Pattern and Determinants of Complementary Feeding Practices among children aged 6-23 months.

Piramal Swasthya, Patna

Presented By – Nikhil Kumar
Roll no - 73
Mentor – Dr Sukesh Bhardwaj
Iihmr Delhi

Dr. Sukesh Bhardwaj

To: Nikhil Kumar

Wed 6/18/2025 1:06 PM

Dear Nikhil,

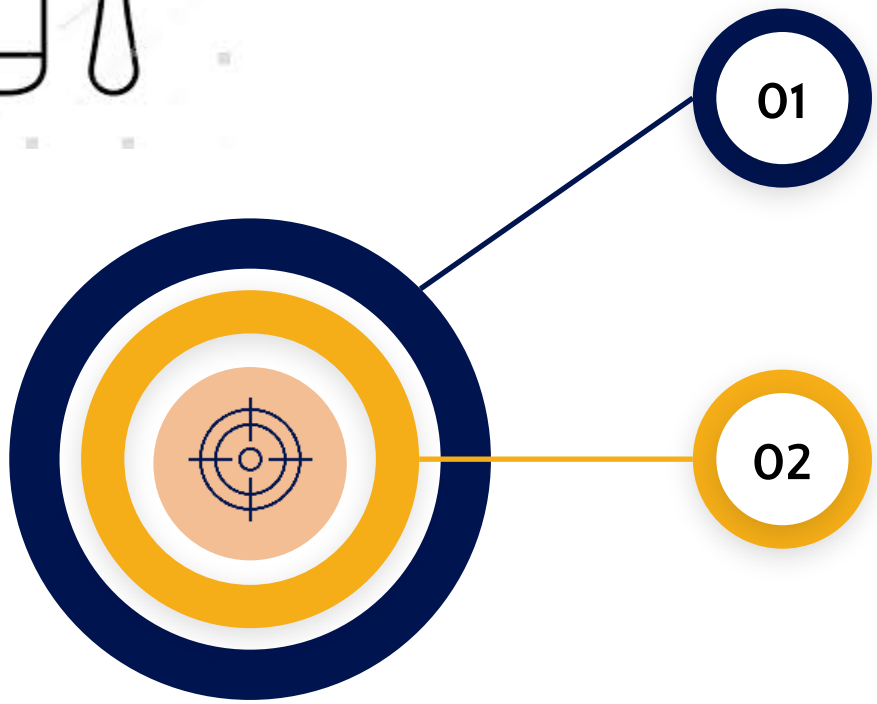
Kindly specify figures rather than %age in your results.

Rest seems ok for now you may go ahead with your presentation.

Note down the suggestions and incorporate all.

Regards
Sukesh

Sent from Outlook for Android



Primary Objective

1. To understand the current situation and pattern of complementary feeding practice among children aged 6-23 months.

Secondary Objective

1. To determine the sociodemographic factors affecting complementary feeding among children aged 6-23 months.

- Complementary feeding means giving babies solid and semi-solid foods, along with breast milk, when they are about six months old.

- This is important because, as babies grow, they need more nutrients like iron, zinc, calcium, and vitamins to stay healthy and develop well.

- If babies do not get the right foods at the right time, they may not grow properly and can become sick more often1. Good complementary feeding helps children grow strong, supports brain development, and protects them from malnutrition and diseases.

- In places like Bihar, many families face challenges such as poverty and lack of awareness, which can make it hard to feed babies the right foods.

- Teaching families about proper complementary feeding can help children have a healthier start in life.
- According to the latest data from the National Family Health Survey (NFHS-5, 2019-21), Bihar has seen some improvements in child nutrition, but malnutrition remains a significant challenge.

- Malnutrition is more pronounced in rural areas, where poverty, lack of awareness, and limited access to health services are greater barriers. Rural children are more likely to be stunted, underweight, or wasted compared to their urban counterparts.

