

ASSAM ENDLINE REPORT

NOURISHING SCHOOLS
INDIA

November 2022

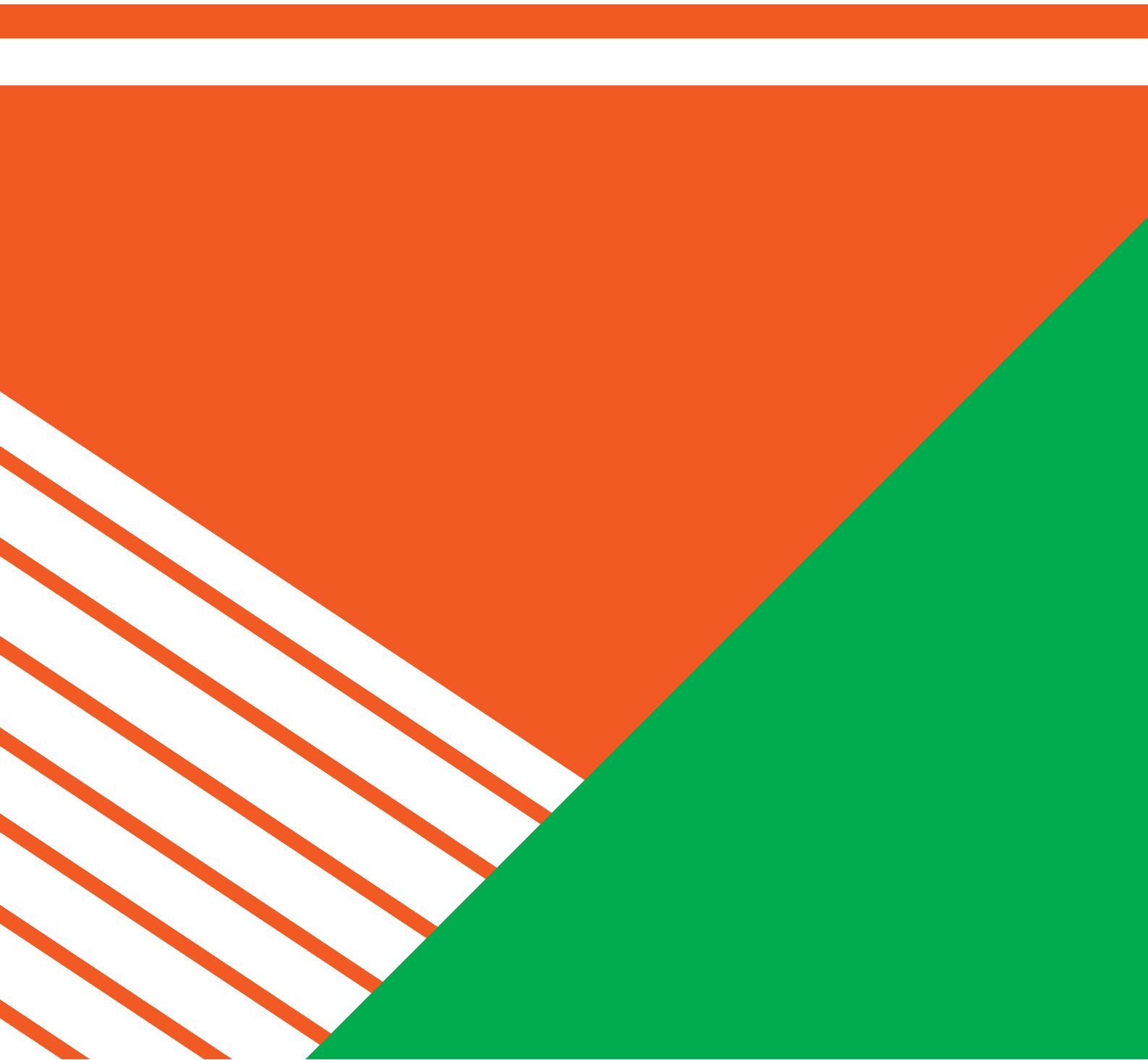


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NOURISHING SCHOOLS

ABOUT NOURISHING SCHOOLS FOUNDATION

Nourishing Schools Foundation's mission is to help children take charge of tackling malnutrition. In partnership with various organizations, we have worked with over 250 schools in India on this, reaching over 60,000 children in Maharashtra, Rajasthan, Assam, and Tamil Nadu. We have also collaborated with governments, such as the Government of Rajasthan and the Central Government's Eat Right India initiative.

Our intervention aims to develop young changemakers aged between 9-14 years who can take charge of improving their own and their communities' nutrition. We provide toolkits to schools with games and activities for children between 4th to 9th grade. These activities promote behaviour change and help children learn about nutrition and how they can improve it e.g., by managing school gardens to access a diverse source of nutrients or building a handwashing station to prevent diarrhoea.

Over two cycles of engagement with the toolkit, children solve problems in their schools and communities related to nutrition.



OVERVIEW

PROGRAMME CYCLE

The Nourishing Schools Foundation along with partner organizations leverages schools as a hub to improve the nutrition of families and communities. The diagram below outlines the programme cycle that includes toolkit implementation and data collection process that we follow at the level of schools with implementation support from the partner organization.



SURVEY METHODOLOGY

The sample size for the endline survey consisted of 320 students who were studying in grades 4 to 9. These children were from 43 schools across two districts – Jorhat and Golaghat in Assam, India. A random stratified sampling method was used to determine the children who will participate in this study. A maximum of 20 students were chosen from each grade (i.e. grades 4 to 9). Therefore from any given school, provided they have all six grades, a maximum of 120 students were chosen for the baseline survey. If it is a single-gendered school (i.e. only girls or only boys), then it will be 20 girls or boys from each grade. If it is coeducational, then it will be a maximum of 10 girls and 10 boys from each grade. The subsequent surveys (midline and endline) were conducted with the same students that were part of the baseline survey. Consent was obtained from the guardians of the children before data collection.

