EHSAS

Endline Survey Report

(2023)

Society for Nutrition, Education & Health Action
Behind Bldg. No. 11, BMC Colony
Shastri Nagar, Santa Cruz (W)
Mumbai - 400 054

+ 91 022 26606295 / 26614488

TABLE OF CONTENTS

List of Tables

Acronyms

SNEHA	Society for Nutrition Education and Health Action
EHSAS	Empowerment Health and Sexuality of Adolescents
WHO	World Health Organization
ICDS	Integrated Child Development Services
ICT	Information and Communication Technologies
GEM Scale	Gender-Equitable Men Scale
CD-RISC-10	Connor Davidson Resilience Scale-10
IFA	Iron and Folic Acid
BMI	Body Mass Index
M&E	Monitoring and Evaluation
SD	Standard Deviation
SRH	Sexual and Reproductive Health
UNICEF	United Nations Children's Fund
MHM	Menstrual Hygiene Management
RMNCH+A	Reproductive, Maternal, Newborn Child plus Adolescent Health

Executive Summary

This report presents findings from the Endline survey of the adolescent program implemented by the Society for Nutrition Education and Health Action (SNEHA) in the intervention areas of Dharavi and Kalwa. This was a cross sectional study on adolescents who have been enrolled into the programme between October and December 2020. The baseline data were collected between December 2020 and February 2021. The endline survey was administered over a period of three weeks (in November 2023) and face to face interviews were conducted. The objective of the survey was to measure the overall impact of the intervention on adolescents' understanding and practices on nutrition and anaemia, sexual and reproductive health, emotional resilience and gender attitudes, communication with parents and health seeking behaviour.

Programme overview

The Empowerment Health and Sexuality of Adolescents (EHSAS) intervention is a three-year project (2020- 2023) and is envisaged as a journey from adolescence to youth hood as young people acquire information, learn how to process the same, strike conversations within families and communities and move into adulthood as confident and responsible individuals. The goal of the programme is to address health and wellbeing of adolescents, enabling them to become healthy, gender sensitive and responsible citizens and creation of an adolescent friendly ecosystem.

Key Findings

The report indicates an improvement in dietary diversity among adolescents. Compared to the baseline survey, there is a decrease in the prevalence of underweight, while the prevalence of obese/overweight has slightly increased. Awareness regarding nutritional disorders such as iron-deficiency anaemia and sexual and reproductive health has notably increased. Additionally, there is a positive trend in the uptake of public health services. Although there has been significant progress in fostering gender-equitable attitudes among adolescents, emotional resilience scores have not shown improvement. This highlights the necessity of targeted interventions to meet program targets, with careful consideration of differing outcomes between the two intervention sites during planning.

Introduction

EHSAS programme, an initiative undertaken by SNEHA, addresses the health and well-being of adolescents in vulnerable urban slums of Mumbai and Thane through group education, community mobilization, service provision and creation of an adolescent friendly ecosystem. The EHSAS intervention model is a three-year project (2020- 2023) thatstrives to build the perspectives of adolescents as well as those of their parents, community stakeholders and public institutions (such as healthcare providers, the police, educational institutions and civic representatives) to come together and improve health conditions (physical, sexual and mental) of young people and promote gender equity. The goal of the programme is to address health and wellbeing of adolescents and youth, enabling them to become healthy, gender sensitive and responsible citizens and creation of an adolescent friendly ecosystem.

Evaluation

Context and scope of evaluation

At the outset of the intervention, a baseline assessment was carried out to gauge adolescents' awareness of nutrition and critical health issues such as anaemia, sexual and reproductive health, as well as their attitudes towards gender roles, emotional resilience, parental connection, and access to health services.
The endline assessment was conducted to measure the impact of the EHSAS program by assessing the status of program indicators against predefined targets, with the specific aim of comparing these indicators between the baseline and endline assessments.

This report summarizes the findings of the endline survey conducted in November 2023, which will be useful in evaluating the program's performance and improvising implementation strategies for future programs of a similar kind.

Methods

Study Designs

The endline survey was a cross-sectional quantitative study conducted with adolescents from the enrolled cohort. The study was conducted in November 2023. Face to face interviews were conducted and anthropometric measurements were taken following COVID appropriate behaviour.

Sample size and sampling

Sample size was determined using 'N Master', a statistical calculator developed by Dept. of Biostatistics, Christian Medical College, Vellore, assuming a detectable difference of 7%

(20%[1] to 27%) in proportion of adolescents having high emotional resilience, at 85% power, and a 5% margin of error. The calculated sample size was 686.

Stratification was done on area (343 from Dharavi and Kalwa each) and a random list of adolescents was generated based on the sample size.

