

RAJASTHAN BASELINE REPORT

SEPTEMBER 2022



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INTRODUCTION

About the Nourishing Schools Programme

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.

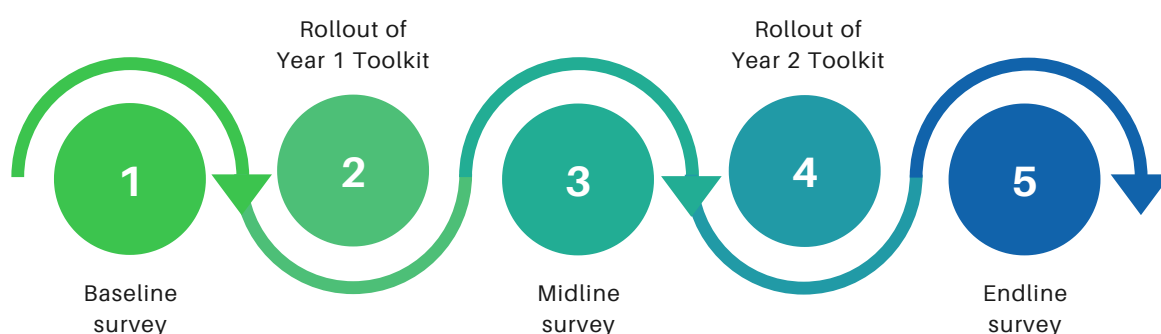
Over two cycles of engagement with the toolkit, children solve nutrition-related problems in their schools and communities.



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 baseline survey consisted of 3412 students who are studying in grades 4 to 9. These children are from 40 schools across two districts – Jhunjhunu and Sikar in Rajasthan, India. A random stratified sampling method was used to enrol the students in a survey. 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) will be 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 baseline survey was conducted in partnership with Shikshit Rojgar Kendra Prabandhak Samiti (SRKPS) in Rajasthan. SRKPS's goals include promoting health and education, protecting and promoting natural resource management as well as empowering youth and women.

They help women, children and deprived sections of society actively participate in the areas of health, education and self-governance to eliminate inequalities. SRKPS has been working in the region since 1987.

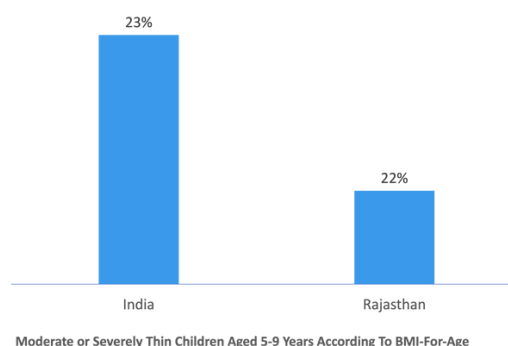
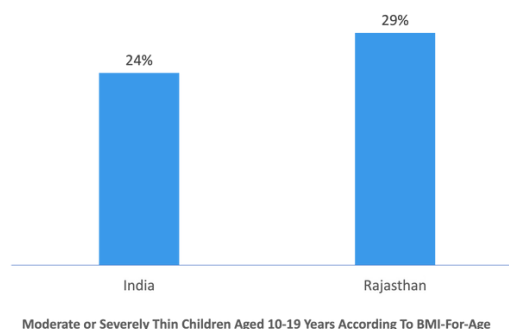
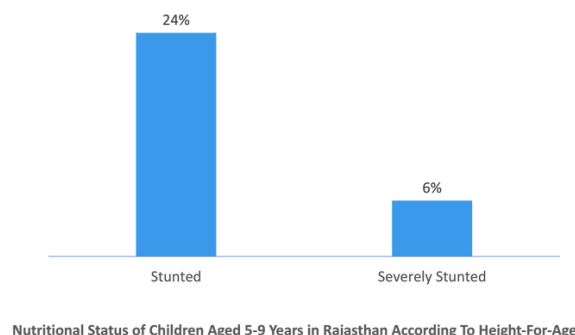
OVERVIEW

Overview - India and Rajasthan

According to the Comprehensive National Nutrition (CNNS) 2019 report, every second Indian adolescent is either too short or too thin, or overweight/obese. Girls are shorter than boys, but boys are thinner than girls. Thinness is highest in 10–12-year-olds, with vast in-state variations among 10–14-year-olds and 15–19-year-olds.¹ Similarly, according to the same report (2019), in Rajasthan, 22% of children aged 5 to 9 years and 29% of adolescents aged 10–19 years are undernourished (low BMI for age).²

According to the National Multidimensional Poverty Index Baseline report 2021, in Rajasthan, 43% of the population is deprived when it comes to nutrition. 29% of Rajasthan's population is multidimensionally poor.³

According to the CNNS 2019 report, 41% of pre-schoolers aged 1–4 years, 24% of school-age children aged 5–9 years and 28% of adolescents aged 10–19 years had some degree of anaemia in India. As per the same report, 32% of pre-schoolers aged 1–4 years, 18% of school-age children aged 5–9 years and 26% of adolescents aged 10–19 years are classified as anaemic.⁴