Study Area

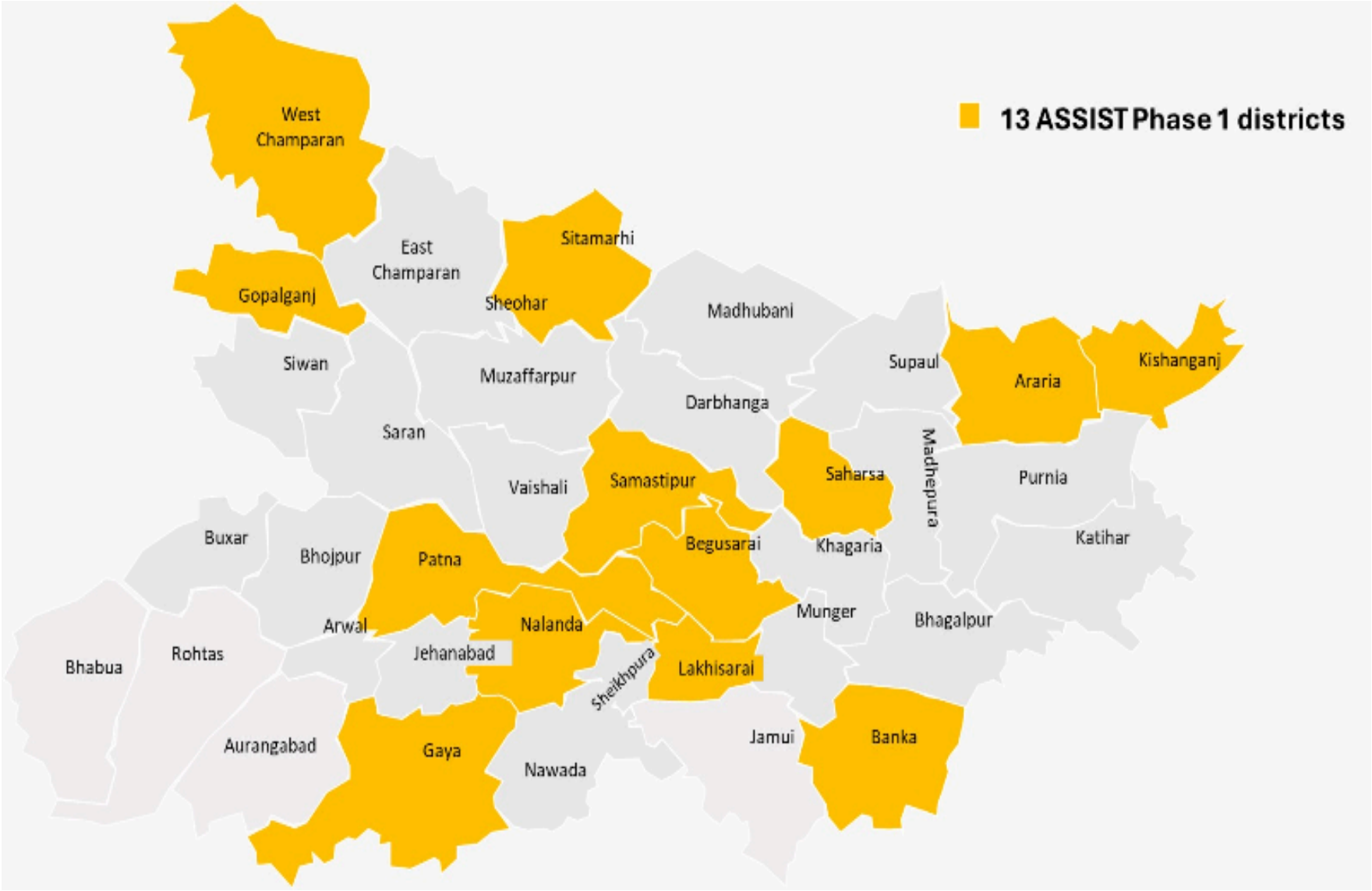
45 blocks from **13** districts across all **9** **Commissionerate**

2,250 sample size/age group

6,750 respondents

Mothers of children aged:

- 0-5 months
- 6-11 months
- 12-23 months



Methodology

Inclusion: -

- This Study based on Secondary data which is collected in 2024 and again in 2025 in 13 district of bihar.
  - Study Area: 13 districts of Bihar selected randomly from 9 Commissionerates.
  - Target population: mothers of children 6-11, 12-23 months.
  - Sample size: ~2,250 interviews per category (6-11 months, and 12-23 months)
  - SAS software is used for data analysis.

Exclusion: - Mothers of children aged above 24 months.

Sample Size Calculation

13 Districts

↓

Each District 45 block

↓

25 Anganwadi centres selected from each block.

↓

6 interviews have to be conducted at each Anganwadi.

↓

0-5 months | 6-12 months | 12-23months

13 districts were selected randomly.
45*25= 1125
In every ANC 2 interview conducted within each age group.
So,
1125 *2=2250

Tool

ASSIST-2025

"HOUSEHOLD SURVEY" FOR PROGRAMME MANAGEMENT
UNDER BIHAR TECHNICAL SUPPORT PROGRAMME
QUESTIONNAIRE FOR MOTHER OF CHILDREN AGED 6-11 MONTHS