Data collection

The data collection process required coordination with the implementation team as the interviews were predominantly conducted in the programme community centres and not in households in order to maintain privacy during data collection. Community organizers of the programme shared participation information sheets with parents of adolescents and sought written informed consent from them. Following this, the adolescents were mobilized and brought for interviews at the community centres. Prior to conducting the interviews, verbal informed assent was sought from adolescents by the surveyors. A team of 11 surveyors, led by two field officers, was responsible for data collection. Each interview lasted for about 20-25 minutes. The supervisors were responsible to ensure that the surveyors followed protocols throughout the data collection; data collection was also monitored by the Monitoring & Evaluation Coordinator through direct observation of 5% of the interviews. Data were collected in CommCare (Dimagi, USA), an open sourced mobile-based platform with a cloud-based server.

Survey Tool

A single standard questionnaire to gather information on the wide variety of topics related to adolescent health was not found. The survey tool was therefore adapted from other survey instruments like the 'Youth in India: Situation and Needs 2006-2007' Report, 'Minimum Dietary Diversity for Women: A guide to measurement' and included standard tools like the Gender-Equitable Men (GEM) Scale and the Connor-Davidson Resilience Scale – 10 (CD-RISC-10). It consisted of the following sections as depicted in Table 1.

Table 1: Summary of survey questions

	Sections	Questions
01	Administrative	Intervention area, name of adolescent
02	Socio-demographic information	Age, sex, religion, occupation, education, migration history, family details, household details, type of drinking water and toilet details, school details, access to internet
03	Diet and nutrition	Minimum Dietary Diversity (24 hour recall)

[1] *20% of the surveyed adolescents from the previous cohort showed high emotional resilience in evaluation survey conducted in June 2019*

04	Understanding of sexual and reproductive health (SRH)	Changes during puberty, legal awareness, menstrual hygiene management
05	Understanding of anaemia	Causes, symptoms and prevention of anaemia, anaemia testing in previous year
06	Parent child communication	Frequency of checking homework/activity during free time (parental regulation), understanding their problems (parental connection)
07	Civic participation	Participation in civic initiatives in the community in preceding six months
08	Gender equity perspective	GEM Scale. It consisted of 15 statements under three sub-domains: gender roles, attributes and violence
09	Emotional resilience	CD-RISC-10. A 10 item scale to assess resilience or how well one is equipped to bounce back after change
10	Health service access	Health problems in preceding three months and health seeking behaviour, uptake of IFA tablet in preceding month, uptake of deworming tablet in preceding six months
11	Anthropometry	Height and weight measurement

At the end of the interview, the surveyors took the adolescents' anthropometric measurements. Adolescents' height and weight were measured and body mass index (BMI) was calculated using the formula weight/height2. Weight was measured using a well-calibrated, portable bathroom scale and height was measured using a portable stadiometer, which consists of an anthropometer with a simple moveable headboard.

Data analysis

After crosschecking for discrepancies and data cleaning, data analysis was conducted using Stata v. 14. Continuous variables like age, family size, age at menarche etc. were summarized as Mean and Standard Deviation. Categorical variables like gender, educational attainment, access to internet etc. were summarized as proportions. Proportions of programme indicators in this survey were also compared with the Baseline survey, Annual Survey 1, Annual Survey 2 and Endline Survey (Annexure 1).

Ethical considerations

Investigators respected the privacy and confidentiality of all participants, and made sure informed consent was obtained prior to interview. Care was taken to maintain confidentiality at all times by not sharing information provided by participants or discussing any of the details of interviews with others. Confidentiality of the information

was maintained in data processing and the final data sets did not include participants' name.

Any adolescent participating in the survey if found to be in need of assistance for health issues or violence, received the support through SNEHA's community organizers and clinical psychologists.

Results

Socio-demographic profile of the adolescents:

691 adolescents were interviewed in the endline survey. As seen from Table 2, more than half of the surveyed adolescents were female (56%). Majority belonged to nuclear families (75%) and were Hindus (76%). 78% of the adolescents said their family owned a ration card, of which most (94%) had orange-colour cards (issued to families with income between Rs. 15,000 and Rs. 1,00,000 per annum). The average household size was 6. The mean age of the surveyed adolescents was 15.1 years.

Table 2: Socio-demographic characteristics of surveyed adolescents

Socio-demographic characteristics	Baseline		Endline	
	(N = 687)	%	(N=691)	%
Area				
Dharavi	383	56	346	50
Kalwa	304	44	345	50
Sex				
Male	321	47	301	44
Female	366	53	390	56
Family type				
Nuclear	539	78	521	75
Joint	148	22	170	25
Religion				
Hindu	510	74	525	76
Muslim	139	20	126	18
Buddhist	23	3	27	4
Christian	15	2	13	2
Ownership of Ration card				
Yes	503	73	538	78
No	146	21	146	21
Don't know	38	6	7	1
Color of ration card	N=503		N=538	
Orange	441	88	505	94
Others	51	10	29	5
Don't know	11	2	4	1
Average household size	6		6	
Mean age (SD)	12.5 (0.04) year		15.1 (0.05) year	

Household characteristics:

Lesser proportion of the surveyed adolescents lived in rented houses (26%) as opposed to those living in their own house (74%). Majority lived in pucca houses (91%). All the adolescents lived in households with improved water source, however only about one-fourth (29%) had access to private flush toilet facilities. Except two adolescents, almost all reported using LPG as cooking fuel.

