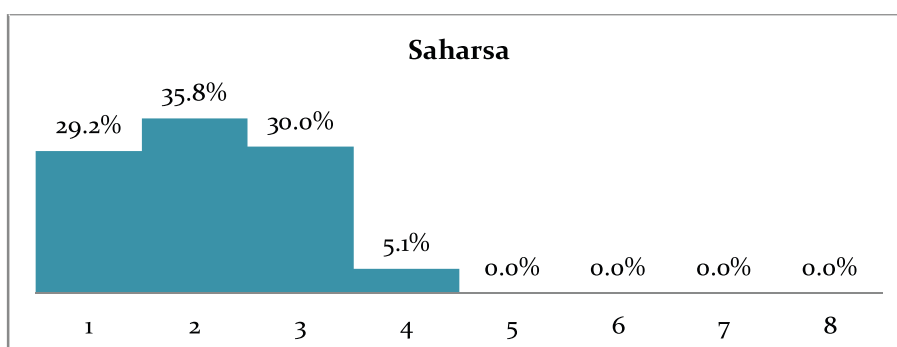


Figure 67. Women's Dietary Diversity Score, Saharsa, Suposhan Baseline Survey, Bihar, 2018

Women's dietary diversity was found to be lowest in Saharsa, ranging from 1-4, with only 5.1% women consuming from 4 food groups. Higher percentages of women's dietary diversity ranged between 1-3 food groups.

4.14. Social Benefits and Entitlements

Access to Targeted Public Distribution Scheme (TPDS)

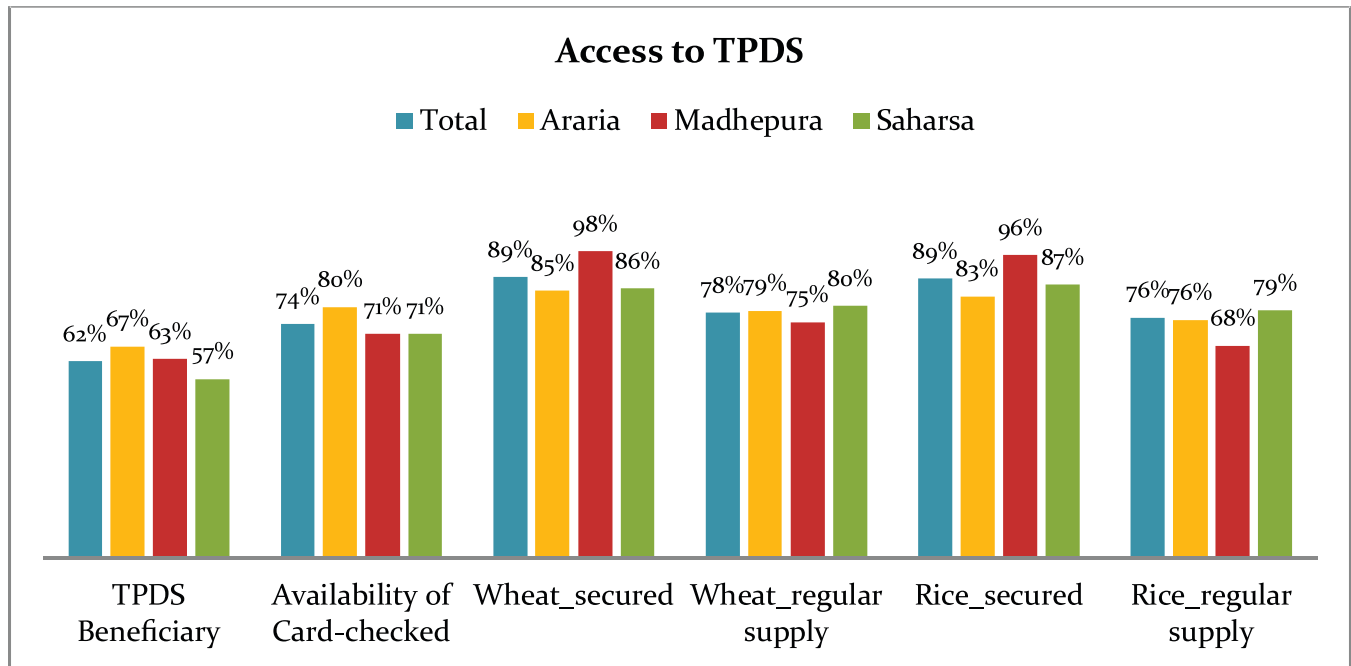


Figure 68. Access to TPDS services, Suposhan Baseline Survey, Bihar, 2018

Overall, 62% households were covered under the Targeted Public Distribution Scheme, of which highest coverage was found in Araria (67%), followed by Madhepura (63%) and Saharsa (57%). Among the TPDS beneficiaries, 74% respondents had job cards which could be verified during the survey. Under the scheme, subsidised food grains to ensure basic food security to eligible rural poor households (under the National Food Security Act 2013).

Among the beneficiaries of TPDS, 89% households secured wheat from fair price ration shops, and 78% reported regularity in wheat supply. Of the 89% TPDS beneficiaries, Madhepura (96%) had the highest number of those securing rice, followed by Saharsa (87%) and Araria (83%). Overall, 76% beneficiaries reported a regular supply of rice. 48% beneficiaries mentioned about the good quality of wheat and 44% stated of the good quality of rice secured under the scheme (figures 69 & 70).

However, the analysis also points to a significant percentage of study population across districts (38%) not covered by the scheme. Saharsa has highest number of population yet to be covered followed by Madhepura and Araria.