CONFIDENTIAL

IDENTIFICATION		
A.डेटा संग्रहण के जिला का नाम /DISTRICT OF DATA COLLECTION		**Drop down list**
B.डेटा संग्रहण के प्रखंड का नाम / BLOCK OF DATA COLLECTION		**Drop down list**
C.स्वास्थ्य उपकेन्द्र (एच.एस. सी.) /NAME OF HEALTH SUB CENTRE (HSC) निर्देश: यह AWC जिस HSC / AAM-HWC के अंतर्गत आता है उसके बारे में आंगनवाड़ी सेविका या आशा से पूछकर दर्ज करें / Instructions: Ask the name of HWC from AWW or ASHA.		**Text**
C1. क्या यह स्वास्थ्य उपकेन्द्र (एच.एस. सी) वर्तमान में एक आयुष्मान आरोग्य मंदिर-हेल्थ & वेलनेस सेंटर/ (AAM-HWC) बन चुका है या अपग्रेड हो चुका है? / Has this HSC currently been upgraded to Ayushman Arogya Mandir -Health & Wellness Centre?	हाँ / Yes ·····. 1 नहीं / No ····· 0	**Text**
C2. इस AAM-HWC/HSC पर कितने ANM पोस्टेड हैं? / How many ANMs are posted on AAM-HWC/HSC?	**संख्या / Number ____**	<=2
C3. AAM-HWC/HSC पर पोस्टेड ANM का नाम / NAME OF ANM POSTED ON AAM-HWC/HSC निर्देश: ANM का नाम एवं मोबाईल नंबर आंगनवाड़ी सेविका या आशा से पूछकर दर्ज करें / Instructions: Ask the name and mobile number of both ANM from AWW or ASHA.	**ANM-1 का नाम/** NAME OF ANM-1 __ **ANM-1 का मोबाईल नंबर /** MOBILE NUMBER OF ANM-1 ____ **ANM-2 का नाम /** NAME OF ANM-2__ **ANM-2 का मोबाईल नंबर /** MOBILE NUMBER OF ANM-2____	Ask Name and mobile number of ANM as per number mentioned in Q.C2
D.गाँव का नाम /VILLAGE NAME		**Text**
E. पंचायत का नाम / PANCHAYAT NAME		**Dropdown**
F. पंचायत का कोड / PANCHAYAT CODE		**Dropdown**
QAWW_1. सैंपल लिस्ट के अनुसार आँगनवाड़ी केन्द्र का यूनिक कोड(11 अंक) /AWC Unique Code (11 digit) as per sample list		**Integer** **Type & match with given list**
QAWW_2. क्या सैंपल लिस्ट में दिया गया 11 अंकों का AWC कोड वर्तमान कोड से अलग है ?Is the 11 digit AWC code different from the given AWC code in the sample list	हाँ/Yes.....1 नहीं/No.....2	
कृपया 11 अंकों का वर्तमान AWC कोड दर्ज करें/Please enter the current 11 digit AWC code		**Ask if QAWW_1=1** **integer**
आँगनवाड़ी कार्यकर्ता का नाम /NAME OF AWW		

ASSIST 2025

HOUSEHOLD SURVEY FOR PROGRAMME MANAGEMENT
UNDER BIHAR TECHNICAL SUPPORT PROGRAMME
QUESTIONNAIRE FOR MOTHER OF CHILDREN AGED 12-23 MONTHS

CONFIDENTIAL

IDENTIFICATION		
A.डेटा संग्रहण के जिला का नाम /DISTRICT OF DATA COLLECTION		**Drop down list**
B.डेटा संग्रहण के प्रखंड का नाम / BLOCK OF DATA COLLECTION		**Drop down list**
C.स्वास्थ्य उपकेन्द्र (एच.एस. सी) /NAME OF HEALTH SUB CENTRE (HSC) निर्देश: यह AWC जिस HSC / AAM-HWC के अंतर्गत आता है उसके बारे में आंगनवाड़ी सेविका या आशा से पूछकर दर्ज करें / Instructions: Ask the name of HWC from AWW or ASHA.		**Text**
C1. C1. क्या यह स्वास्थ्य उपकेन्द्र (एच.एस. सी) वर्तमान में एक आयुष्मान आरोग्य मंदिर-हेल्थ & वेलनेस सेंटर/ (AAM-HWC) बन चुका है या अपग्रेड हो चुका है? / Has this HSC currently been upgraded to AAM-HWC?	हाँ / Yes ·····. 1 नहीं / No ····· 0	**Text**
C2. इस AAM-HWC/HSC पर कितने ANM पोस्टेड हैं? / How many ANMs are posted on AAM-HWC/ HSC?	**संख्या / Number ____**	<=2
C3. AAM-HWC / HSC पर पोस्टेड ANM का नाम / NAME OF ANM POSTED ON AAM-HWC / HSC निर्देश: ANM का नाम एवं मोबाईल नंबर आंगनवाड़ी सेविका या आशा से पूछकर दर्ज करें / Instructions: Ask the name and mobile number of both ANM from AWW or ASHA.	**ANM-1 का नाम/** NAME OF ANM-1 __ **ANM-1 का मोबाईल नंबर /** MOBILE NUMBER OF ANM-1 ____ **ANM-2 का नाम /** NAME OF ANM-2__ **ANM-2 का मोबाईल नंबर /** MOBILE NUMBER OF ANM-2____	Ask Name and mobile number of ANM as per number mentioned in Q.C2
D.गाँव का नाम /VILLAGE NAME		**Text**
E. पंचायत का नाम / PANCHAYAT NAME		**Dropdown**
F. पंचायत का कोड / PANCHAYAT CODE		**Dropdown**
QAWW_1. सैंपल लिस्ट के अनुसार आँगनवाड़ी केन्द्र का यूनिक कोड(11 अंक) /AWC Unique Code (11 digit) as per sample list		**Type and match with given list**
QAWW_2. क्या सैंपल लिस्ट में दिया गया 11 अंकों का AWC कोड वर्तमान कोड से अलग है ?Is the 11 digit AWC code different from the given AWC code in the sample list	हाँ/Yes.....1 नहीं/No.....2	
कृपया 11 अंकों का वर्तमान AWC कोड दर्ज करें/Please enter the current 11 digit AWC code		**Ask if QAWW_1=1** **Integer**
आँगनवाड़ी कार्यकर्ता का नाम /NAME OF AWW		