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

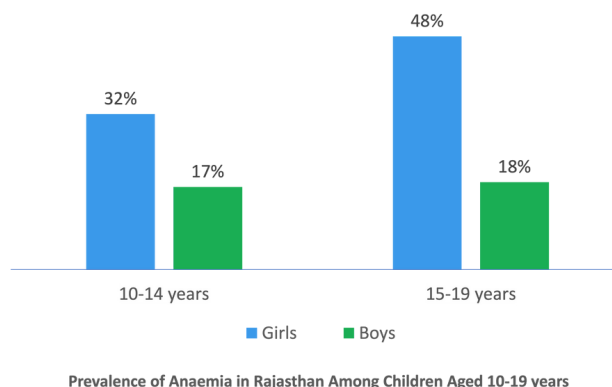
2. Comprehensive National Nutrition Survey India Report 2019 <https://nhm.gov.in/WriteReadData/l892s/1405796031571201348.pdf>

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

4. Comprehensive National Nutrition Survey India Report 2019 <https://nhm.gov.in/WriteReadData/l892s/1405796031571201348.pdf>

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According to the CNNS report 2019, during early adolescence (10-14 years), 1 in 3 girls (32%) and nearly 1 in 5 boys (17%) were anaemic (mild or moderate or severe). Of those that are anaemic (either sex), 40% of anaemia is of moderate to severe form. In late adolescence (15-19 years), 1 in 2 girls (48%) and 1 in 5 boys (18%) were anaemic (mild or moderate or severe). Of those girls who are anaemic, nearly 50% have anaemia of moderate or severe in nature. However, in boys who are anaemic, 90% of anaemia is mild in nature.⁵

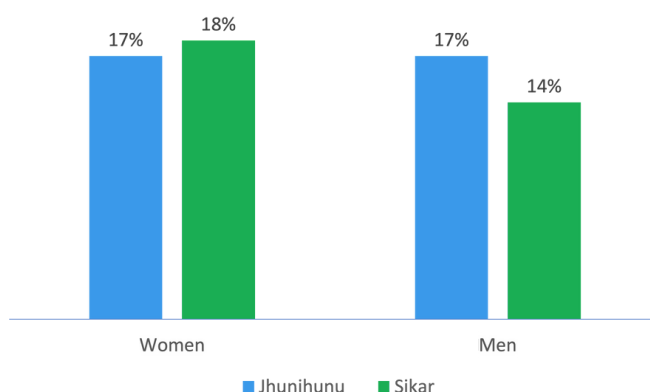


Prevalence of Anaemia in Rajasthan Among Children Aged 10-19 years

OVERVIEW OF THE DISTRICTS (JHUNJHUNU AND SIKAR)

According to the National Multidimensional Poverty Index Baseline report 2021, 15% and 13% of the Sikar and Jhunjhunu populations were classified as multidimensionally poor.⁶ As per the POSHAN district nutrition profile, the prevalence of stunting or wasting in children under 5 years was higher in Jhunjhunu than in Sikar. However, the prevalence of being underweight or anaemic in children under 5 years was higher in Sikar than in Jhunjhunu.

In both districts, the percentage of women (15-49 years) who are overweight or obese was higher than the percentage of men (15-49 years) who are overweight or obese.⁷



Prevalence of BMI (>25) i.e. Obese/Overweight Among Population Aged 15-49 years

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 Jhunjhunu and Sikar District Profiles <http://ebrary.ifpri.org/utils/getfile/collection/p15738coll2/id/131727/filename/131942.pdf> and <http://ebrary.ifpri.org/utils/getfile/collection/p15738coll2/id/131736/filename/131951.pdf>

nourishing
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RESULTS

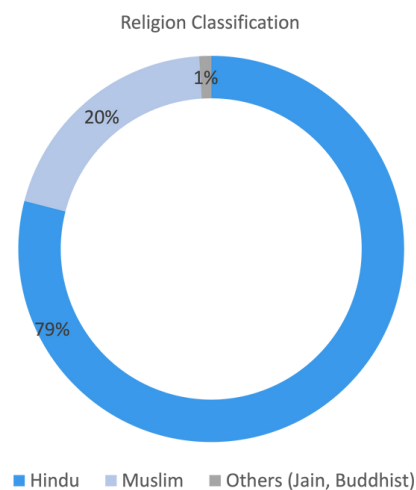
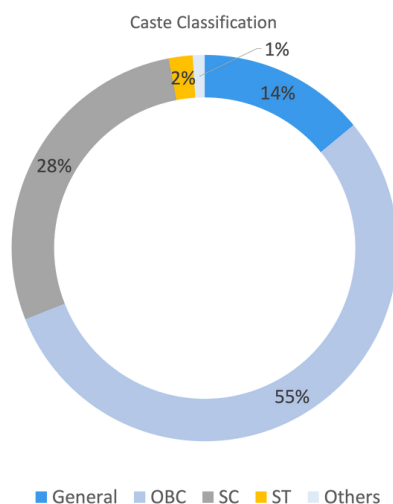
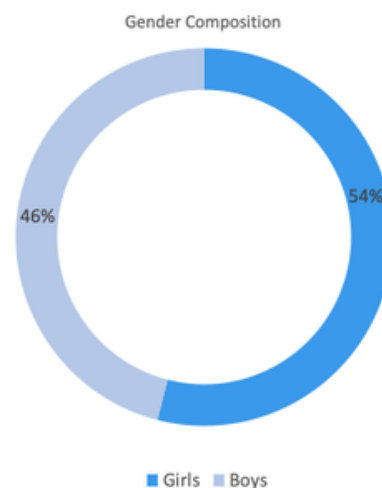
Nourishing Schools Foundation and SRKPS conducted the baseline survey in 40 schools in Jhunjhunu and Sikar districts in Rajasthan (completed in August 2018) before introducing the Nourishing Schools toolkit.