This endline survey was conducted in partnership with Farm2Food Foundation (F2F).

Co-Founded by Deep Jyoti Sonu Brahma, Farm2Food Foundation (F2F) encourages communities in North-East India to take up sustainable farming and learn entrepreneurial practices. F2F works with middle-school students to set up nutrition gardens in their schools and support their process of learning self-sustaining and organic methods of growing their own food, eating healthy, learning about nutrition, and becoming entrepreneurs.



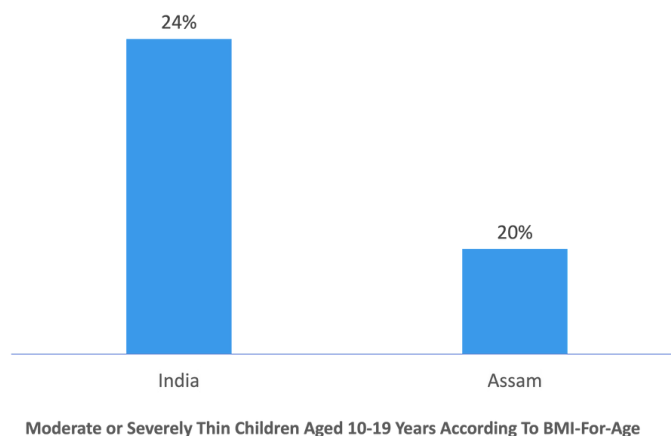
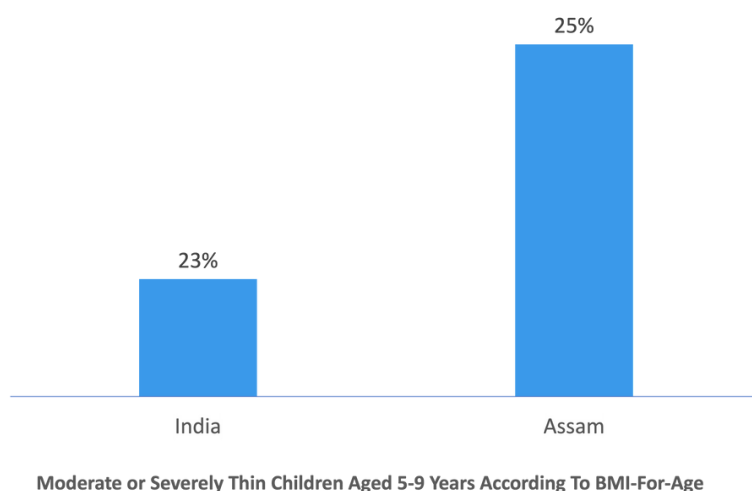
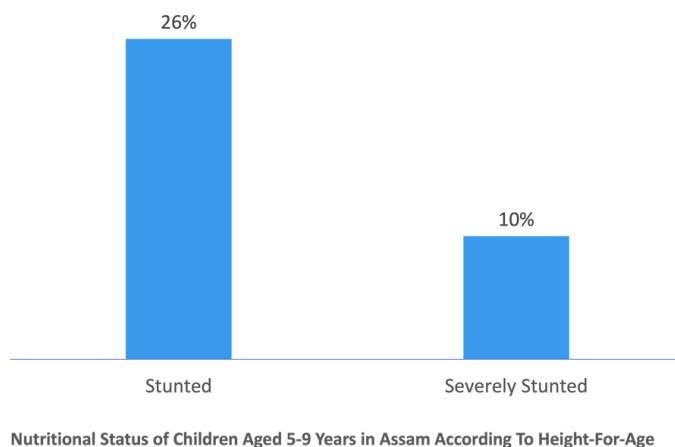
OVERVIEW

Overview - India and Assam

According to the Comprehensive National Nutrition (CNNS) 2019 report, every third adolescent girl and every fourth adolescent boy aged 10-19 years is too short for their age. More boys than girls are thin for their age in both the 10-14 age group and the 15-19 age group.¹ Similarly, in Assam, according to the same report (2019), almost half of the adolescent girls aged 10-14 years (~43%) were short for their age and 1/3rd of boys were as well (~34%). For the age group of 15-19 years in Assam, 30% of girls and 56% of boys are short for their age.²

According to the National MPI report of India, about 1/3rd (~33%) of the population of Assam is multidimensionally poor and is one of the top ten poorest states in India. It is also one of the top ten states where people are deprived in nutrition (40%).³

According to the CNNS report in Assam, 1 in 4 children aged 5-9 years are stunted. 1 in 4 children in this age group are moderately or severely thin. 7% of children in this age group are either obese or overweight. Anaemia was more common amongst females, especially those that belonged to the age group of 10-19 years (43%), followed by males belonging to the age group of 5-9 years (35%), and then females belonging to the age group of 5-9 years (34%).⁴



1. CNNS-Thematic-Report-Adolescents-Diets-and-Nutrition <https://www.unicef.org/india/media/2631/file/CNNS.pdf>

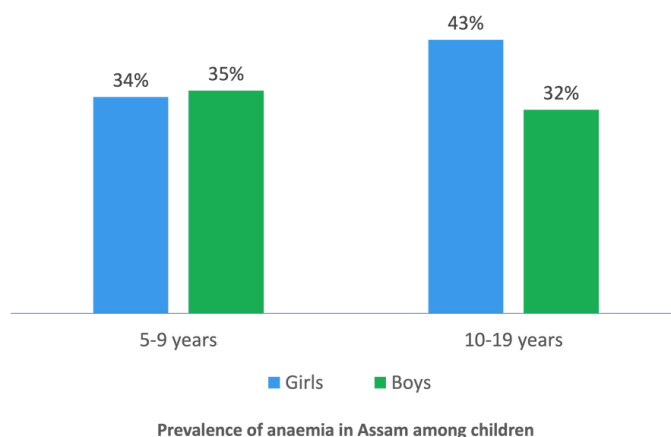
2. Ibid

3. National Multidimensional Baseline Report https://www.niti.gov.in/sites/default/files/2021-11/National_MPI_India-11242021.pdf.