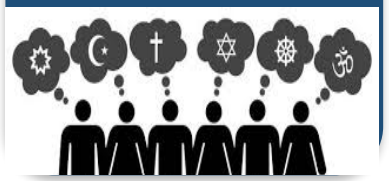
Literature review

- Complementary feeding (CF) is the process of giving solid or semi-solid food along with breast milk to children starting at 6 months of age.
- According to the World Health Organization (WHO), this period is critical for a child's growth and development. Poor feeding practices can lead to malnutrition, stunting, and other health problems in early childhood.
- In Bihar, the National Family Health Survey (NFHS-5, 2019–21) shows that only about **42%** of children aged 6–8 months receive timely complementary foods. Furthermore, just **11%** of children aged 6–23 months receive an adequately diverse diet (i.e., food from four or more food groups), and only **9.6%** get the minimum acceptable diet.
- These figures are much lower than the national average, indicating that complementary feeding practices in Bihar are poor and need urgent attention.
- Community-based studies and government data also highlight that many mothers start complementary feeding late or give only one type of food, such as rice or dal water, which lacks nutrients. Lack of counselling during antenatal and postnatal visits further worsens the situation.
- To improve the situation in Bihar, targeted nutrition education programs, awareness campaigns, and regular counselling through ASHAs and Anganwadi workers are essential. Government schemes like **POSHAN Abhiyaan** aim to address this gap, but more focused efforts are needed in remote and rural areas.

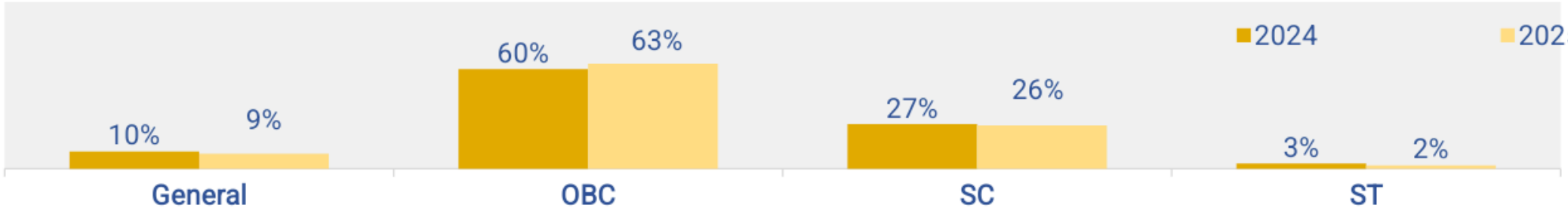
Variable

Socio-demographic variables	Exposure variables	Outcome variables
Religion	Advice on age-appropriate initiation of complementary feeding	TICF
Caste	Advice on age-appropriate frequency of complementary feeding	Age-appropriate meal frequency
Type of House	Advice on diverse diet from FLW	MDD
Family Type		Continued breastfeed
Mother Occupation		Minimum acceptable diet
SHG Membership		