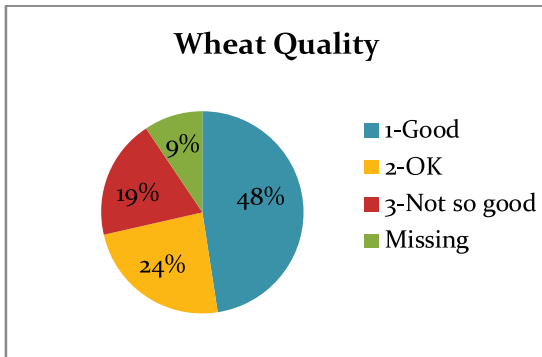


Figure 69. Beneficiaries response on wheat quality supplied through TPDS, Suposhan Baseline Survey, Bihar, 2018

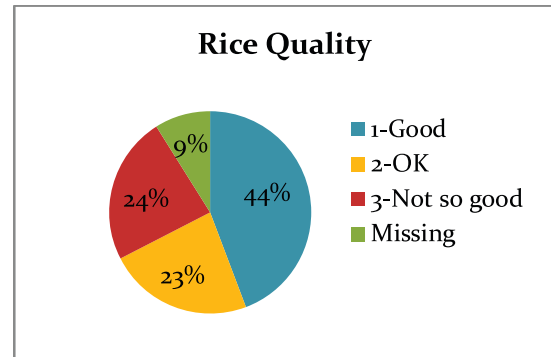


Figure 70. Beneficiaries response on rice quality supplied through TPDS, Suposhan Baseline Survey, Bihar, 2018

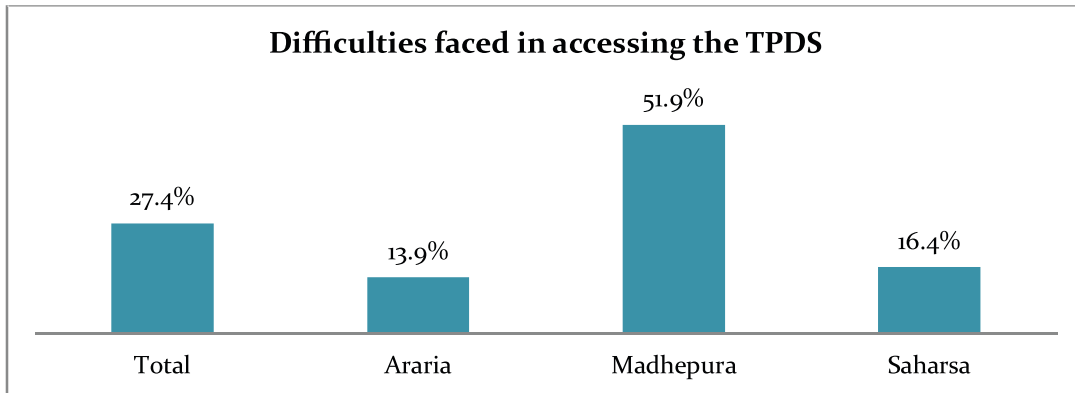


Figure 71. Challenges in accessing TPDS Ration, Suposhan Baseline Survey, Bihar, 2018

Overall, 27% beneficiaries reported difficulties in accessing ration through TPDS, with highest number of respondents in Madhepura (51.9%), which showed a fair coverage of beneficiaries (Fig.68), followed by Saharsa (16.4%) having lowest TDPS coverage (Fig 68) and Araria (13.9%) with highest beneficiary coverage.

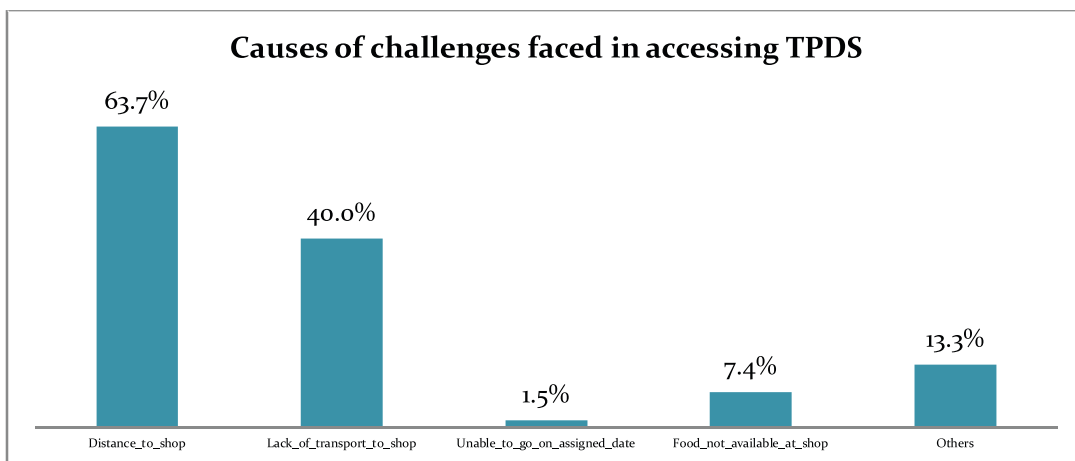


Figure 72. Reasons for difficulty in accessing TPDS ration, Suposhan Baseline Survey, Bihar, 2018

The challenges were related with distance (63.7%), lack of transportation (40%), unavailability of ration (7%) and inconvenient timings for fair price shops to operate (1.5%). Clearly, physical accessibility to the ration shops emerged as main obstruction in realisation of the entitlement.

Migration and Livelihood

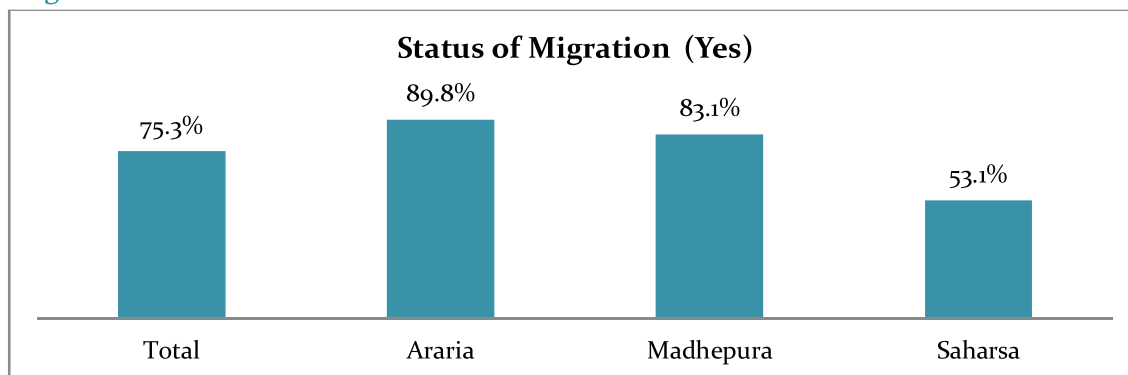


Figure 73. Migration among Mushahar community for livelihood, Suposhan Baseline Survey, Bihar, 2018

Overall, 75% of the households among study population reported inter-state migration as alternative means of livelihood. A higher proportion of migration was reported in Araria (89.8%), followed by Madhepura (83.1), and lowest in Saharsa (53.1%).