Table 3: Household characteristics of surveyed adolescents

Household characteristics	Baseline		Endline	
	(N = 687)	%	(N = 687)	%
House ownership				
Own house	475	69	514	74
Rental	212	31	177	26
Type of house				
Pucca	550	80	627	91
Semipucca	96	14	60	9
Kaccha	41	6	4	1
Source of drinking water				
Piped water into dwelling	256	37	274	40
Piped water to yard plot	296	43	156	23
Public tap standpipe	132	19	235	34
Bottled water	3	<1	4	1
Community RO Plant			11	2
Other (Borewell)			11	2
Toilet facility				
Flush/pour flush (public)	521	76	494	71
Private flush toilet	163	24	197	29
No facility	3	<1		
Fuel used for cooking				
LPG	673	98	689	100
Kerosene	13	2	2	<1
Other	1	<1		

Educational characteristics:

Almost all surveyed adolescents had completed primary level of education (1st to 4th years of schooling). Most were currently in school with 3% (n=20) having dropped out of school. Eight of these adolescents cited lack of personal interest in studies as the reason for discontinuation of schooling, and four of them reported that education was not considered necessary by their families. Other reasons included family poverty, involvement in household chores/taking care of younger siblings, distance of the school and poor infrastructural facilities at school.

Majority (67%) of the adolescents were enrolled in private schools. Most were studying (94%) and not doing any jobs at the time of the interview. 97% reported having access to internet.

Table 4: Educational characteristics of surveyed adolescents

Characteristics	Baseline		Endline	
	(N = 687)	%	(N = 691)	%
Education level				
No Education	2	<1	1	<1
Primary (1st -4th std)	34	5	1	<1
Secondary (5th -8th std)	617	90	233	34
Senior secondary (9th -12th std)	34	5	456	66
Schooling status				
Currently in school	674	98	671	97
Drop out/not going to school	13	2	20	3
Type of educational facility				
Government	235	35	219	33
Private	439	65	452	67
Current occupation				
Student	658	96	648	94
Student and working	16	2	20	3
Drop out and working	2	<1	3	<1
Drop out and not working	11	2	20	3
Access to internet				
Yes	619	90	672	97
No	68	10	19	3

Parental characteristics:

The socio-demographic characteristics of the respondents' parents were also collected, including their survival status, education and occupation. Among 94% of the adolescents, both their parents were surviving. Close to half (48%) of the respondents' fathers had completed senior secondary education (9th -12th standard of schooling) while one-third of their mothers (33%) were educated up to the secondary level (5 to 8 years of schooling). Almost half of the fathers (49%) were employed in occupations which didn't require any special skills or training; about half of the mothers (51%) were not working.

Table 5: Parental characteristics of surveyed adolescents

Parental characteristics	Baseline		Endline	
	(N = 687)	%	(N = 691)	%
Survival status				
Both parents deceased	3	<1	1	<1
Both parents alive	639	93	647	94
Only father alive	5	1	6	1
Only mother alive	40	6	37	5
Educational attainment of father	(N=644)	%	(N=653)	%
No schooling	56	9	53	8
Lower Primary (Standard 1-4)	32	5	34	5
Upper Primary (Standard 5-8)	184	29	214	33
Secondary (Standard 9-10)	197	31	249	38
Senior secondary (Standard 11-12)	62	10	61	9
Graduate and above	15	2	21	3
Don't know	98	15	21	3
Educational attainment of mother	(N=679)	%	(N=684)	%
No schooling	152	22	167	24
Lower Primary (Standard 1-4)	41	6	58	9
Upper Primary (Standard 5-8)	227	33	225	33
Secondary (Standard 9-10)	129	19	147	22
Senior secondary (Standard 11-12)	39	6	50	7
Graduate	13	2	16	2
Don't know	78	11	21	3

Parental characteristics	Baseline		Endline	
Occupational status of father	(N=644)	%	(N=653)	%
Does not work or looking for work	30	5	14	2
Skilled or technical work	91	14	68	10
Work that does not require special training or a degree	523	81	569	87
Don't know			2	<1
Occupational status of mother	(N=679)	%	(N=684)	%
Does not work or looking for work	335	49	351	51
Skilled or technical work	25	4	20	3
Work that does not require special training or a degree	319	47	313	46

Objective 1: To improve the nutritional status of adolescents

Indicators:

1) **Proportion of adolescents with adequate dietary diversity**
2) **Proportion of adolescents who are underweight**
3) **Proportion of adolescents having knowledge about anaemia causation, prevention and treatment**

The results of assessment of the dietary intake of adolescents are presented in Table 6. The adolescents were asked about their diet on the previous day and night of the interview (24 hour recall). Those who had partaken of more than or equal to 5 out of ten defined food groups were classified as having adequate dietary diversity, a proxy indicator for higher micronutrient adequacy.

More than half of the surveyed adolescents (59%) had inadequate dietary diversity. However as compared with the baseline survey, an increase in the percentage of adolescent who had reported adequate diversity was noted. The consumption of food grains and pulses was high (100% and 93% respectively); however, the consumption of green leafy vegetables during the end line survey was only 17%, as compared to 26% in the baseline survey.