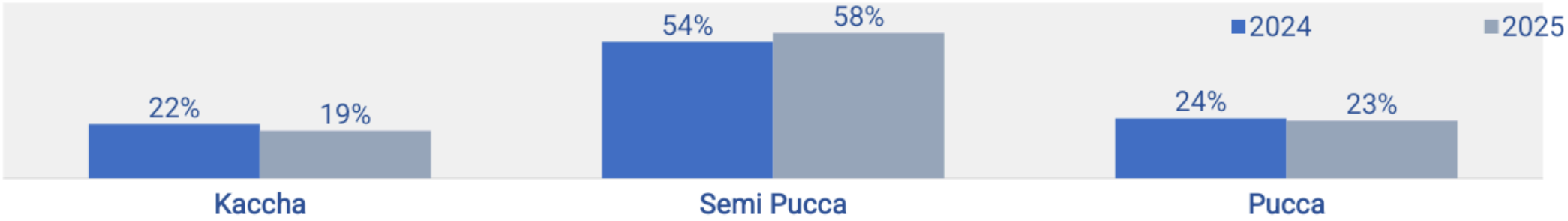
RELIGION



CASTE



TYPE OF HOUSE



Year	2024	2025
Month	Apr-May	Apr-May
N	4500	4500

Type of Family

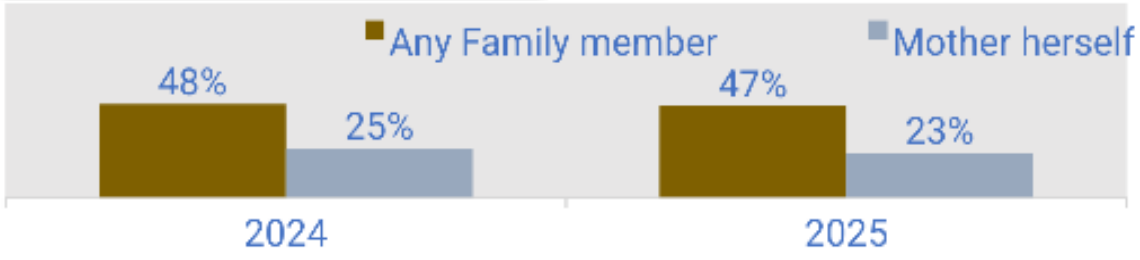
Nuclear		Joint	
44.61 %	42.84 %	55.39 %	57.16 %
2024	2025	2024	2025

Year	2024	2025
Month	Apr-May	Apr-May
N	4500	4500

Mother Occupation

	2024	2025
Unemployed	94%	95%
Agricultural Labour	2%	2%
Non Agricultural Labour	2%	1%
Buisness	2%	2%
Salaried	2%	1%