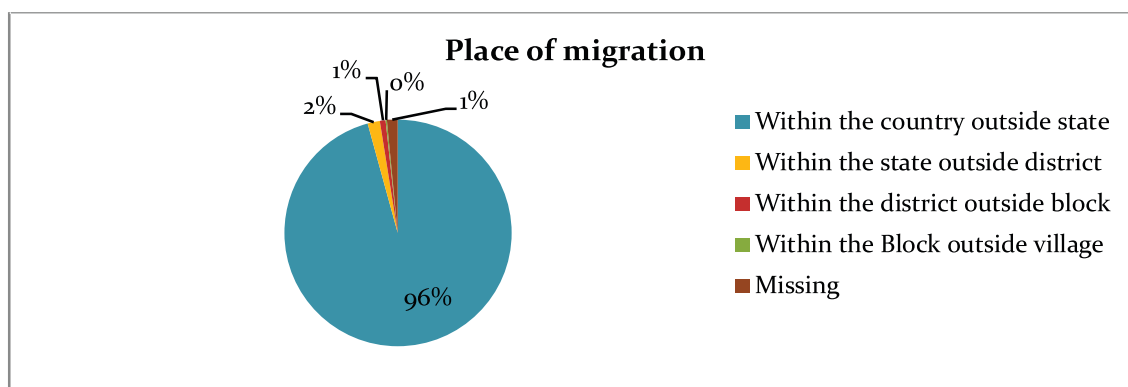


Figure 74. Place of migration, Suposhan Baseline Survey, Bihar, 2018

A majority of households (96%) among the study population reported interstate migration (figure 74), with half of them (Fig 75) taking to farm labour and (32%) as construction work.

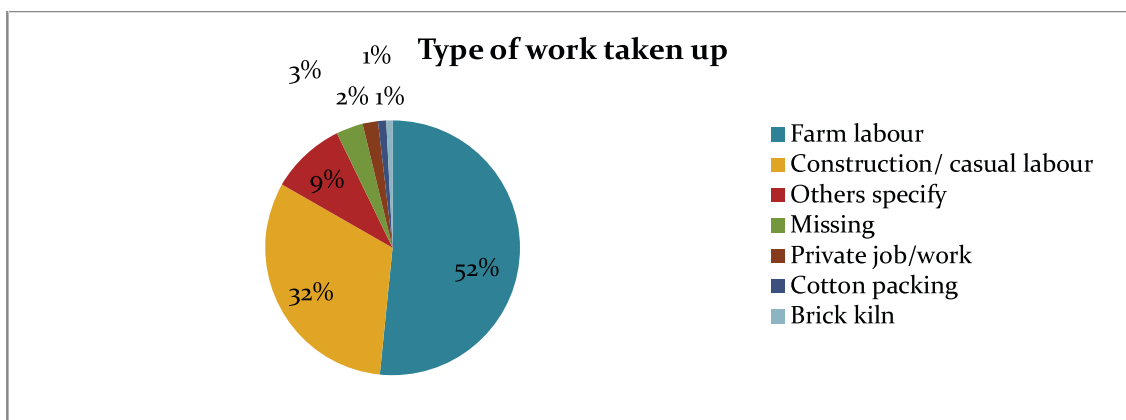


Figure 75. Type of work take up during migration, Suposhan Baseline Survey, Bihar, 2018

Access to MNREGA

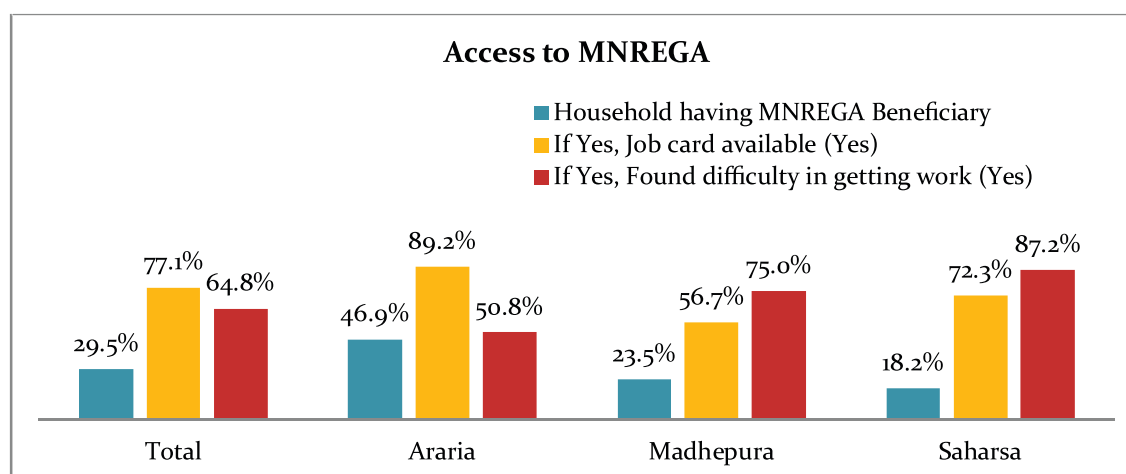


Figure 76. Access to work through MNREGA, Suposhan Baseline Survey, Bihar, 2018

Under the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), hundred days of wage-employment to rural households in a financial year is guaranteed, in exchange for unskilled manual work. It aims to enhance livelihood security of the rural households. Only 29.5% households among the study population reported access to work under the scheme, of which 77% had job cards. About 64% faced difficulties in securing work under the scheme.

Access to work under MNREGA was found to be better in Araria (46.9%) as compared to Madhepura (23.5%) and Saharsa (18.2%). Most of the challenges were reported by the study population in Saharsa (87%), followed by Madhepura (75%) and Araria (50.8%). Lack of work opportunities in the village explains the high rate of migration (Fig. 74) among the study population.