The analysis and findings from these 3412 students showcase their demographics, nutritional status, food habits and behaviours at the time of the survey. They will also form the benchmark for measuring the programme's progress in the following 2 consecutive surveys.

Demographics

Child malnutrition is caused by inadequacies in food, health and care for children, especially in the first two years of life (immediate determinants). Access to nutrition-specific interventions can influence these immediate determinants. At the household and community level, hygiene and socio-economic conditions further contribute to children's nutritional outcomes (underlying and basic determinants). There is a potential to improve nutrition by addressing underlying and basic determinants.⁸

As per the baseline survey, more than half of the respondents were girls. More than half of the respondents belong to the Other Backward Class (OBC) followed by Scheduled Castes (SC), General, and Scheduled Tribes (ST) categories. The majority of respondents belong to the Hindu community, followed by the Muslim, Jain, and Buddhist communities.



8. POSHAN Jaipur District Profile <http://ebrary.ifpri.org/utills/getfile/collection/p15738coll2/id/131723/filename/131938.pdf>

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As pointed out in the CNNS 2019 Report, investing in the nutrition of the 1.2 billion adolescents (10-19 years aged population) will shape the world's future. A fifth of these adolescents – 253 million – live in India. Among adolescents, there are two levels of malnutrition-both its visible (thin, short and overweight/ obese) and hidden forms (anaemia and six micronutrient deficiencies - iron, vitamin B12, folate, vitamin A, vitamin D and zinc). In India, adolescents receive several health and nutrition services. These include biannual health check-ups, biannual deworming, Weekly Iron Folic Acid Supplementation (WIFS), and counselling for mental and reproductive health conditions. However, every second Indian adolescent is either too short or too thin or overweight/obese. Girls are shorter than boys, but boys are thinner than girls.

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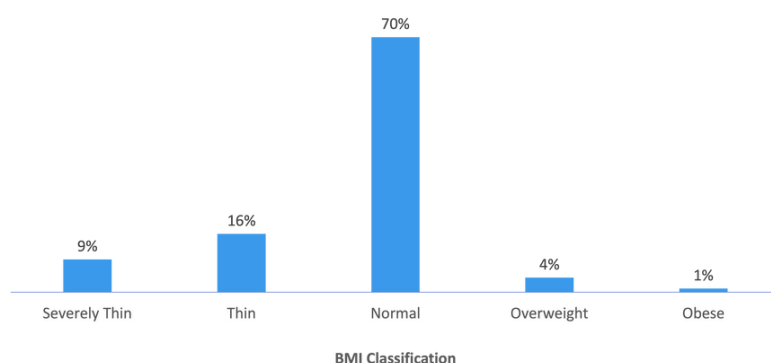
Nutritional status



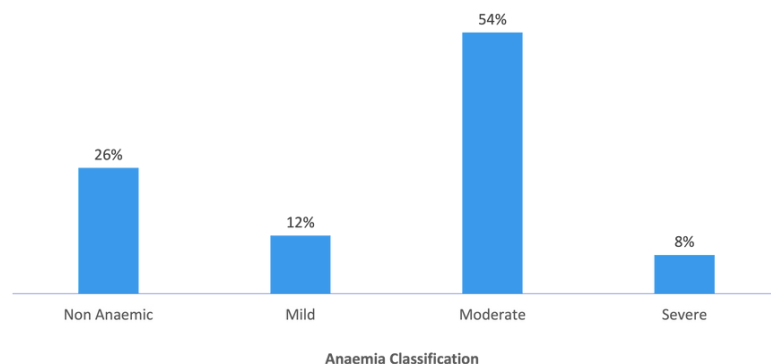
The baseline survey results of the Jhunjhunu & Sikar districts of Rajasthan show that one-fourth of schoolchildren are thin or severely thin. In addition, about one in twenty children is obese or overweight.

According to National Family Health Survey 5 (NFHS-5), in Rajasthan, the percentage of the population that is undernourished is 14% and 20% for men and women, respectively.