SHG Membership

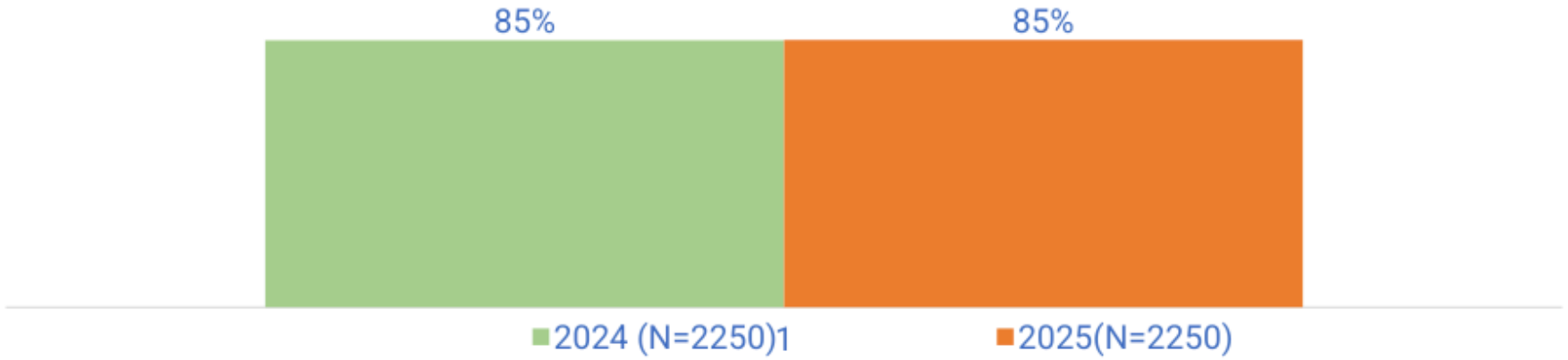


Year	2024	2025
Month	Apr-May	Apr-May
N	4500	4500

Continuation of Breastfeeding among children aged between 6-11 month

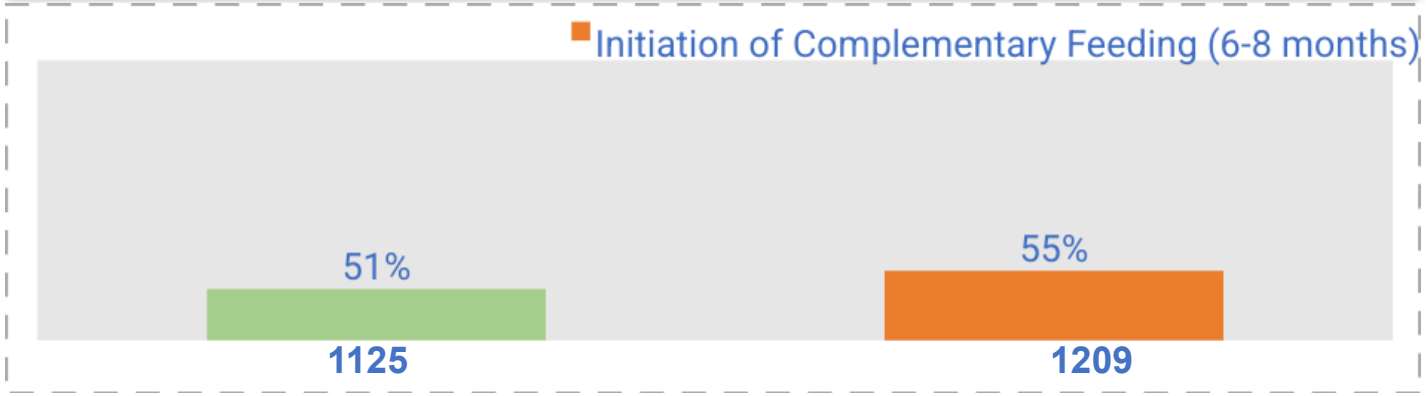
6-8 months	9-11 months	6-11 months
95.5% N=1209	94.5% N=1041	95% N=2250