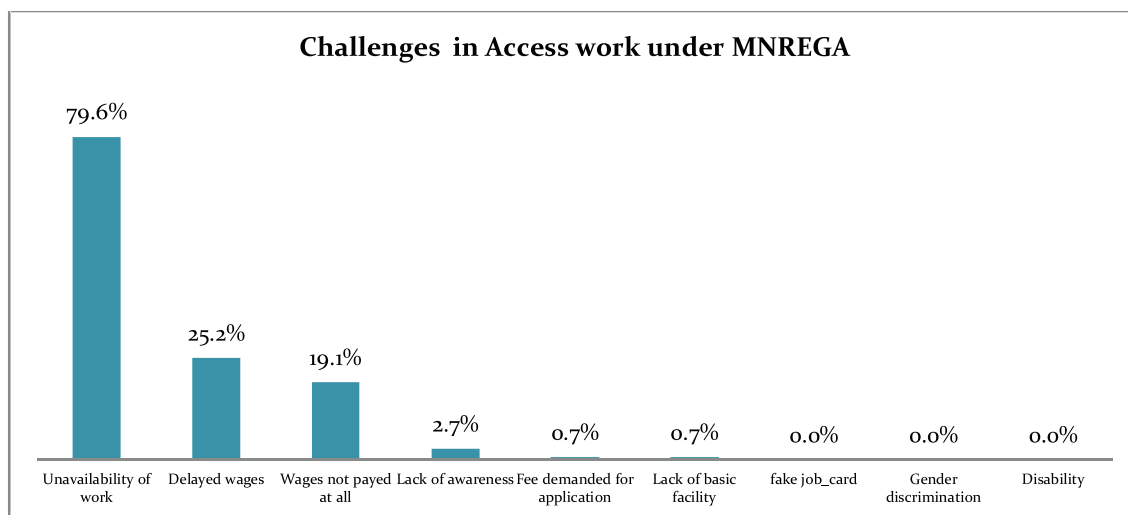


Figure 77. Challenges in getting work through MNREGA, Suposhan Baseline Survey, Bihar, 2018

The difficulties pertained to unavailability of work (79%), delayed wages (25%) and unpaid wages (19%). This raises concerns about the implementation of the scheme, which is very critical for the study population that has shown high migration as alternative livelihood option. It also throws open the need to create awareness about compensation people are entitled to upon unavailability of work under the Act.

Access to Janani Suraksha Yojana

Janani Suraksha Yojana (JSY) is a safe motherhood intervention under the National Rural Health Mission (NRHM) being implemented with the objective of reducing maternal and neo-natal mortality, by promoting institutional delivery among the poor pregnant women. JSY Scheme provisions cash assistance to pregnant women of Rs 1400.00 for institutional delivery in rural area and Rs 1000.00 in urban area.

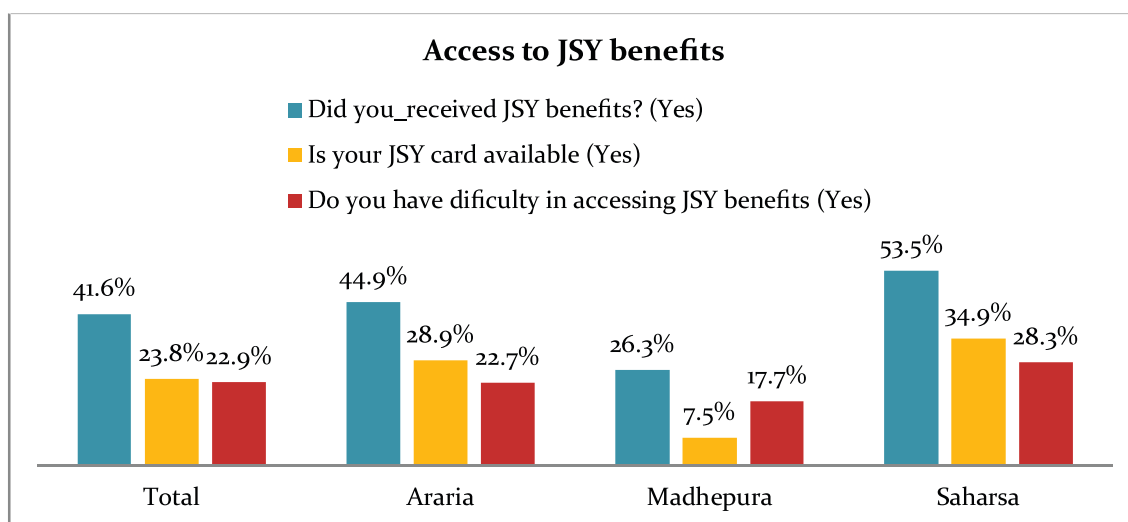


Figure 78. Access to JSY Benefits, Suposhan Baseline Survey, Bihar, 2018

The survey showed that 41.6% women in the study population had received financial assistance under JSY during last pregnancy. A higher number of beneficiaries were found in Saharsa (53.5%), followed by Araria (44.9%), with a very low turnout in Madhepura (26.3%). However, of the 41.6% beneficiaries, JSY cards were available with a little over half the beneficiaries (Fig 78) for on-spot verification. While 34.9% beneficiaries in Saharsa possessed JSY cards, followed by Araria (28.9%), in Madhepura only 7.5% had their JSY cards with them.

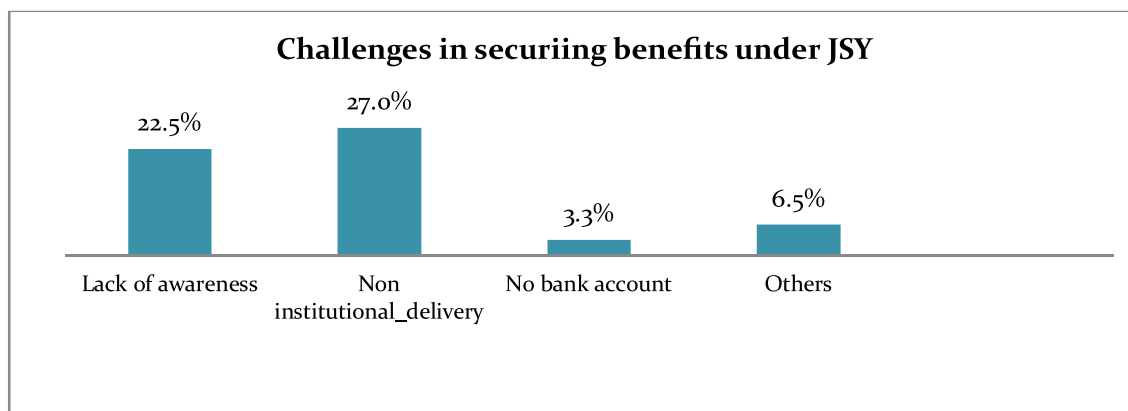


Figure 79. Challenges in security benefits under JSY, Suposhan Baseline Survey, Bihar,2018

Overall, 22.9% women reported the challenges in accessing benefits under the scheme, of which highest number of reports came from Saharsa (28.3%) followed by Araria(22.7%), and a significant number from Madhepura (17.7%) compared to abysmal scheme coverage in the district. The main challenges for non-realisation of JSY benefits pertained to non-institutional (27%) and absence of awareness about the scheme (22.5%).