Table 6: Dietary diversity of surveyed adolescents

Characteristics	Baseline		End line	
	(N = 687)	%	(N =691)	%
Minimum dietary diversity				
Inadequate dietary diversity	468	68	406	59
Adequate dietary diversity	219	32	285	41
Consumption pattern of food groups				
Grain (cereal)foods	684	99	689	100
Legumes and pulses	649	94	642	93
Nuts and seeds	120	17	229	33
Dairy products	147	21	200	29
Flesh foods	191	28	228	33
Eggs	79	12	94	14
Green leafy vegetables	178	26	117	17
Other Vitamin A rich fruits and vegetables	66	10	79	11
Other fruits	227	33	287	42
Other vegetables	449	65	429	62

Height and weight of the adolescents were measured and BMI was calculated using the formula weight/height^2. Those adolescents with BMI for age less than 5th percentile of the WHO growth charts' reference population (*Growth Reference 5-19 Years - BMI-for-Age (5-19 Years)*, n.d.) were classified as underweight, those between 5th and 85th percentile were considered to have normal weight, greater than or equal to 85th but less than 95th percentile were considered to be at risk of being overweight. Those with BMI for age greater than 95th percentile were said to be obese.

During the endline survey, 31% of the adolescents were found to be underweight, as compared to 34% in the baseline survey. Again, 10% were also found to be in the overweight/obese category during the endline survey compared to 9% in the baseline survey.

Table 7: Nutritional status of surveyed adolescents

BMI categories (WHO BMI-for-age growth charts)	Baseline		End line	
	(N = 616)	%	(N =687)	%
Underweight	207	34	216	31
Normal	355	58	405	59
Overweight	34	6	34	5
Obese	20	3	32	5

The adolescents were asked about the causes, symptoms and prevention of anaemia in order to assess their understanding of anaemia. The questions were adapted from Food and Agriculture Organization of the United Nations' guidelines for assessing nutrition related knowledge, attitude and practices (Fautsch Macías & Glasauer, 2014). The results are presented in Table 8.

When probed about the symptoms of anaemia, weakness (92%) was the most commonly reported symptom in the endline survey, followed by symptoms like – dizziness (60%), paleness (35%) and less immunity (35%). Symptoms like difficulty to concentrate or loss of appetite which are important with respect to adolescent health and functioning were reported only by 16% and 29% of the adolescents respectively during the Endline survey. However, reporting of such indicators were extremely poor during the base line survey. Again, as compared to 32% reported that they did not know any symptoms of anaemia during the base line survey only 1% of the adolescents reported of not knowing any symptoms of anaemia during the endline survey.

The proportion of adolescents attributing anaemia to a lack of iron in their diet increased from 42% in the baseline to 90% in the endline. In comparison to the baseline survey where 34% of adolescents indicated they were unaware of any causes of anaemia, only 3% of adolescents reported the same in the endline survey, demonstrating a marked increase in awareness.

When probed about what could be done in order to prevent anaemia, about 97% said that it could be prevented by eating iron rich food in the endline survey as compared to 67% in the baseline survey. Again only 2% were not aware of any means of anaemia prevention in the endline survey as compared to 21% during the baseline survey.

The questionnaire used to assess knowledge of anaemia consisted of 14 correct responses for questions on causes, symptoms and prevention of anaemia. A summary score was prepared based on the number of correct responses to all the three questions; it was seen that in the endline survey 21% (n=148) of the adolescents had low score (score 0-4), 71% (n=491) had moderate score (5-9) and only 8% (n=52) got a high score (10-14). While during the baseline survey, the comprehensive knowledge on anemia among the adolescents was much poor, as 80% scored low and 20% scored moderate on the same questionnaire.

The proportion of adolescents who had undergone screening for anaemia in the previous year has shown improvement from 6% (baseline survey) to 78% (endline survey).

Table 8: Knowledge about anaemia causation, prevention and treatment among adolescents

Characteristics	Baseline		End line	
	(N = 687)	%	(N =691)	%
Symptoms of anaemia (Multiple choice response)				
Less energy /weakness	366	53	639	92
Paleness	91	13	239	35
More likely to get sick (less immunity)	90	13	242	35
Difficulty to concentrate	3	<1	109	16
Loss of appetite	55	8	202	29
Dizziness	171	25	417	60
Any other			49	7
Don't know	217	32	4	1
Causes of anaemia (Multiple choice response)				
Lack of iron in the diet	286	42	624	90
Sickness/Infection (Malaria,hookworm,HIV)	30	4	68	10
Heavy bleeding during menstruation	24	3	108	16
consumption of junk food	188	22	425	62
Any other			87	13
Don't know	236	34	24	3
Prevention of anaemia (Multiple choice response)				
Eating iron rich food	459	67	670	97
Eating Vitamin C rich food during or right after meals	63	9	23	3
Taking iron supplements if prescribes	25	4	209	30
Treating other causes of anemia (diseases and infections)	15	2	29	4
Avoid Junk food			348	50
Any other			68	10
Don't know	145	21	13	2
Summary scores (Anaemia Knowledge)				
High score	1	<1	52	8
Moderate score	135	20	491	71
Low score	551	80	148	21
Adolescents who had undergone **screening for anaemia** in the previous year	43	6	540	78