4. CNNS Assam Preliminary Factsheet

OVERVIEW

The CNNS thematic report 2019 recorded a high prevalence of folate deficiency in girls between the ages of 10-14 years (74%) and a high prevalence of zinc deficiency in both boys and girls in this age group (33% and 34%). There is also a high prevalence of folate deficiency among boys aged 15-19 years (80%), which was higher than that for girls in the same age group (66%). Boys and girls in this age group also suffer from iron deficiency (4% and 41%), with the prevalence being much higher among girls.⁵

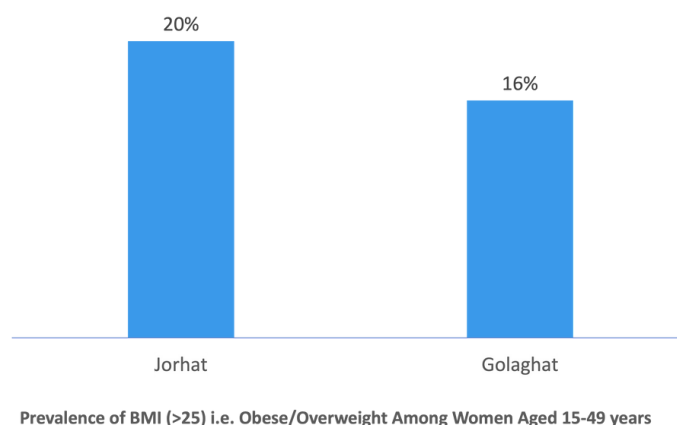


Overview Of The Districts (Golaghat And Jorhat)

According to the National Multidimensional Poverty Index Baseline report 2021, 21% and 20% of the Golaghat and Jorhat populations were identified as multidimensionally poor.⁶

According to the POSHAN district nutrition profile of Golaghat, anaemia is high among children under the age of 5 years (75%). Moreover, the percentage of children under 5 years that are stunted (low height-for-age) is 26% and wasted is 19% (low weight-for-height).⁷

Among children under 5 years in Jorhat, 74% are anaemic, 39% are stunted and 15% are wasted, as per the POSHAN district nutrition profile.⁸



5. CNNS-Thematic-Report-Adolescents-Diets-and-Nutrition. <https://www.unicef.org/india/media/2631/file/CNNS.pdf>

6. National Multidimensional Baseline Report https://www.niti.gov.in/sites/default/files/2021-11/National_MPI_India-11242021.pdf.

7. POSHAN Golaghat-District-Nutrition-Profile <http://ebrary.ifpri.org/utils/getfile/collection/p15738coll2/id/131816/filename/132031.pdf>

8. POSHAN Jorhat-District-Nutrition-Profile <http://ebrary.ifpri.org/utils/getfile/collection/p15738coll2/id/131818/filename/132033.pdf>

KEY RESULTS

Nourishing Schools Foundation and Farm2Food Foundation conducted the endline survey in 43 schools across two districts, viz. Golaghat and Jorhat in Assam. Results from this survey are compared with the results from the baseline survey and the midline survey before and after the introduction of the Nourishing Schools toolkit. Findings from 320 students covered in the endline survey were compared with the same 320 students covered in the baseline and midline survey. The baseline, midline and endline surveys were completed in November 2016, February 2020 and August 2022, respectively. The completion of the endline survey was delayed due to the pandemic, which caused a significant reduction in the sample size. The results shown below are changes observed between the baseline and endline survey.

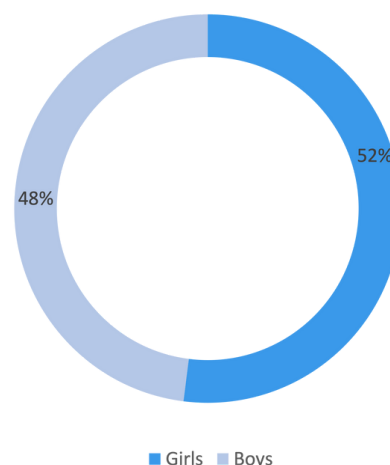
Demographics



As per details from Census 2011, Assam has a population of 3.12 Crores. The sex ratio in Assam is 958 females per 1000 males. The literacy rate in Assam is 72%. The male literacy rate is 78% compared to the female literacy rate of 66%. 86% of Assam's population lives in rural areas & 14% lives in urban areas of the state.⁹

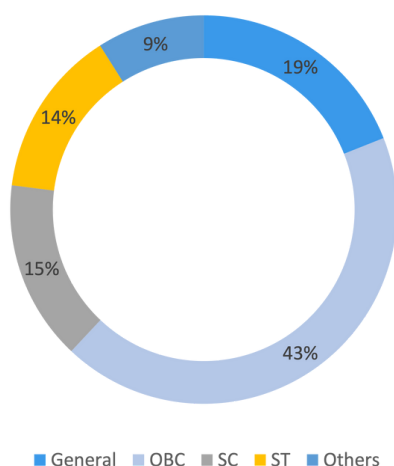
In the endline survey, more than half of the respondents were girls. Close to half of the respondents belong to the Other Backward Class (OBC) followed by General, Scheduled Castes (SC), and Scheduled Tribes (ST) categories. Most respondents belong to the Hindu community, followed by the Muslim, Christian and Buddhist communities.