Madhepura, interestingly, showed a lesser number of beneficiaries under the scheme, with a disproportionately lesser number of them having JSY cards, and higher reporting of challenges in accessing the scheme, alluding to the discrepancy riddled coverage and implementation on ground.

Access to widow pension

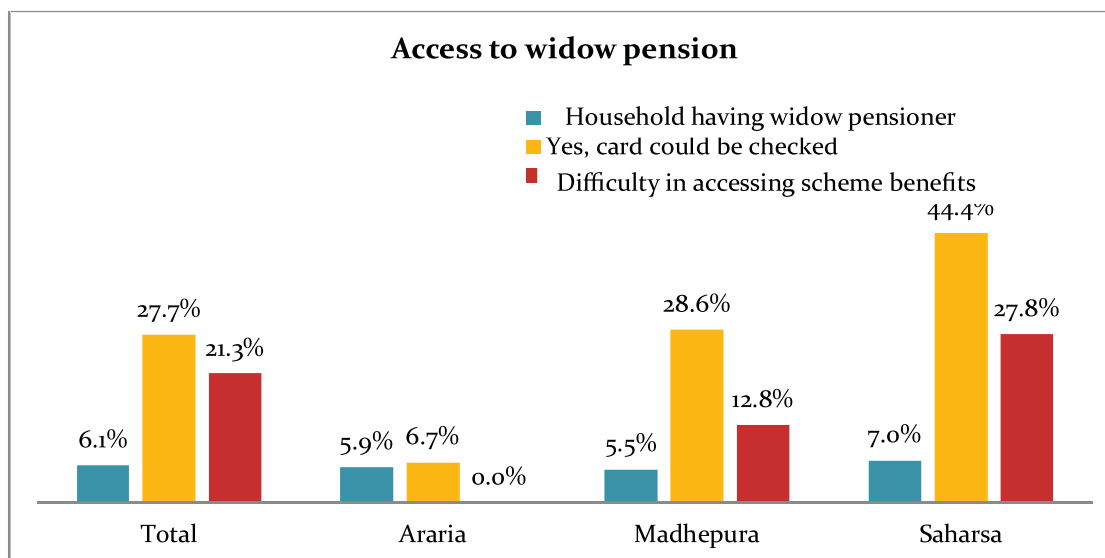


Figure 80. Access to widow pension, Suposhan Baseline Survey, Bihar, 2018

Overall, only 6.1% households were found having beneficiaries of widow pension scheme. District wise analysis shows an unimpressive scheme coverage. Of the total beneficiaries 27.7% beneficiaries had widow pension card. A high number (27.7%) of respondents reported difficulties in accessing the scheme. Lack of proper documentation, delays in disbursements, and AADHAAR linking of bank account were reported among the barriers to realisation of the scheme.

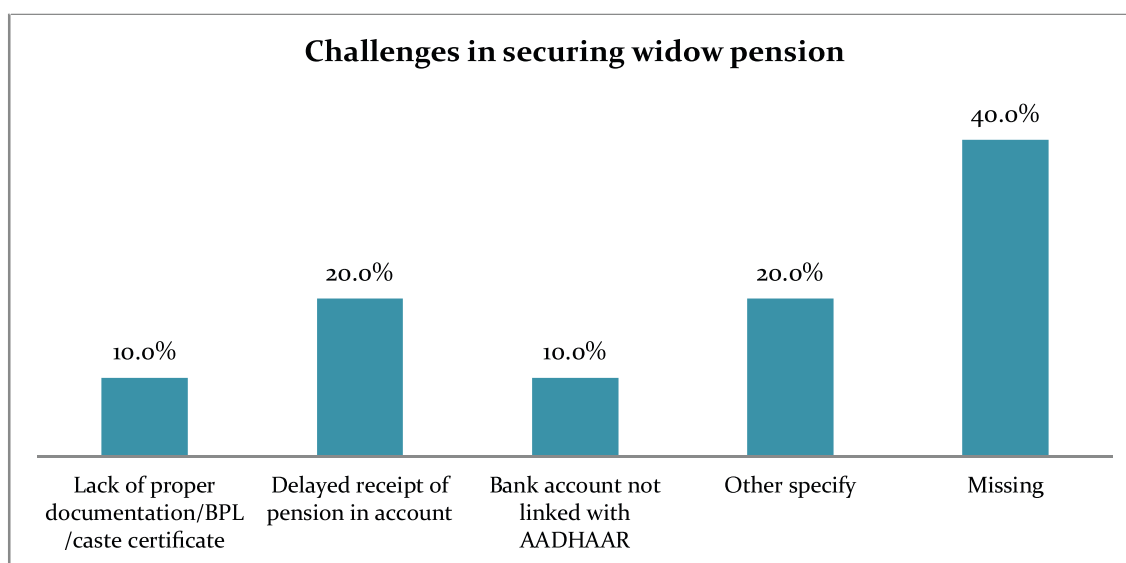


Figure 81. Challenges in securing widow pension, beneficiary response, Suposhan Baseline Survey, Bihar, 2018