Further, the percentage of the population that is overweight or obese is 15% and 13% for men and women, respectively.¹⁰



The baseline survey results show that approximately three-fourths of schoolchildren are mildly, moderately or severely anaemic. According to the CNNS 2019 report, approximately one-quarter of adolescents aged between 10-19 years are anaemic in Rajasthan.¹¹ According to the POSHAN districts profiles, the prevalence of anaemia among women of reproductive age is 38% and 33% in Jhunjhunu and Sikar, respectively.¹²



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

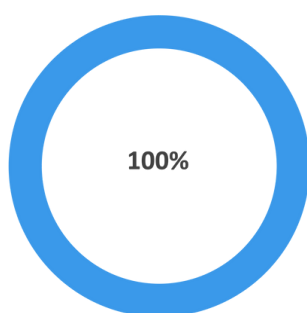
10. National Family Health Survey (NFHS-5) 2019-21 India Report [FR375] <https://dhsprogram.com/pubs/pdf/FR375/FR375.pdf>

11. Comprehensive National Nutrition Survey India Factsheet 2016-2018 <https://nutritionindia.info/portal/portal/wp-content/uploads/2019/10/CNNS-v6-factsheet-India.pdf>

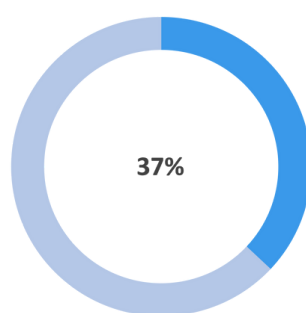
12. POSHAN District Nutrition Profiles: Rajasthan <https://poshan.ifpri.info/2018/06/01/poshan-district-nutrition-profiles-rajasthan-in-english-hindi/>

RESULTS

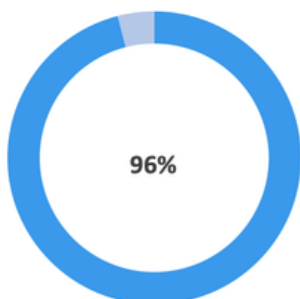
Diet Snapshot



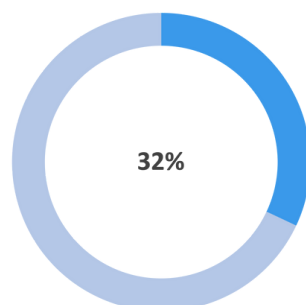
of students reported that they consume vegetables



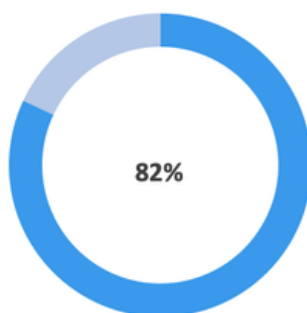
of children reported that they consume eggs



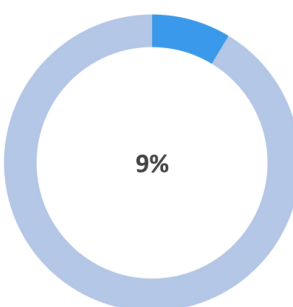
of children reported that they consume fruits



of children reported that they consume meat



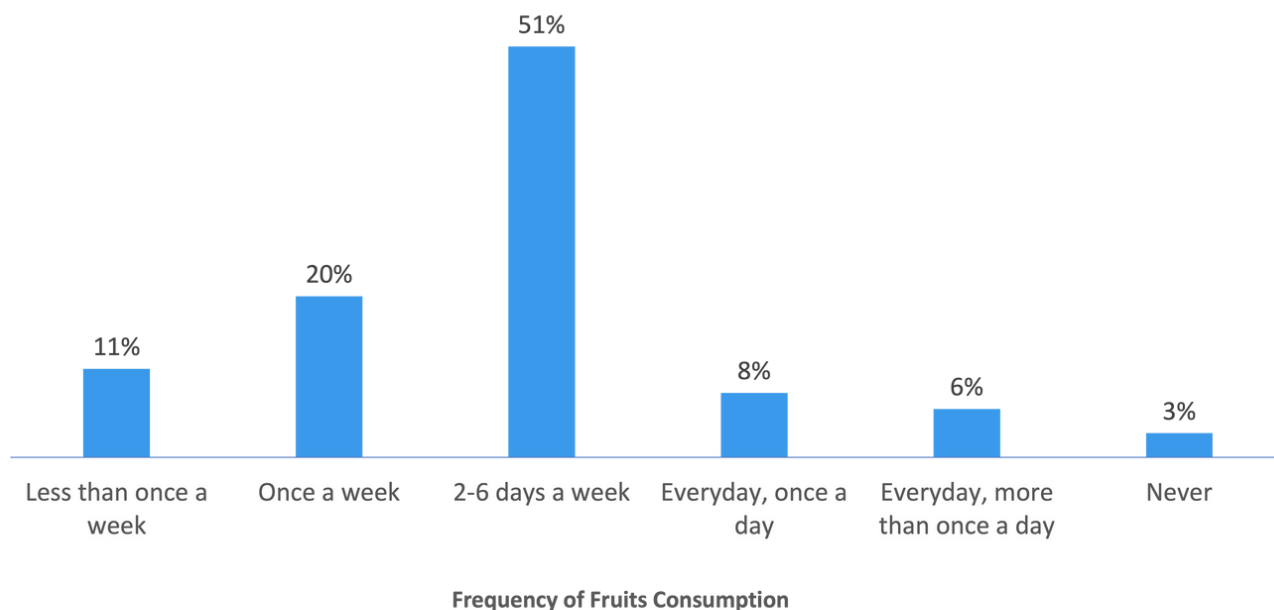
of children reported that they consume milk/milk products