Gender Composition

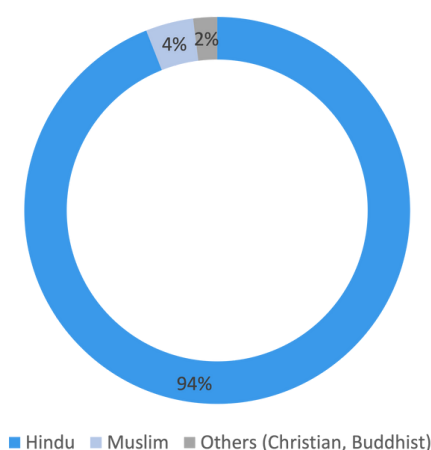


1

Caste Classification



Religion Classification



2

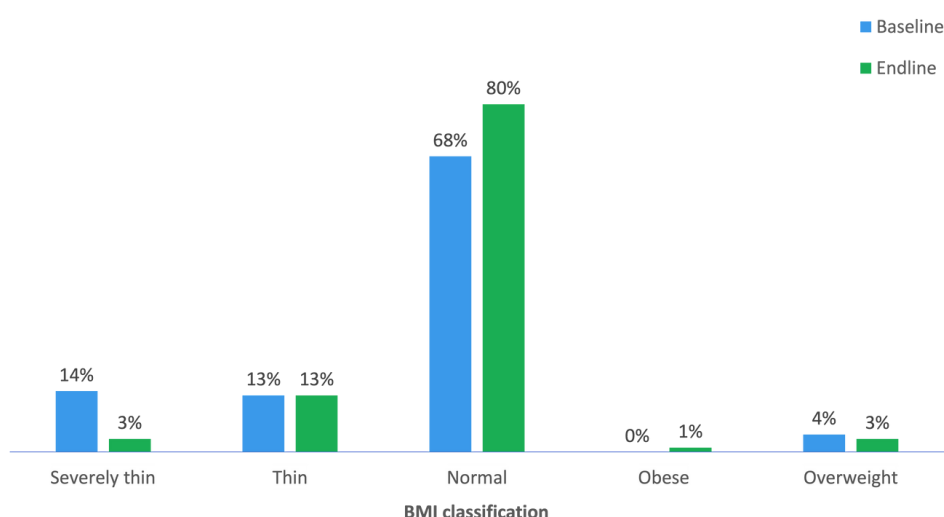
⁹. Assam census,2011 <https://des.assam.gov.in/information-services/state-profile-of-assam>

KEY RESULTS

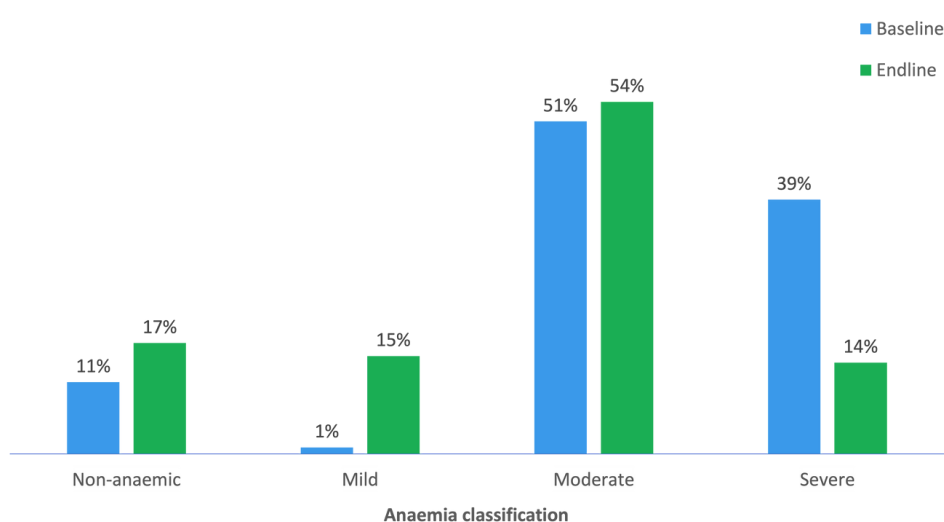
As highlighted in CNNS 2019 report, in India, education is free and compulsory till the age of 14 years. School-going adolescents are also entitled to a mid-day meal providing almost a third of the energy and protein requirements for 200 school-days in a year in all government schools.

Even with these entitlements, there are more than 1 in 5 short adolescents at all ages from 10 to 19 years. The prevalence of thinness and obesity peaks in early adolescence (10 to 14 years) for both girls and boys. Thus, reaching adolescents with nutrition services early is imperative.¹⁰

Nutritional Status



As per the endline survey of the Golaghat and Jorhat districts of Assam, the percentage of children classified as normal based on their BMI-for-age has increased by 12 percentage points. The percentage of children classified as severely thin has decreased by 11 percentage points, and overweight by 1 percentage point. However, the percentage of children classified as thin has remained the same and as obese has increased by 1 percentage point. This reduction in undernourishment and increase in obesity is in line with the NHFS-5 trends for Assam.¹¹



As per the endline survey, the percentage of non-anaemic children increased by 6 percentage points. The percentage of severely anaemic children decreased by 25 percentage points. However, the percentage of mildly anaemic students increased by 14 percentage points and moderately anaemic by 4 percentage points. According to the CNNS 2019 report, anaemia affects 40% of adolescent girls and 18% of boys aged 10-19 years in India.¹²