Objective 2: To improve knowledge, attitude and behaviour of adolescents in relation to sexual and reproductive health

Indicators:

1) **Proportion of adolescents knowledgeable about puberty and associated changes**
2) **Proportion of adolescent girls practising hygienic methods of menstrual management**
3) **Proportion of adolescents who are aware of social and legal issues related to reproductive health**

Adolescents' current understanding of puberty and associated changes were assessed through their awareness of physical changes during puberty, correct knowledge of wet dreams (that their occurrence is normal and a part of growing up) and rejection of misconceptions regarding menstruation (namely, that girls should eat separately, should not enter the kitchen or touch anyone during their menstrual period). The results are presented in Table 9.

In the endline survey, the most common responses to bodily changes during puberty were found to be increase in height and weight (90%), followed by beard and moustache (80%) and menstruation (77%). Only 1% reported not knowing any bodily changes during puberty in the endline survey compared to 11% during the baseline survey.

Around 45% of the adolescents said that wet dreams are normal and a part of growing up in the endline survey as compared to only 13% during the baseline survey. About 70% of the adolescents rejected myths associated with menstruation and said that girls should consume iron rich food especially during their period in the endline survey as compared to 35% during the baseline survey.

The questionnaire used to assess knowledge of SRH consisted of 10 correct responses for questions on changes occurring during puberty, correct knowledge about wet dreams and rejection of menstrual myths. A summary score was prepared based on the number of correct responses with scores ranging from low to high. It was found that in the endline survey, 19% (n=129) of the adolescents had high score (score of 7-10), 65% (n=451) scored medium (score of 4-6) and 16% (n=111) reported low score (score of 0-3) on awareness of pubertal changes. In the baseline the majority (84%) of the adolescents reported low score on awareness of pubertal changes.

Table 9: Awareness about puberty and changes during growing up among adolescents

Characteristics	Baseline		End line	
	(N = 687)	%	(N =691)	%
Bodily changes during puberty (Multiple choice response)				
Menstruation	188	27	529	77

Hair growth in armpits and private parts	58	8	440	64
Maturing of voice	53	8	296	43
Wet dreams			140	20
Broadening of hips	20	3	25	4
Development of breasts	98	8	462	67
Increase in height and weight	505	43	624	90
Beard and moustache	118	10	551	80
Other			92	13
don't know	126	11	5	1
Response to "how should a friend react if a boy tells them about his first experience of wet dreams"				
Correct response	89	13	314	45
Incorrect response	542	79	373	54
Don't know	56	8	4	1
Rejecting myths associated with menstruation				
Correct response	243	35	483	70
Incorrect response	276	40	189	27
Don't know	168	24	19	3
Summary scores				
High score	3	1	129	19
Moderate score	107	16	451	65
Low score	577	84	111	16

During the endline survey, 96% adolescent girls (n=376) attained menarche as compared to 58% adolescent girls (n=214) in the baseline survey. These girls were enquired about their menstrual hygiene management practices. The mean age at menarche was found to be 12.8 years in the endline as compared to 12.2 years in the baseline survey.

According to UNICEF (*Guidance on Menstrual Health and Hygiene*, 2019), menstrual hygiene management (MHM) refers to management of hygiene associated with the menstrual process. WHO and UNICEF Joint Monitoring Programme for drinking water, sanitation and hygiene (WASH) has used the following definition of MHM: menstruators are using a clean menstrual management material to absorb or collect menstrual blood, that can be changed in privacy as often as necessary for the duration of a menstrual period, using soap and water for washing the body as required and having access to safe and convenient facilities to dispose of used menstrual management materials.

It was seen in both the surveys that most of the surveyed adolescent girls were using hygienic methods of menstrual protection. All girls said that they could dispose used sanitary products conveniently and safely in the endline survey compared to 96% girls in

the baseline survey. Almost all girls reported to be using soap and water to clean themselves during their menstrual period in both the surveys.

When probed about frequency of changing absorbents during a day, 52% of the girls said that they did so three times a day or more in both the surveys. However, only 2% of the adolescent girls in the endline survey reported to have used one pad throughout a day, which was 5% in the baseline survey. In the endline survey, it was reported by most of the girls (90%) to have been disposed their used sanitary products in the garbage can (Table 10).