Access to old age pension

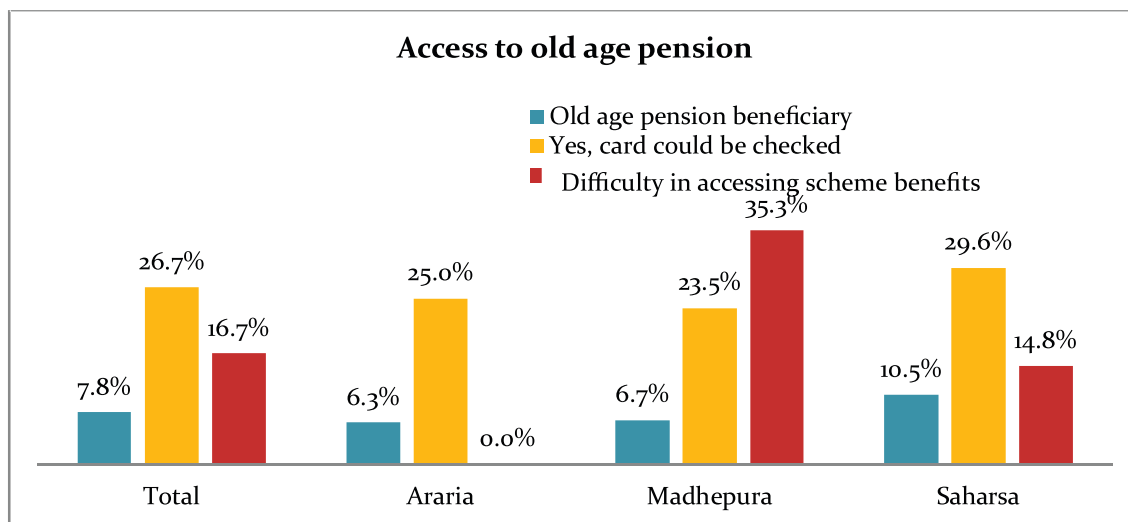


Figure 82. Access to old age pension, Suposhan Baseline Survey, Bihar, 2018

Overall, 7.8% households of the study population were covered under old age pension scheme, which is highest in Saharsa (10.5%) followed by Madhepura (6.7%) and Araria (6.3%). The data on district wise coverage presents a bleak picture, and only Saharsa district has a slightly better coverage, though far from satisfactory as for all 3 districts together. However, more than benefit realisation, a greater percentage of study population reported difficulties in accessing the entitlements under the scheme in Madhepura (35.3%), and nearly half the beneficiaries having the scheme card reported challenges in Saharsa (14.8%).

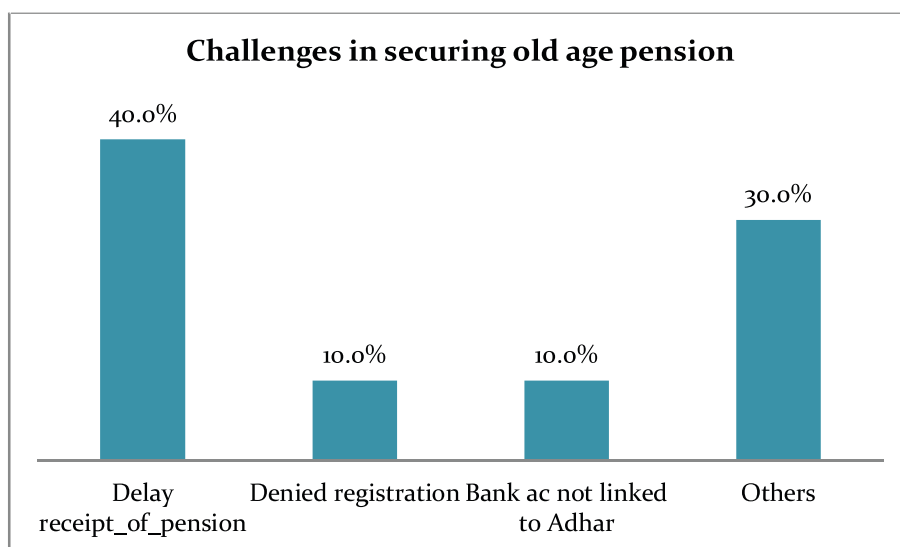


Figure 83. Beneficiary's response on challenges in securing old age pension, Suposhan Baseline Survey, Bihar, 2018

Of 16.7% beneficiaries who reported challenges in realising the scheme benefits, a very high percentage (40%) reported delays in disbursement of pension as the main issue. Other reasons included registration denied and Aadhaar linking of bank account. The delay in financial assistance under the scheme is likely to expose the elderly in the study population to uncertainties and dependencies.

Access to ICDS services

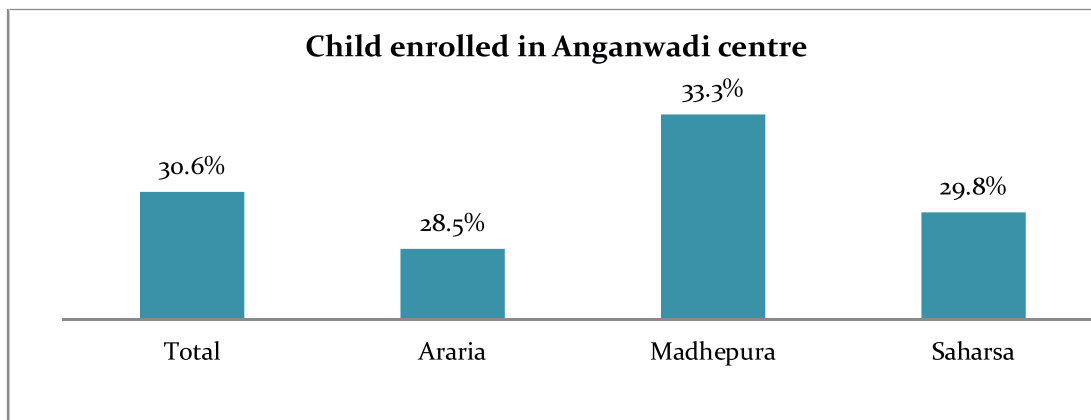


Figure 84. Children's enrolment in Anganwadi Centre, Suposhan Baseline Survey, Bihar, 2018

Overall, 30.6% children aged 0-5 years in the study population were found to be enrolled in Anganwadi centres under the ICDS scheme. Highest enrolment was reported in Madhepura (33.3%), followed by Saharsa (29.8%) and Araria (28.5%). The reverse reading of data show that about 70% children under-5 were not enrolled in the Anganwadis.