10. CNNS-Thematic-Report-Adolescents-Diets-and-Nutrition. <https://www.unicef.org/india/media/2631/file/CNNS-Thematic-Report-Adolescents-Diets-and-Nutrition.pdf>

11. NFHS 5 Assam Factsheet https://nhm.assam.gov.in/sites/default/files/swf_utility_folder/departments/nhm_lipl_in_oid_6/menu/document/factsheet_as.pdf

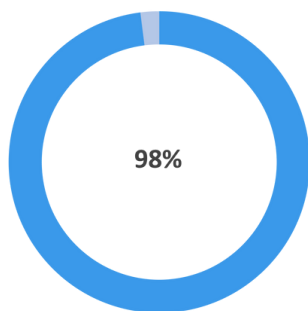
12. CNNS-Thematic-Report-Adolescents-Diets-and-Nutrition. <https://www.unicef.org/india/media/2631/file/CNNS-Thematic-Report-Adolescents-Diets-and-Nutrition.pdf>

KEY RESULTS

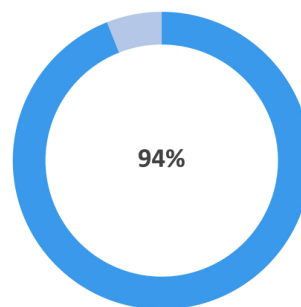
Diet

According to the CNNS 2019 report, almost all adolescents have "unhealthy" diets. Only 2 out of 5 adolescents (~45%) include milk in their daily diet. Only 1 out of 5 adolescents (~20%) consume pulses and green leafy vegetables. Less than 1 out of 5 adolescents (<10%) consume fruits daily. Every fourth adolescent reported zero consumption of green leafy vegetables even once a week.¹³


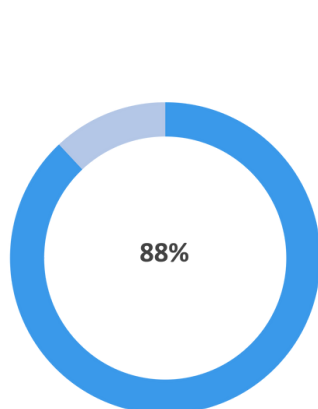
Our surveys collect data on the consumption of eggs, meat, fish and milk to understand children's dietary preferences. As per the baseline and endline surveys, the prevalence of consuming eggs and meat remained constant. However, there was a decrease in the prevalence of consuming fish by 4 percentage points and milk by 5 percentage points over the same period.



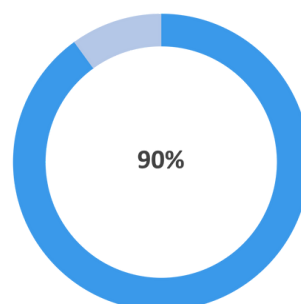
of children reported that they consume eggs



of children reported that they consume meat



of children reported that they consume milk/milk products

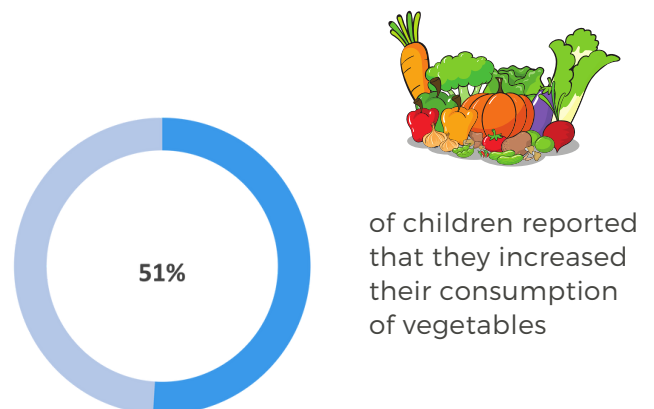
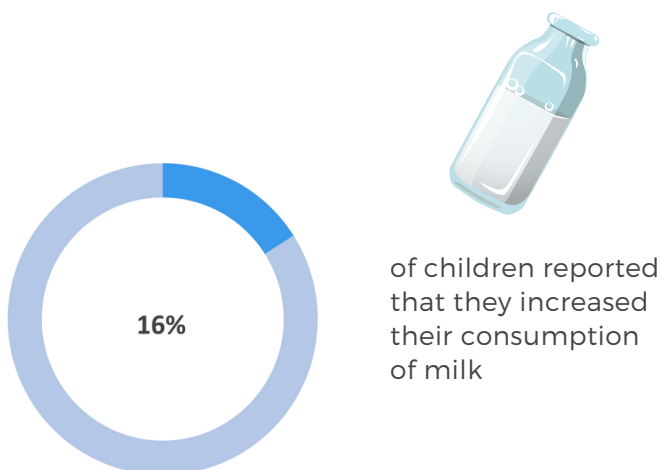
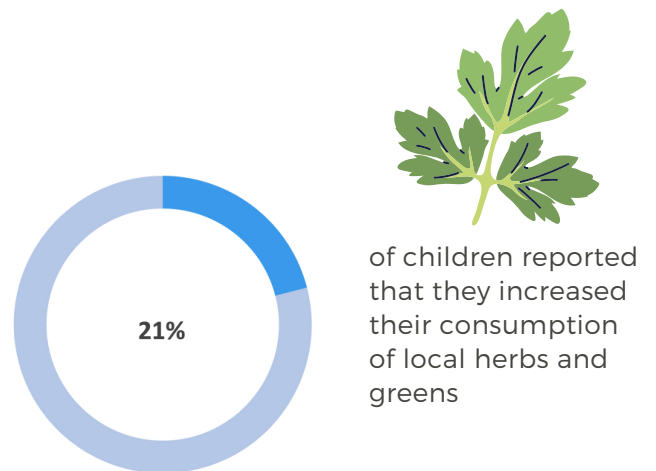
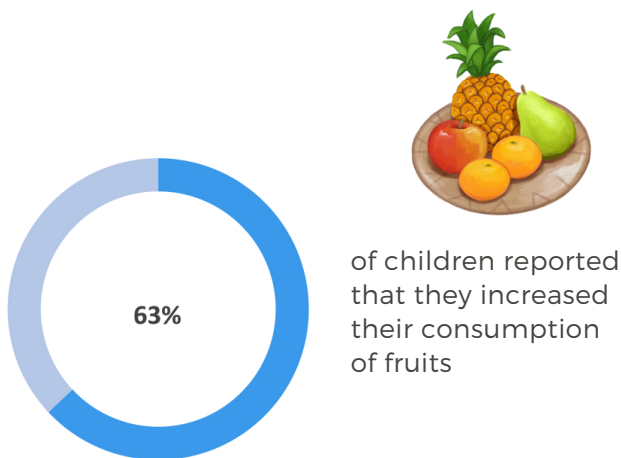