of children reported that they consume fish

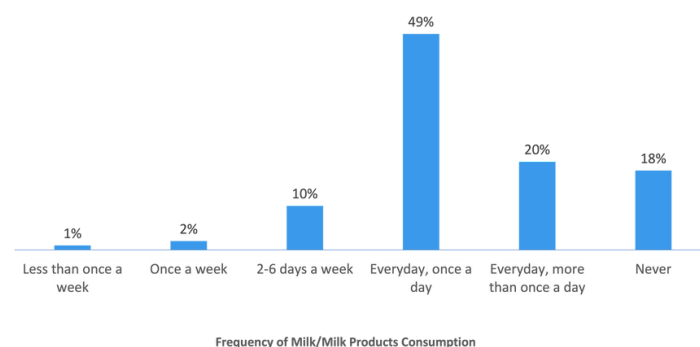
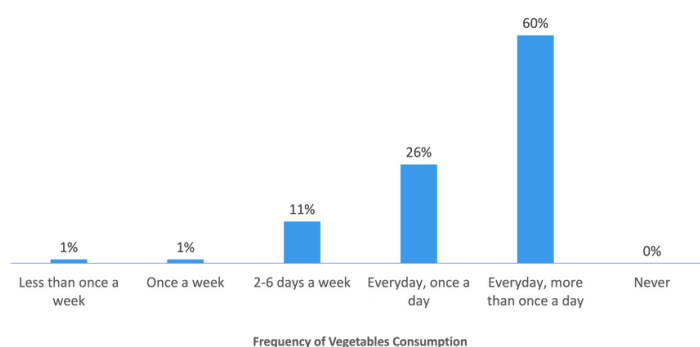
RESULTS

Diet Snapshot



The baseline survey results show that one-third of schoolchildren consume fruits once a week or less frequently (including those who never consume them). More than half of schoolchildren are consuming vegetables more than once a day, every day. Inadequate consumption of fruits and vegetables is one of the risk factors for non-communicable diseases.¹³

Almost half of the schoolchildren consume milk or milk products more than once a day, every day. Milk is a source of nutrients such as calcium, protein, Vitamin B2 (riboflavin), Vitamin B12 and potassium.¹⁴

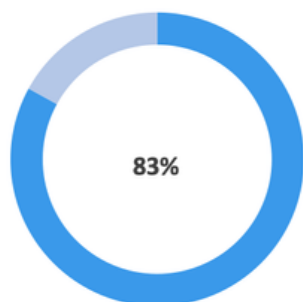


13. WHO's Global Strategy on Diet, Physical Activity and Health https://apps.who.int/gb/ebwha/pdf_files/WHA57/A57_R17-en.pdf

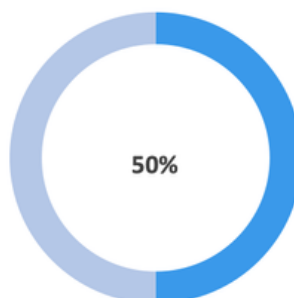
14. Harvard T.H. Chan School of Public Health, Milk." The Nutrition Source, 19 Oct. 2020, www.hsph.harvard.edu/nutritionsource/milk

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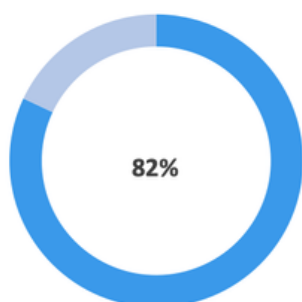
Snack Snapshot



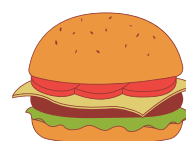
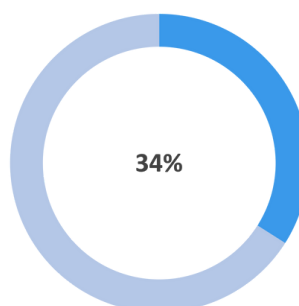
of students reported that they consume sweets (candy/chocolate/ Indian sweets)



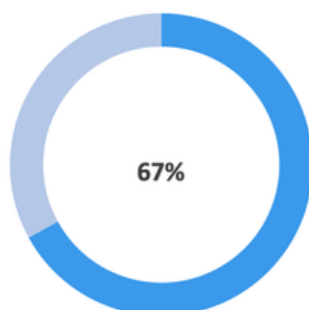
of children reported that they consume bakery food items