Table 10: Menstrual hygiene management among adolescent girls

Indicators	**Baseline**		**End line**	
	N=214	%	N=376	%
Proportion of adolescent girls using hygienic methods of menstrual protection	209	98	373	99
Proportion of adolescent girls who could dispose used sanitary products easily and safely	206	96	376	100
Proportion of adolescent girls who used soap and water to clean theselves during their period	202	94	369	98
Proportion of adolescent girls who could change absorbents easily in privacy as often as needed	211	99	368	98
Frequency of changing absorbents				
Change every 3-4 hours	22	10	49	13
3 times a day	89	42	148	39
2 times a day	84	39	155	41
Feeling wet	9	4	16	4
Use one pad throughout the day	10	5	7	2
Place of disposal of used absorbents**				
Put in the garbage can			340	90
Wash clothes, dry and reuse			2	1
Other (Throwing down in the drain-Gutter/Khadi)			34	9

Note: **using cloth as an absorbent was not considered hygienic*
*** The question was not asked during the baseline survey.*

It was noted that more than half of the adolescents (53%) reported correct legal age at marriage for women in the endline survey as compared to 35% adolescents in the baseline survey (Table 11).

Table 11: Awareness about legal age at marriage for women

Adolescents having correct knowledge about women's legal age for marriage	Baseline		End line	
	(N = 687)	%	(N =691)	%
18 years	241	35	368	53
21 years	NA	NA	155	22
Any other	446	65	168	25
Note: Option as 21 years as legal age at marriage was not given in the baseline survey.				

Objective 3: To improve awareness and addressal of mental health issues among adolescents

Indicators:

1) **Proportion of adolescents with high emotional resilience**

Resilience is defined as a "process of adapting well in the face of adversity or threat". An adolescent who is resilient is likely to enter adulthood with a good chance of coping well, even if he or she has experienced difficult circumstances in life. The emotional resilience of the adolescents was assessed using the Connor-Davidson Resilience Scale-10.

The CD-RISC-10© consists of 10 statements describing different aspects of resilience. The scale serves mainly as a measure of hardiness, with items corresponding to **flexibility** (1 and 5), **sense of self-efficacy** (2, 4 and 9), **ability to regulate emotion** (10), **optimism** (3, 6 and 8) and **cognitive focus/maintaining attention under stress** (7). Each item is scored on a five-point scale ranging from 0 to 4, with 0 representing that the resilience statement is not at all true and a score of 4 indicating that the statement is true nearly all the time. The total score is obtained by adding up all 10 items. The total can therefore range from 0 to 40. Higher scores suggest greater resilience and lower scores suggest less resilience, or more difficulty in bouncing back from adversity.

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The mean score of **emotional resilience** slightly improved in the Endline survey (27.1) as compared to the baseline survey (25.8)**.** We have presented score distribution by tertile. However it was noted that in the endline surveys 39% adolescents scored the lowest tertile as compared to 34% in the baseline survey.

Table 12: Emotional resilience of surveyed adolescents

Resilience scores	Baseline		End line	
	(N = 687)	%	(N =691)	%
Top tertile (30 – 40 scores)	213	31	206	30
Middle tertile (26 – 30 scores)	238	35	218	31
Lowest tertile (0 - 25 scores)	236	34	267	39
Mean Score (SD)	25.8 (0.24)		27.1 (0.20)	

Objective 4: To develop adolescents' skills to work with communities and systems on the issues of health, well-being, gender equity and citizenship

Indicators:

1) **Proportion of adolescents with high gender equitable attitudes**
2) **Proportion of adolescents participating in community events**

Gender norms are often defined as culturally shared expectations about the characteristics that men and women should possess and how they should behave (Yu et al., 2017). Gender attitudes are defined as an individual's perceptions, beliefs, or support of gender norms (Kågesten et al., 2016).Gender attitudes can be equitable or inequitable depending on the gender norm. Gender-equitable attitudes are often constructed during adolescence making this a critical time to alter gender perceptions.

The attitudes of the adolescents towards gender equity were assessed through the Gender-Equitable Men (GEM) Scale. There were a set of 15 statements clustered around three themes: **gender roles** *(e.g. "Since girls have to get married, they should not be sent for higher education"),* **attributes** *(e.g. "Boys are naturally better than girls in subjects like mathematics and science)* and **violence** *(e.g. "There are times when a boy needs to beat his girlfriend")* and the responses could be - "agree", "not sure" and "disagree". Those with scores less than 10 were classified as having low gender-equitable attitude, scores 11 to 20 as having moderate equity and greater than 20 as having high equity.

A considerable improvement was observed among the adolescents in gender equitable attitude, as 72% of the respondents displayed high gender equitable attitude in the endline survey compared to 52% of the respondents in the baseline survey.

The participants were also asked about their participation in civic initiatives over the preceding six months. This could be participation in cleanliness drives in their community, distribution drives, awareness campaigns etc. Around 19% of the surveyed adolescents reported civic participation in the endline survey compared to only 3% in the baseline survey.

Table 13: Gender equitable attitude and civic participation of surveyed adolescents

Indicators	Baseline		End line	
	(N = 687)	%	(N =691)	%
High gender -equitable attitude	356	52	498	72
Moderate gender equitable attitude	309	45	186	27
Low gender equitable attitude	22	3	7	1
Civic Participation (Yes)	20	3	130	19

Objective 5: To enable parents to understand adolescent issues and contribute to a safe environment

Indicators:

1) **Proportion of adolescents who reported that their parents understood their worries or concerns all or most of the time (perceived parental connection)**
2) **Proportion of adolescents who reported that their parents knew what they were doing with their free time all or most of the time (perceived parental regulation)**

Parental regulation is defined as parents' knowledge of their child's whereabouts and activities. Empirical research has supported the association between parental regulation and a variety of adjustment indicators. For example, higher levels of parental monitoring have been associated with lower levels of depression, substance use, sexual risk behaviours and violence, and with better school functioning (Jacobson & Crockett, 2000).