of children reported that they consume fish

KEY RESULTS

Diet

In the endline survey, we asked schoolchildren about the changes in their diet - whether they have increased the consumption of a particular food, to understand the changes in their eating habits.



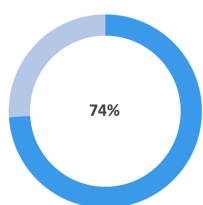
KEY RESULTS

Nutritional Supplements

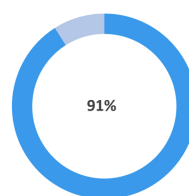


In Assam, anaemia is a concern for almost all age groups and categories. Women (15-49 years) are more impacted by anaemia (66%) compared to men (36%).¹⁴ The CNNS thematic report recorded a high prevalence of folate deficiency in girls between the ages of 10-14 years (74%)¹⁵ and a high prevalence of zinc deficiency in both boys and girls of this age group (33% and 34%).

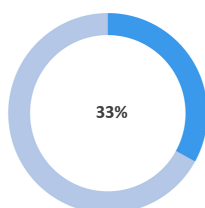
The endline survey results show an increase of 20 percentage points in the percentage of children that consume Iron Folic Acid (IFA) tablets. There is a 50 percentage points increase in the percentage of children that consume vitamin supplements. However, there is a decrease of 26 percentage points in the percentage of children that consume deworming tablets.