of children reported that they consume chips/mixtures



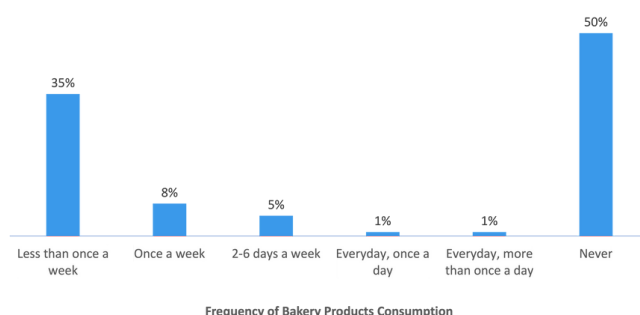
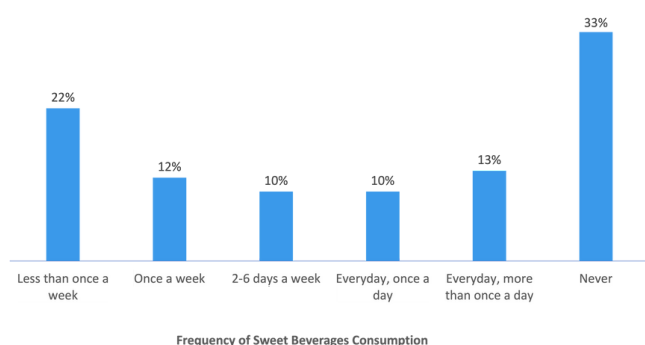
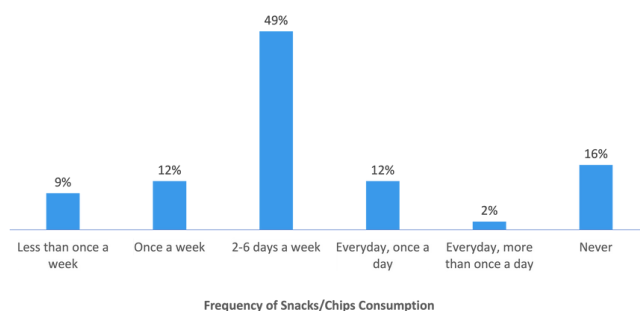
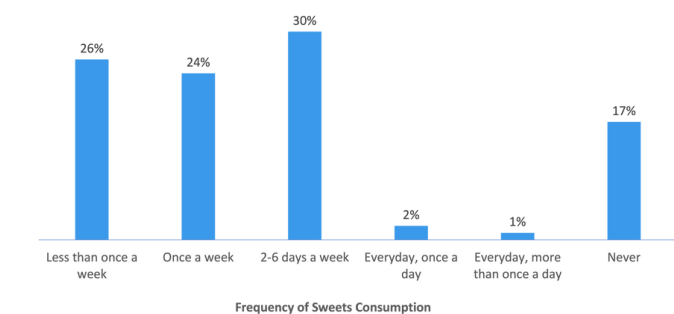
of children reported that they consume fast foods



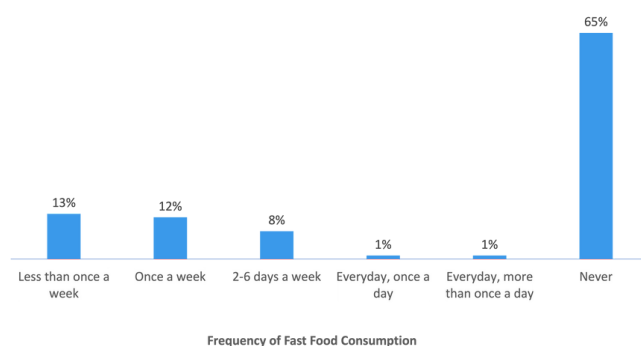
of children reported that they consume sugary beverages

RESULTS

Snack Snapshot



The baseline survey results show that sweets and chips are the most popular snacks amongst schoolchildren, followed by sweet beverages. Bakery items and fast food items are relatively less popular. The food choices in children are determined by several factors such as easy availability, better taste, reasonable price, peer pressure, advertisements, buying power etc.¹⁵ Regular and excess consumption of foods high in fat, sugar and salt leads to obesity. It is a risk factor for diabetes, high blood pressure, heart disease and other non-communicable diseases.¹⁶



15. The Ministry of Women and Child Development, Report of Working Group on Addressing Consumption of Foods High in Fat, Salt and Sugar (HFSS) and Promotion of Healthy Snacks in Schools of India <https://wcd.nic.in/sites/default/files/Final%20Report%20of%20Working%20Group%20on%20HFSS-merged.pdf>

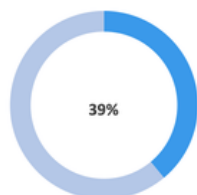
16. Food Safety and Standards Authority of India, Eat Right India, <https://eatrightindia.gov.in/reduction-fat-sugar-salt.jsp>

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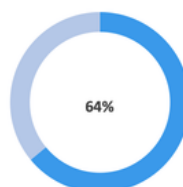
Nutritional Supplements



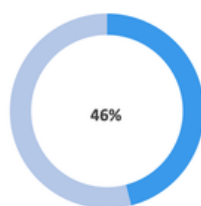
In India, anaemia affects almost 50 to 60 percent of the population, while vitamin A deficiency and iodine deficiency have reduced over the years. One in two adolescents suffers from at least two of the six micronutrient deficiencies (iron, folate, vitamin B12, vitamin D, vitamin A, and zinc).¹⁷ As per the baseline survey results, over half of the schoolchildren consume iron tablets, while more than half do not consume deworming tablets and vitamin A supplements.