Nearly three-fourths (74%) of the adolescents reported that their parents understood their problems or worries always or most of the time. A little more than half of the adolescents (52%) reported that their parents or guardians had mostly or always checked whether their homework had been done in the preceding month of the survey. Around 53% reported that their parents or guardians had mostly or always been aware of their activities during the past 30 days.

Table 14: Perceived parental connection and regulation among surveyed adolescents

Indicators	Baseline		End line	
	(N = 687)	%	(N =691)	%
Perceived parental connection				
Do you think your parents understand your problems or worries				
Always/Most of the time	518	75	513	74
Perceived parental regulation				
In the past one month, how often did your parents check to see if your homework was done				
Always/Most of the time	454	66	357	52
During the past one month, how often did your parents really know what you were doing during your free time				
Always/Most of the time	338	49	364	53

Objective 6: To improve coordination with public health system, ICDS and municipal schools to strengthen adolescent-friendly services

Indicators:

1) **Increased health seeking behaviour among adolescents**
2) **Improved access to IFA and deworming (essential under RMNCH+A) tablets among adolescents**

Adolescents were asked if they had experienced any of the selected general health or sexual and reproductive health problems like fever, diarrhoea, weakness, menstrual issues, painful urination, injury etc. in the preceding three months. About 71% adolescents had reported experiencing health issues in the Endline survey, as compared to 38% adolescents in the baseline survey. Further, their health seeking behaviour was probed. Of those who experienced health issues, 81% reported that they sought medical care for the same in the endline survey, which was very close to the findings from the baseline survey. Not much change has been noticed in heath seeking behaviour of the adolescents as 72% of them had sought medical attention from a private doctor in both the surveys.

In the endline survey, 30% of adolescents reported receiving iron and folic acid tablets in the last month, a marked increase from the 3% reported in the baseline survey. Additionally, 40% of adolescents in the endline survey reported receiving deworming tablets in the last six months, compared to 7% in the baseline survey.

Table 15: Prevalence of selected general and sexual & reproductive health problems among surveyed adolescents and their access to health services

Indicators	**Baseline**		**End line**	
	(N = 687)	%	(N =691)	%
Adolescents reporting experiences of selected general and sexual and reproductive health problems in the preceding three months	264	38	493	71
	(N=264)	%	(N=493)	%
Adolescents who sought care for recent experiences of selected general and sexual and reproductive health problems	216	82	397	81
Place of seeking healthcare	(N=264)	%	(N=493)	%
Public health post	10	5	41	10
Government hospital	16	7	38	10
Private doctor	156	72	286	72
Private hospital	20	9	28	7
Others	14	6	4	1

Indicators	**Baseline**	**End line**

	(N = 687)	%	(N = 687)	%
Adolescents who received weekly iron and folic acid tablets in the preceding month	19	3	207	30
Adolescents who received deworming tablets in the preceding six months	51	7	279	40

Conclusions

This report presents the profile of sampled adolescents in terms of socio-economic, demographic and educational characteristics in baseline and endline surveys. It also captures data on knowledge, attitude and practices of adolescents in terms of dietary patterns, sexual and reproductive health, attitude towards gender norms etc.

The survey findings indicate that while dietary diversity remains low in both baseline and endline surveys, there has been noted improvement in the endline survey. Reduction in proportion of the underweight adolescents was not encouraging. However, notable improvements in knowledge related to anaemia, pubertal changes, and legal rights concerning sexual and reproductive health (SRH) were observed among adolescents in the endline survey. The mean emotional resilience score in the endline survey improved slightly as compared to the baseline survey A remarkable improvement has been noted in the endline survey among the surveyed adolescents related to gender-equitable attitudes. There was an improvement in the uptake of services from public health facilities, while seeking healthcare from private doctors remained consistent. Overall, this study identifies key areas for improving the health, nutrition, and well-being of adolescents in vulnerable communities in Mumbai and Thane. Investing in adolescent health is recognized as yielding multiple benefits, including health, social, and economic gains for both current and future generations. This study provides crucial evidence for programming and highlights priority areas for investment and action.

Finally, these survey results are a source for discussion of situational analysis and to help strategize interventions for the adolescent programme. The report presents simple univariate analyses on a wide range of variables in a clear and precise manner. The idea is that the results will stimulate readers to raise questions, thereby exploring avenues for further studies and research among this important yet often understudied target population.