of children reported that they take Vitamin A supplements



of children reported that they take Iron tablets



of children reported that they take deworming tablets



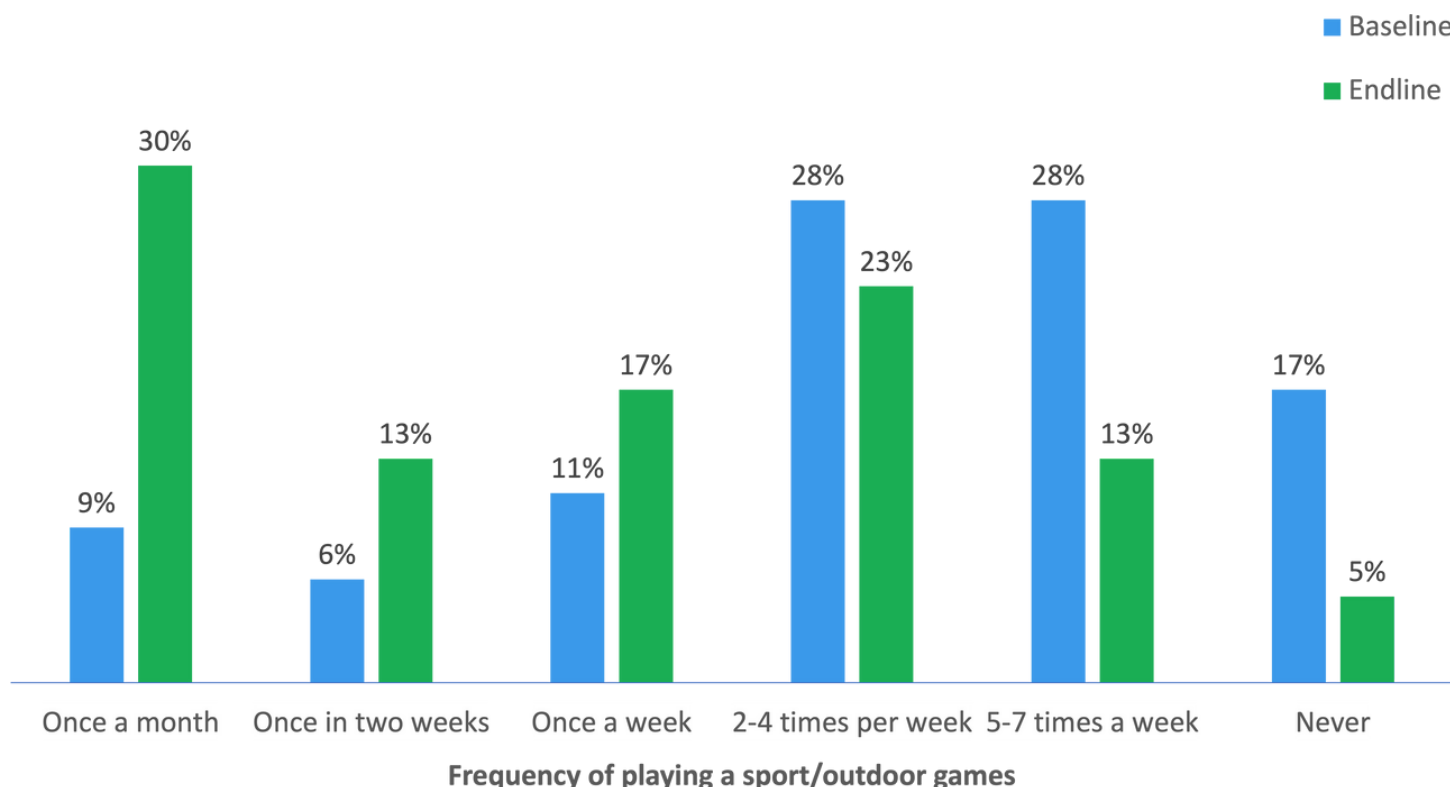
14. Assam-NFHS 5-Factsheet

https://nhm.assam.gov.in/sites/default/files/swf_utility_folder/departments/nhm_lip1_in_oid_6/menu/document/factsheet_as.pdf

15. CNNS-Thematic-Report-Adolescents-Diets-and-Nutrition. <https://www.unicef.org/india/media/2631/file/CNNS-Thematic-Report-Adolescents-Diets-and-Nutrition.pdf>

KEY RESULTS

Physical Activity



The 2022 India Report Card (IRC) on Physical Activity gave the country a C grade on Overall Physical Activity. This implies that approximately half of children and adolescents are meeting the minimum recommendation of 60 minutes of moderate-to-vigorous physical activity per day. The report also pointed out the lack of research and evidence on active living, due to which the indicators of Active Play and Organized Sport Participation had to be graded as incomplete. Active Play refers to the proportion (%) of children and youth who engage in unstructured or unorganized active play at any intensity for more than 2 hours per day. Organized Sport Participation refers to the proportion (%) of children and youth who participate in organized sports and/or physical activity programs.¹⁶

However, according to the CNNS 2019 report, all girls and boys are unable to meet the 60 minutes per day recommended outdoor sports and exercise time. On average, girls in late adolescence spend only 10 minutes per day on such activities. Boys do relatively better, with exercise time of 40 to 50 minutes per day.¹⁷

As per the endline survey, the percentage of children playing a sport/outdoor games 2-4 times a week and 5-7 times a week have gone down by 5 percentage points and 15 percentage points respectively. Children under the once-a-month category have improved by 21 percentage points. We have seen a decline in the percentage of children who never play a sport/outdoor activity by 12 percentage points.

16. 2022 India Report Card On Physical Activity For Children & Adolescents <https://www.activehealthykids.org/get.php?file=india-report-card-long-form-2022.pdf>

17. CNNS-Thematic-Report-Adolescents-Diets-and-Nutrition. <https://www.unicef.org/india/media/2631/file/CNNS-Thematic-Report-Adolescents-Diets-and-Nutrition.pdf>



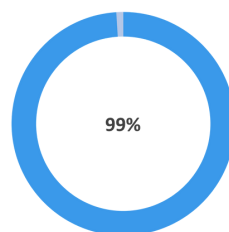
KEY RESULTS

Water, Sanitation and Hygiene

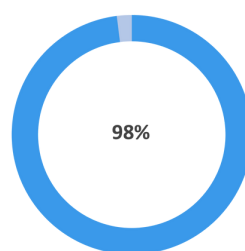


According to the Joint Monitoring Report 2022 on WASH, 74% of schools in India have basic water services from an improved and available source. Further, 86% of schools have basic sanitation services (improved, available and single-sex) and 53% have basic hygiene services (facility with water and soap).¹⁸

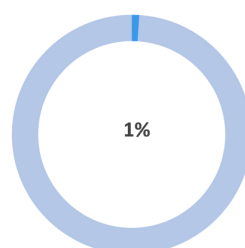
The endline survey results show an overall improvement in the handwashing behaviour of schoolchildren. As per the endline survey, the percentage of schoolchildren who reported that soap is present in school to wash their hands increased by 42 percentage points. The schoolchildren that reported using water and soap to wash their hands at school increased by 33 percentage points, while the percentage of schoolchildren using only water decreased by 31 percentage points.



children reported that there was soap at their school to wash their hands



children use water and soap to wash their hands in school

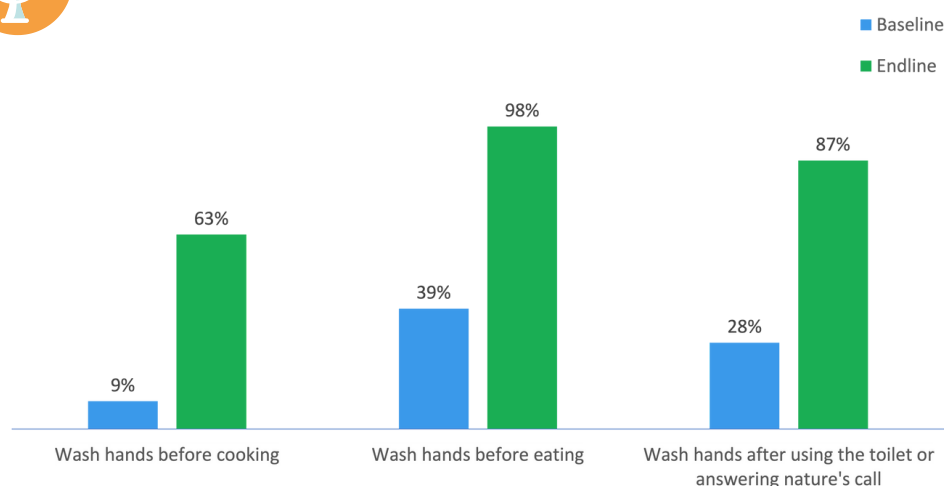


use only water to wash their hands in school



As per the endline survey, there is an increase in the percentage of schoolchildren washing their hands with soap before eating, after using the toilet or answering nature's call and before cooking

It is essential to ensure an increase in the percentage of schoolchildren that are washing their hands with soap to prevent water, hygiene and sanitation-related diseases.