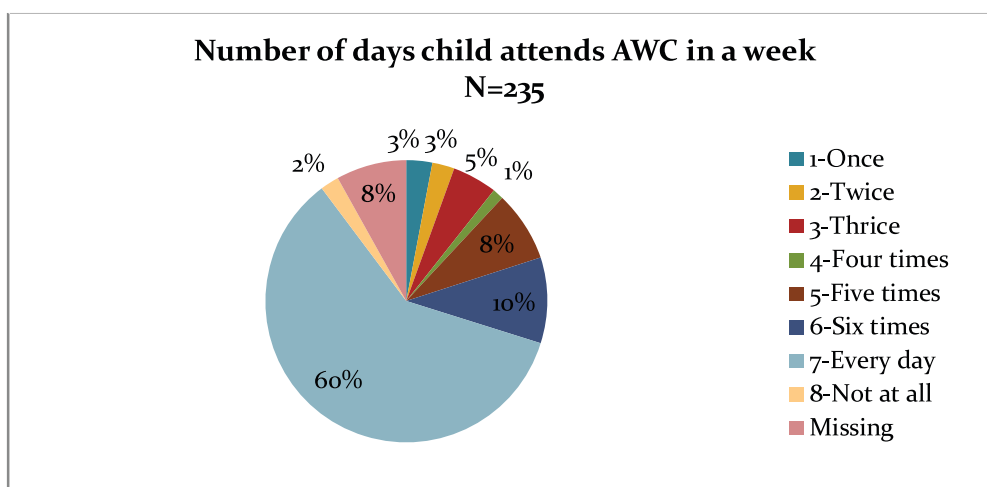


Figure 85. Child's attendance in AWC, Mothers response, Suposhan Baseline Survey, Bihar 2018

Of those enrolled in Anganwadi centres, while a majority were reported to be regular to anganwadi centres, with 71% children receiving food regularly, 40% were found to be irregular to the centre. A considerable percentage (13%) of them were found to be receiving nutrition entitlements less often.

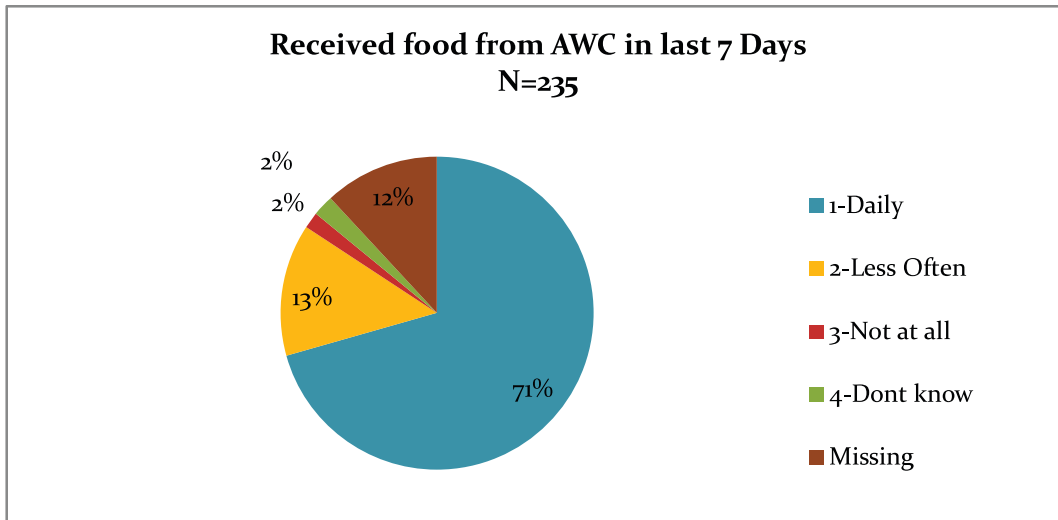


Figure 86. Mothers response on food received by the child from AWC, Suposhan Baseline Survey, Bihar, 2018

Interactions with women during the study revealed their reluctance to send to children to Anganwadi centres because the children were not receiving any benefits to which they were entitled. Besides, the ICDS workers shared about the limited food provisions the centre received in addition to the prescribed capacity for each centre. This resulted in prioritisation of 40 most needy children based on nutritional status of the child for admission into AWCs leaving out other entitled children and women. This also indicated to the shortage of food provisions and distribution at the centre.

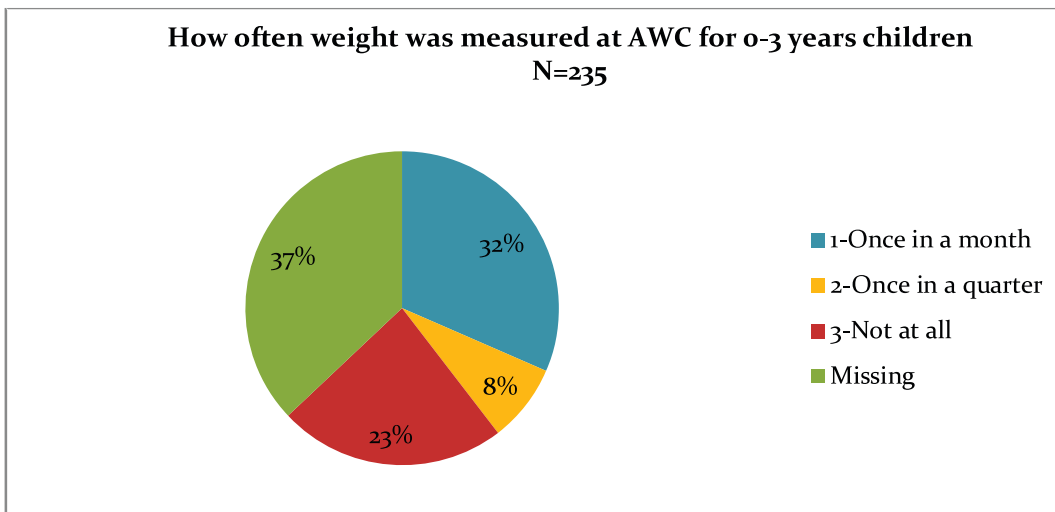


Figure 87. Measurement of weight in AWC (0-3 Years), Suposhan Baseline Survey, Bihar, 2018

The study revealed that 32% women reported monthly weighing of children at anganwadi centre, whilst a significant percentage (23%) of them reported absence of weighing exercise. Observations and field interactions revealed that many anganwadi centres didn't have child weighing machines, or were dysfunctional; besides lacking growth charts. Moreover, anganwadi workers were found wanting of training in measuring the weight and height of children, and tracking child growth as per the growth standards prescribed by the World Health Organisation.