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

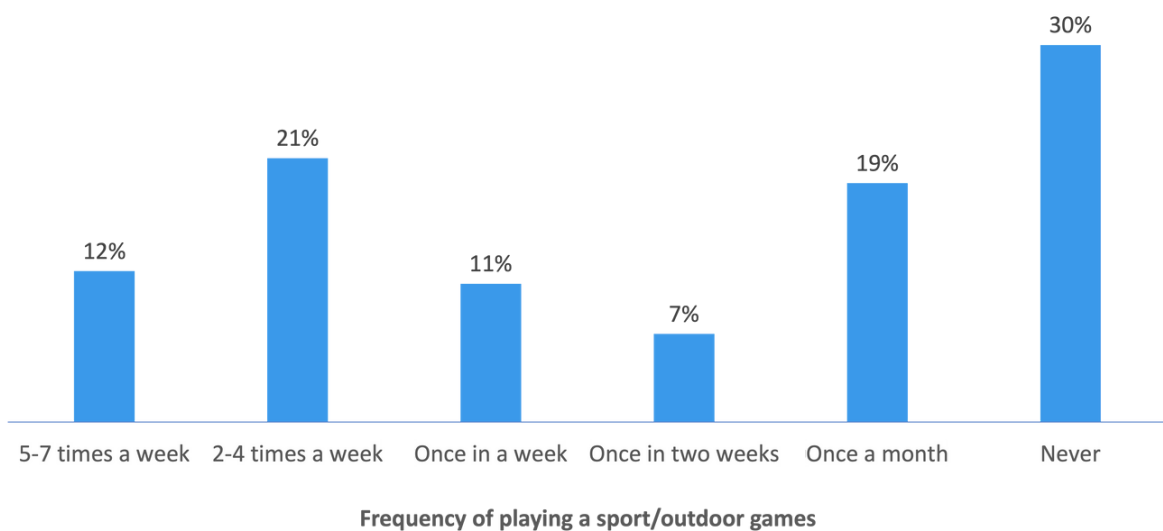


17. CNNS-Thematic-Report-Adolescents-Diets-and-Nutrition. <https://www.unicef.org/india/media/2631/file/CNNS-Thematic-Report-Adolescents-Diets-and-Nutrition.pdf>



RESULTS

Physical activity



Global trends for insufficient adolescent physical activity show that urgent action is needed to increase physical activity levels in girls and boys aged 11 to 17 years. A study published in The Lancet Child & Adolescent Health journal and produced by researchers from the World Health Organization (WHO) found that more than 80% of school-going adolescents globally did not meet current recommendations of at least one hour of physical activity per day – including 85% of girls and 78% of boys.

The health benefits of a physically active lifestyle during adolescence include improved cardiorespiratory and muscular fitness, bone and cardiometabolic health, and positive effects on weight. There is also growing evidence that physical activity has a positive impact on cognitive development and socializing. Current evidence suggests that many of these benefits continue into adulthood. To achieve these benefits, the WHO recommends that adolescents do moderate or vigorous physical activity for an hour or more each day.¹⁸

This baseline survey covers a subset of the physical activity frequency of children playing outdoor games or a sport. The baseline survey results show that 3 in 10 children never play sports or outdoor games and only about 1 in 10 children play sports or outdoor games 5-7 times a week.

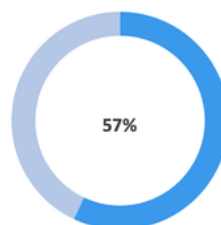
18. World Health Organization, <https://www.who.int/news-room/detail/22-11-2019-new-who-led-study-says-majority-of-adolescents-worldwide-are-not-sufficiently-physically-active-putting-their-current-and-future-health-at-risk>

RESULTS

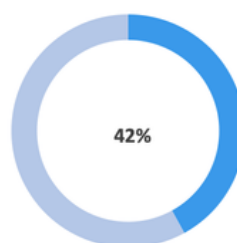
Water, Sanitation and Hygiene



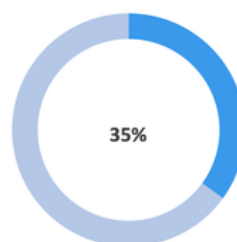
The combination of adequate water and sanitation facilities, correct behavioural practices and education is critical for securing children's good health, learning, and overall development. The Government of India's Clean India: Clean Schools campaign (2014) stresses ensuring that every school has hand-washing and soap facilities.¹⁹ As per the baseline survey results, around 1 in 2 schoolchildren reported using water and soap to wash their hands. Approximately 1 in 3 schoolchildren wash their hands with soap before eating, and half of them wash their hands with soap after using the toilet or answering nature's call. 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.



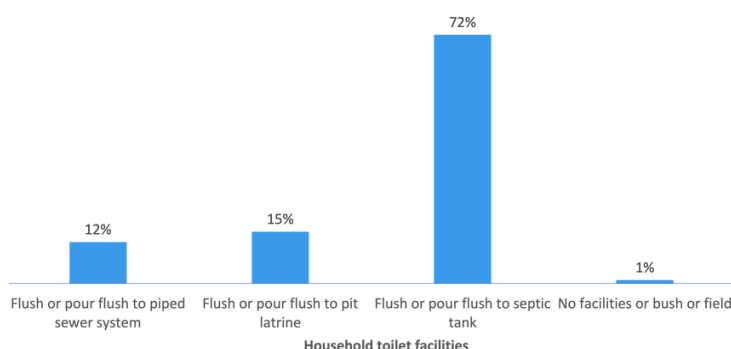
Around 1 in 2 children wash their hands with water and soap



Approximately 2/5th use only water to wash their hands and the rest use sanitiser, water and sand.