Continuation of Breastfeeding in 12-23 months old children over the years

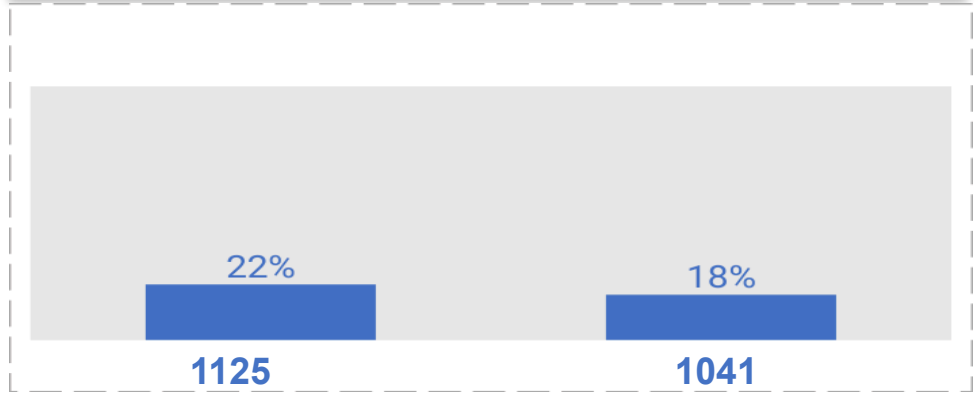


Initiation of Complementary Feeding (CF)^ 6-8 months

^6-8m old infants introduced to cereal based semi solid food



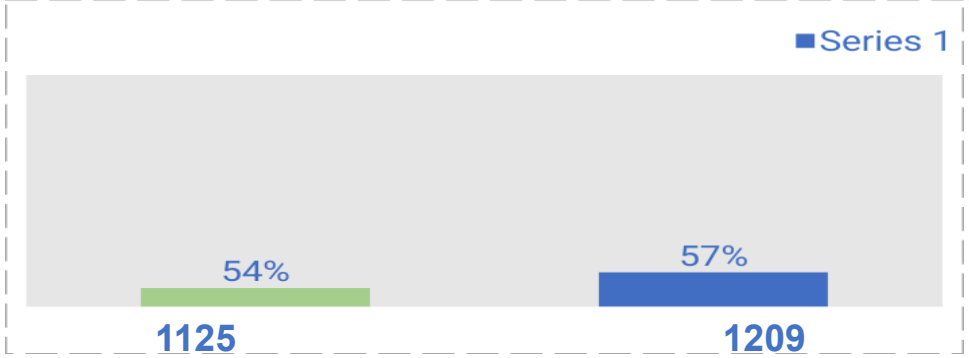
9-11 m old children not initiated to CF



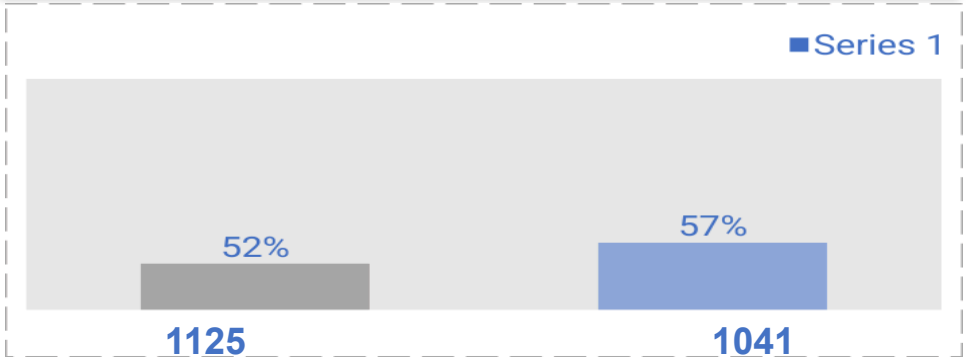
Age-appropriate frequency of feeding

min 2 times/day for infants 6–8m and 3 times/day for infants 9–11m

6-8 months



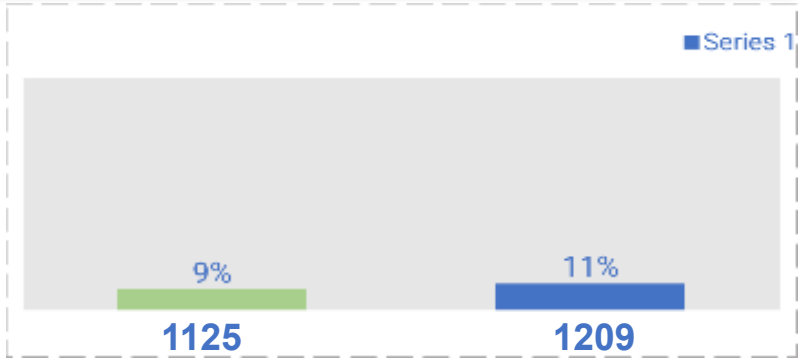
9-11 months



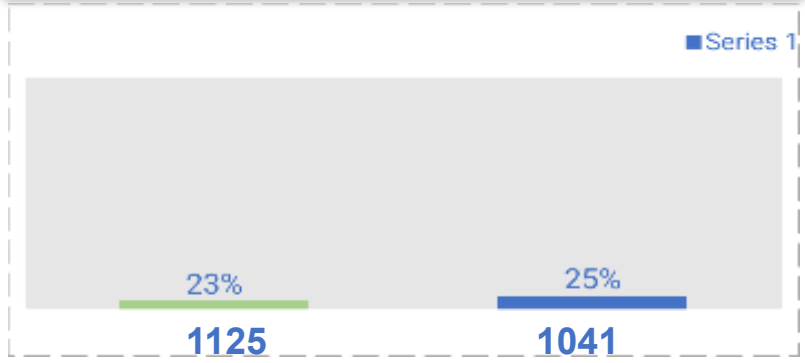
Children receiving minimum dietary diversity*(#) – among 6-23m old children

#Children receiving 4 out of 7 food groups on the previous day

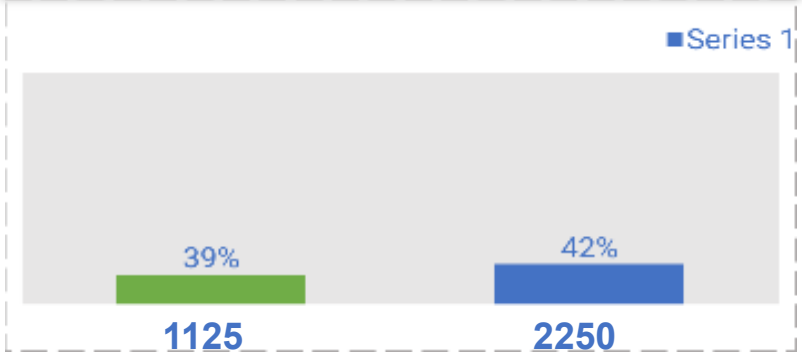
6-8 months



9-11 months



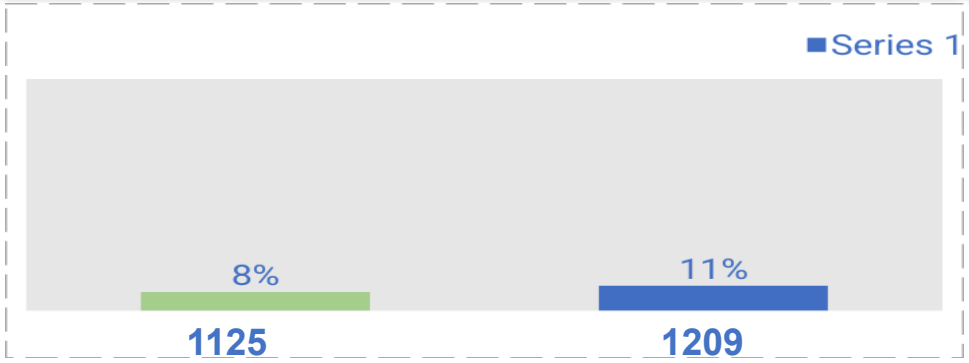
12-23 months



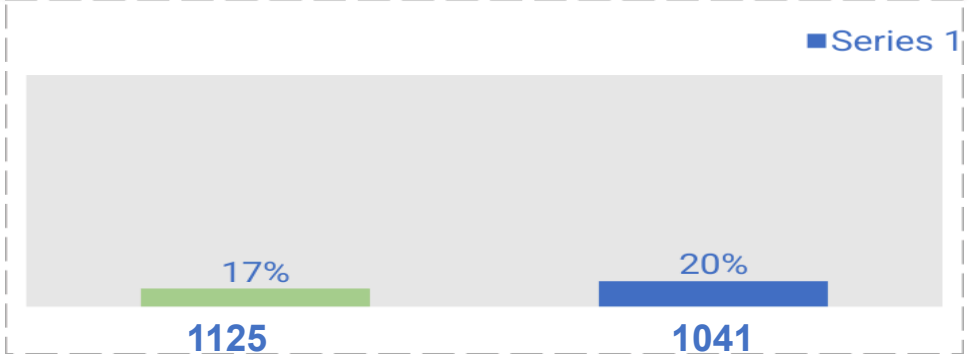
Children receiving minimum acceptable diet(^)