Access to Mid-Day Meal in schools

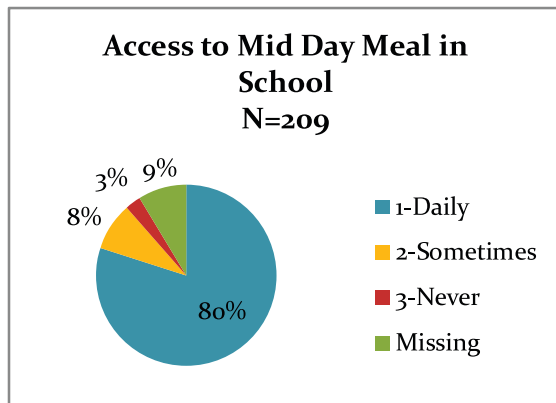


Figure 88. Access to Midday meals in School, Suposhan Baseline Survey, Bihar, 2018

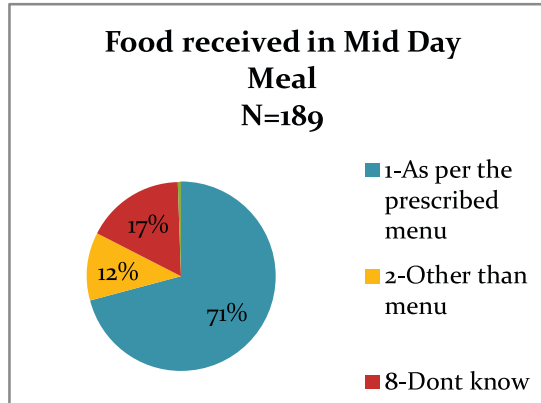


Figure 89. Food received in Mid-Day Meal, Suposhan Baseline Survey, Bihar, 2018

Overall, the coverage of MDM service was found to be better than other schemes. This also points to the school enrolment of children in school with 80% availing midday meals in schools every day. A small percentage of responses (8%) indicated irregularity in the service that could be read together with 12% responses on provision of out of menu meals. Overall 71% respondents reported MDM provision as per the prescribed menu.

5. Conclusions & Recommendation

The status of maternal health and nutrition in the study districts is found to be critical. Early marriage, early pregnancy and high fertility rate is of concern to health of the women in the community. As per the study findings, a significant percentage of women reported to receive between 1-3 ANC check-ups whereas the percentage of women who reported more than 3 ANC check-ups was abysmally low. Further, overall, one in two women goes for institutional delivery in government hospitals which indicates that this is a critical area of intervention. Consumption of iron-folic acid, Vitamin – A and deworming tablets is also quite low. Further, knowledge of mothers regarding the frequency of tetanus injections during pregnancy, use of iodised salt, number of ANCs to attend and food intake was, in general, found to be quite low.

The awareness gaps observed in matters of health and nutrition need very strong and targeted Information, Education and Communication strategy to make the households aware about the need to intake proper quantities of food and medicines during and after pregnancy. This would also ensure that the maternal health and nutrition services are demand driven.

Water, sanitation and personal hygiene are important nutrition sensitive interventions. The WaSH indicator performances are found to be very low in the study population. To improve health and nutrition indicators, water, sanitation and hygiene will need to be improved too through an integrated programme.

High prevalence of diarrhoea is found among children in the study population. Health seeking behaviour during diarrhoea is found to be low and very few children were treated with recommended zinc and ORS solutions. Correct infant and young child feeding practices during diarrhoea also needs to be improved for the community with intensive awareness generation initiatives, focused counselling of women, sensitisation and capacity building of frontline health workers, and traditional healers/midwives.

Food and nutrition security in the study population is a major concern for ensuring optimal health and nutrition. Scarcity of food at the household level was noted in all three districts at any point of time in a month, which raises questions on the coverage and efficiency of existing food security schemes. Dietary diversity in the community is very low as most of the households depends on market for vegetables and foods. Since majority of the household do not have any land ownership, they do not grow their own foods or vegetables as kitchen garden. To meet the dietary needs and dietary diversity, a more integrated health, nutrition and livelihood programme may improve the situation. Various food technologies like food fortification and community based agricultural practices may bring solution along with advocacy for their land rights. More information on dietary practices based on seasonality and behaviour will help design awareness activities for specific community.

There is high prevalence of moderate and severe child under-nutrition in the study population. Community level child growth monitoring is not being performed as most of the Anganwadi centres do not have weighing machines. Most of the ICDS workers mentioned that they did not receive any training on child growth monitoring in the recent past. A strong networking with government institutions and health service providers including training and capacity building of front-line health and nutrition workers will ensure that the frequency and quality of maternal health and nutrition services are as per demand of the community and as per Indian Public Health Standards. Along with nutrition intervention, continuous monitoring of child growth needs to be prioritised to improve the IYCF practices and child nutrition status in the community.

Given the preference for home based deliveries, and Government's emphasis on institutional deliveries, which connects with other scheme benefits, sensitising and training traditional birth attendants with promotion of institutional deliveries can alter the situation for better. Training of the traditional birth attendants can enable them in gauging the danger signs guiding women to a public health facility well in advance.

As revealed by data, the coverage and implementation of social security and development schemes is found to be shoddy. These schemes could transform the situation for the study population if implemented effectively. ICDS services are essential in ensuring child health nutrition at the young age yet it is sub-optimal in the study population. Growth monitoring and promotion of IYCF practices through ICDS could not be seen during the survey. ICDS is mostly focused on take home ration (THR) which is also for few beneficiaries only. For urgent improvement in child nutrition, ICDS services need to be reprioritised with up gradation with essential infrastructures and capacity building of AWW for improved service delivery. Overall, awareness drives focusing complete information and assistance on schemes, and legal documentation need to go hand in hand.

About Caritas India

Caritas India, founded in 1962, is the official development arm (registered under the Societies Registration Act XXI 1860 (the Punjab Amendment Act 1957) of the Catholic Church in India. Over the years, Caritas India has diversified her interventions in the areas of Humanitarian Response and Disaster Risk Reduction, Climate Adaptive Sustainable Agriculture and Livelihood, Anti-Human Trafficking, Child Rights and Development, Peace-Building and Community Health. With a network of more than 200 partners across India, Caritas India reaches out to the most marginalised through humanitarian and development programmes.



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