Only 35% use soap to wash their hands before eating and 54% use soap after using the toilets in the school.



One of the goals of the Swachh Bharat Abhiyan is to eliminate open defecation in the country by building toilets. In Rajasthan, 71% of the population is living in households that use an improved sanitation facility. This is similar to 70% of the population living in households that use an improved sanitation facility in India.²⁰ As per the baseline survey, 98% of schoolchildren have toilet facilities with a flush/pour flush system in their homes.

19. https://www.unicef.org/india/what-we-do/clean-india-clean-schools#_ftn1

20. National Family Health Survey (NFHS-5) 2020-21 Rajasthan and India factsheets http://rchiips.org/nfhs/factsheet_NFHS-5.shtml

RESULTS

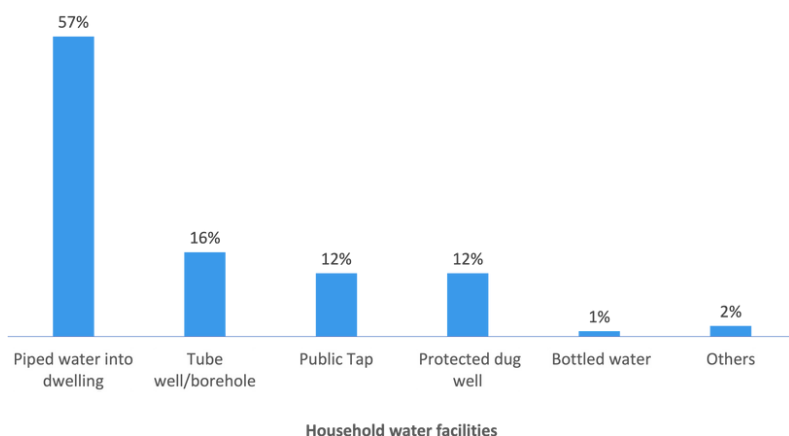
Water, Sanitation and Hygiene



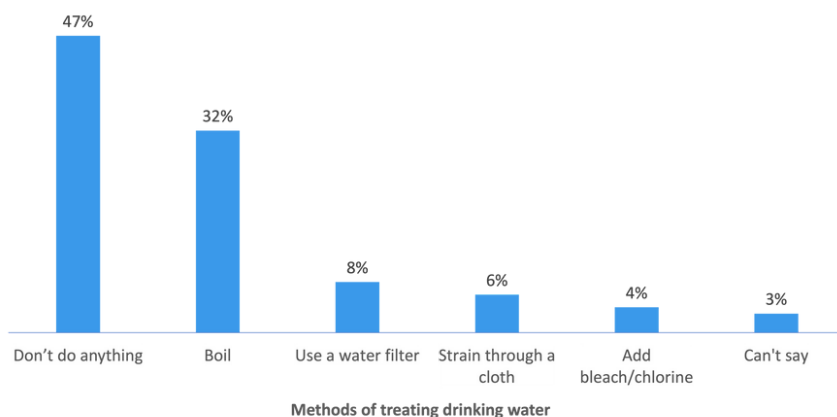
To meet the latest Sustainable Development Goals (SDG) criteria for safely managed drinking water services, households must use an improved water source that is:

- Accessible on-premises
- Available when needed
- Free from contamination.²¹

According to 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%), tube wells or boreholes (16%), and public taps or standpipes (12%). In contrast, rural households rely most on tube wells or boreholes (46%), followed by water piped into their dwelling, yard, or plot (23%).²²



As per the baseline survey results, more than half of the children had piped water into dwellings as their source of water. 2 in 5 children reported a tube well/borehole or public tap/standpipe or protected dug well as their source of water. 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; 66% of rural households do not treat their water, compared with 44% of urban households.²³ As per the baseline survey, almost half of the children reported that their households don't do anything to treat their drinking water.



21 Progress on household drinking water, sanitation and hygiene | 2000-2017 <https://washdata.org/sites/default/files/documents/reports/2019-07/jmp-2019-wash-households.pdf>

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

23. Ibid

CONCLUSION

The results of the Rajasthan Baseline survey in the Jhunjhunu and Sikar districts provide essential information that can be used to understand the present situation in these districts. This information helps us identify the focus areas of our solution and the challenges that children in the region could help us address.

It is crucial to prioritize practical interventions that enhance awareness and knowledge of nutrition, sanitation, hygiene, and food habits. The implementation of the Nourishing Schools toolkit, which incorporates engaging games and activities, can significantly enhance children's understanding and encourage them to take appropriate action. This toolkit offers a fun and interactive platform for learning, thereby equipping children with the necessary knowledge and skills.

While the data presented in this report represents a limited sample of the student population, the Nourishing Schools program strives to empower children as change agents who disseminate knowledge and awareness within their communities.





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