18. WHO/UNICEF Joint Monitoring Programme For Water Supply, Sanitation And Hygiene, Progress on Drinking Water, Sanitation and Hygiene-Thematic-Report-2021 <https://www.who.int/publications/i/item/9789240054943>

KEY RESULTS

Water, Sanitation and Hygiene

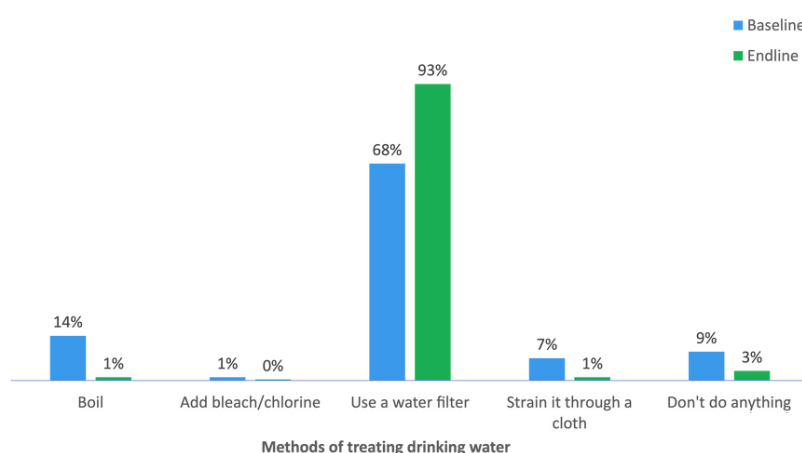
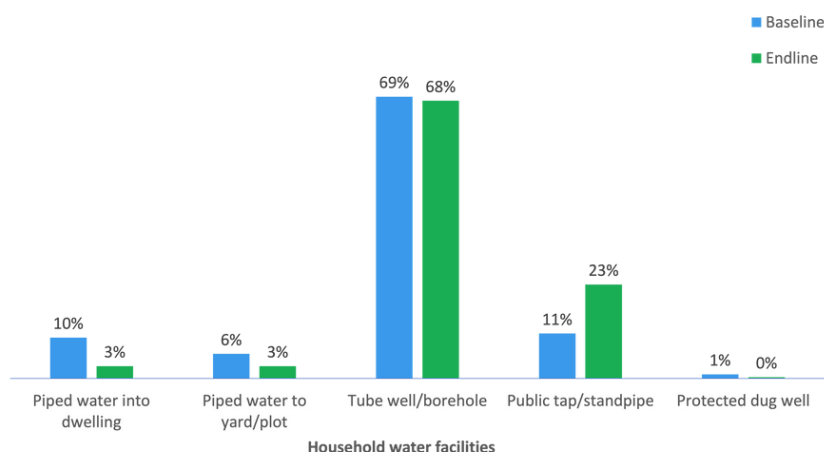


According to the NFHS 5 report, in India, almost all urban households (99%) and rural households (95%) have access to an improved source of drinking water. The main sources of drinking water for urban households are water piped into their dwelling, yard, or plot (54%), followed by tube wells or boreholes (16%), and public taps or standpipes (12%).¹⁹

According to NFHS 5 report, in Assam, 92% of urban and 85% of rural populations live in households that have access to an improved source of drinking water. Improved sources of water protect against outside contamination so that the water is more likely to be safe to drink. Urban and rural households rely on various sources of drinking water.²⁰

As per the endline survey, there is a decline in children whose households access an improved water source, like piped water into dwellings, by 7 percentage points, and piped water into the yard by 3 percentage points. Usage of tube well/borehole remains consistent (69-68%). We see an increase in children whose households use public tap/standpipes by 12 percentage points.

Safe drinking water is essential for staying healthy. However, 58 per cent of households in India do not treat their water prior to drinking. Treatment is less common in rural areas than in urban areas.²¹ As per the endline survey, there is a sharp increase in the percentage of children whose households use water filters to make water safe for drinking.



19. National Family Health Survey (NFHS-5) 2019-21 India Report [FR375] <https://dhsprogram.com/pubs/pdf/FR375/FR375.pdf>

20. Assam-NFHS 5-Factsheet https://nhm.assam.gov.in/sites/default/files/swf_utility_folder/departments/nhm_lipl_in_oid_6/menu/document/factsheet_as.pdf

21. National Family Health Survey (NFHS-5) 2019-21 India Report [FR375] <https://dhsprogram.com/pubs/pdf/FR375/FR375.pdf>

CONCLUSION

The data collected from the Assam endline survey provide critical insights that help us to understand where there have been significant improvements and areas that require attention in the Golaghat and Jorhat districts of Assam.

It is necessary to focus on practical initiatives to improve knowledge around the prevention of anaemia and improving food habits. The prevalence of playing a sport or outdoor games is low. Identifying ways to address this could help prevent the rising prevalence of obesity in adolescents.

While this data is representative of only a subset of the larger population of schoolchildren, the programme aims to develop children as changemakers who will spread knowledge and awareness amongst themselves and the larger community.

Post the implementation of our toolkit, we asked the students whether they wanted to continue the programme in their schools. The endline survey results show that nearly 100% of students surveyed claim they want to continue the programme in their schools.





Authored and reviewed by: Nourishing Schools Foundation team

We thank Farm2Food Foundation for partnering with us for this impact assessment. We are grateful to NASSCOM Foundation for their support that made this report possible.



nourishing
schools