^Children receiving diets with min. dietary diversity and min. meal frequency during the previous day

6-8 months



9-11 months



	2024				2025			
	Initiation of Complementary feeding				Initiation of Complementary feeding			
Variable	AOR	LCI	UCL	P value	AOR	LCI	UCL	P Value
Religion [ref: Hindu]	1.03	0.99	1.08	0.08	1.51	1.44	1.57	<.0001
Caste [ref: Marginalized]	1.07	1.03	1.11	<.0001	0.83	0.80	0.87	<.0001
SHG(no member)	1.02	0.98	1.05	<.0001	1.27	1.24	1.31	<.0001
Advice on initiation of complementary feeding (ref :no)	1.96	1.87	2.06	<.0001	1.57	1.50	1.65	<.0001
Advice on age appropriate meal [ref: No]	1.76	1.66	1.87	<.0001	1.78	1.67	1.91	<.0001

AOR = 1.51 → Other religions had **51% higher odds** of initiating feeding compared to Hindus.

AOR = 0.83 → Non-marginalized groups had **17% lower odds**, suggesting marginalized groups did slightly better.

AOR = 1.27 → SHG members had **27% higher odds** of proper initiation.

AOR = 1.57 → **57% higher odds** when advice was given. **Important, but slightly less than 2024.**

AOR = 1.78 → **78% higher odds** with advice, similar to 2024.

RESULT (Regression)

	2024				2025			
	Minimum dietary diversity				Minimum dietary diversity			
Variable	AOR	LCI	UCL	P value	AOR	LCI	UCL	P value
Religion [ref: Hindu]	0.96	0.91	1.01	0.08	1.03	0.98	1.09	0.24
Caste [ref: Marginalized]	1.26	1.20	1.32	<.0001	1.15	1.10	1.21	<.0001
SHG(no member)	1.17	1.13	1.22	<.0001	1.24	1.19	1.29	<.0001
Advice on minimum dietary diversity [ref: No]	2.53	2.37	2.70	<.0001	2.48	2.30	2.68	<.0001

AOR = 1.03 → Slightly higher odds for non-Hindu groups, but the confidence interval (0.98–1.09) includes 1.

AOR = 1.15 → Non-marginalized had **15% higher odds** of dietary diversity.
Still a positive and significant effect, though slightly lower than 2024

AOR = 1.24 → SHG members had **24% higher odds**.

AOR = 2.48 → Those who received advice were **2.5 times more likely** to meet dietary diversity standards.

- The study on complementary feeding practices among children aged 6–23 months in Bihar highlights both progress and ongoing challenges in child nutrition.

- The findings indicate that while there has been some improvement in the initiation and diversity of complementary feeding, malnutrition remains a persistent concern, especially in rural areas where poverty and limited access to health services are significant barrier.

- Sociodemographic factors such as religion, caste, and membership in self-help groups (SHGs) were found to influence feeding practices. Notably, SHG membership consistently showed a positive association with proper initiation of complementary feeding and dietary diversity, suggesting that community-based interventions can be effective.

- Advice and counseling from frontline workers also had a strong and consistent positive impact, with children whose mothers received advice being significantly more likely to meet recommended feeding practices.

- Despite these gains, disparities persist. Marginalized groups, while sometimes performing better in the initiation of complementary feeding, still face structural disadvantages. The odds of achieving minimum dietary diversity and acceptable diets were higher among non-marginalized groups and those who received targeted counseling.

- This highlights the need for personalized solutions that address both gaps in knowledge and the social factors that affect health.

Conclusion

- In summary, the study demonstrates that improving complementary feeding practices in Bihar is achievable through targeted counseling and community engagement, particularly via SHGs and frontline health workers.

- However, to sustain and accelerate progress, efforts must focus on reducing rural-urban disparities, addressing poverty, and ensuring that marginalized populations are not left behind. Continued investment in education and support for mothers, along with robust monitoring and evaluation, will be crucial for ensuring that all children receive the necessary nutrition for healthy growth and development.

- However, the persistence of malnutrition—especially in rural regions—highlights the need for continued focus on the underlying determinants of health, including poverty, education, and access to healthcare services.

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Thank You