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Annexure 1

Table 16: Comparison of key results from different surveys

Indicators	**Endline Survey** Nov' 2023 (N=691)	**Annual Survey 2** Dec'2022 (N= 516)	**Annual Survey 1** Dec' 2021 (N=513)	**Baseline Survey** Dec'2020 (N=687)
Mean age (in years) of respondents	15.1	14.3	13.5	12.5
Proportion of adolescents living in households with access to improved water facility	100%	100%	100%	100%
Proportion of adolescents living in households with access to improved sanitation facility	29%	30%	28%	24%
Proportion of adolescents currently enrolled in school/college	97%	96%	98%	98%
Proportion of adolescents having access to internet	97%	97%	98%	90%
Proportion of underweight adolescents	31%	34%	40%	34%
Proportion of overweight/obese adolescents	10%	10%	8%	9%
Proportion of adolescents with moderate/high scores in anaemia knowledge	64%	53%	40%	20%
Proportion of adolescents with adequate dietary diversity	41%	35%	28%	32%
Proportion of adolescents with moderate/high scores in SRH knowledge	84%	66%	29%	16%
Mean (SD) emotional resilience score	27.1 (0.2)	26.9 (5.5)	26.4 (5.5)	25.8 (0.2)
Proportion of adolescents with high gender equitable attitude	72%	64%	53%	52%
Proportion of adolescents participating in community events in last 6 months (civic engagement)	19%	6%	7%	3%
Proportion of adolescents who reported that their parents understood their worries or concerns all or most of the time (perceived parental connection)	74%	74%	75%	75%

Proportion of adolescents who reported that their parents knew what they were doing in their free time all or most of the time (perceived parental regulation)	53%	55%	48%	49%
Proportion of adolescents reporting recent experiences of selected general and sexual and reproductive health problems	71%	74%	45%	38%
Proportion of adolescents who sought care for recent experiences of selected general and sexual and reproductive health problems	81%	78%	86%	82%
Proportion of adolescents who received weekly IFA in the preceding month	30%	52%	27%	3%
Proportion of adolescents who received deworming tablets in the preceding 6 months	40%	56%	30%	7%

Annexure 2

Table 17: Site wise comparison of key results during baseline survey

Indicators	DHARAVI (N=383)	KALWA (N=304)	TOTAL (N=687)
Proportion of adolescents living in households with access to improved water facility	100%	100%	100%
Proportion of adolescents living in households with access to improved sanitation facility	25%	22%	24%
Proportion of adolescents currently enrolled in school/college	98%	98%	98%
Proportion of adolescents having access to internet	91%	89%	90%
Proportion of underweight adolescents	32%	36%	34%
Proportion of overweight/obese adolescents	12%	5%	9%
Proportion of adolescents with moderate/high scores in anaemia knowledge	27%	11%	20%
Proportion of adolescents with adequate dietary diversity	31%	33%	32%
Proportion of adolescents with moderate/high scores in SRH knowledge	20%	12%	16%
Mean (SD) emotional resilience score	24.9 (0.3)	26.9 (0.3)	25.8 (0.2)
Proportion of adolescents with high gender equitable attitude	60%	42%	52%
Proportion of adolescents participating in community events in last 6 months (civic engagement)	4%	2%	3%
Proportion of adolescents who reported that their parents understood their worries or concerns all or most of the time (perceived parental connection)	77%	73%	75%
Proportion of adolescents who reported that their parents knew what they were doing in their free	60%	36%	49%

time all or most of the time (perceived parental regulation)			
Proportion of adolescents reporting recent experiences of selected general and sexual and reproductive health problems	31%	48%	38%
Proportion of adolescents who sought care for recent experiences of selected general and sexual and reproductive health problems	84%	80%	82%

Table 18: Site wise comparison of key results during endline survey

Indicators	**DHARAVI** (N=346)	**KALWA** (N=345)	**TOTAL** (N=691)
Proportion of adolescents living in households with access to improved water facility	100%	100%	100%
Proportion of adolescents living in households with access to improved sanitation facility	31%	26%	29%
Proportion of adolescents currently enrolled in school/college	97%	98%	97%
Proportion of adolescents having access to internet	98%	97%	97%
Proportion of underweight adolescents	29%	24%	31%
Proportion of overweight/obese adolescents	12%	6%	10%
Proportion of adolescents with moderate/high scores in anaemia knowledge	76%	52%	64%
Proportion of adolescents with adequate dietary diversity	41%	41%	41%
Proportion of adolescents with moderate/high scores in SRH knowledge	90%	78%	84%
Mean (SD) emotional resilience score	26.7 (0.3)	27.5 (0.3)	27.1 (0.2)
Proportion of adolescents with high gender equitable attitude	73%	71%	72%
Proportion of adolescents participating in community events in last 6 months (civic engagement)	16%	22%	19%

Proportion of adolescents who reported that their parents understood their worries or concerns all or most of the time (perceived parental connection)	72%	77%	74%
Proportion of adolescents who reported that their parents knew what they were doing in their free time all or most of the time (perceived parental regulation)	55%	50%	53%
Proportion of adolescents reporting recent experiences of selected general and sexual and reproductive health problems	70%	73%	71%
Proportion of adolescents who sought care for recent experiences of selected general and sexual and reproductive health problems	85%	76%	81%