

**Integrated project for the Reproductive and  
Sexual Health and Development of  
unmarried adolescent girls**

*(Empowerment of unmarried adolescent girls  
through Life Skills education)*

**Knowledge, Attitudes and  
Practices of Unmarried Adolescent  
Girls**

**Baseline Study Report – 2019**

**Prepared by Institute of Health Management, Pachod**

## Table of Contents

Heading	Page Number
<b>Introduction, Research Objectives, Study Design and Methodology</b>	
• Introduction	
• Research objectives	
• Study design and methodology – Sample size, Sampling unit, Sampling frame, Sampling procedures	
• Method of data collection	
• Data collection and processing	
• Data cleaning and analysis	
<b>Section I: Socio-demographic Characteristics of the Respondent</b>	
• Respondent’s characteristics	
• Parents characteristics	
• Household characteristics	
<b>Section II: Education</b>	
• Schooling status of the girl	
• Educational aspirations of school going girl	
• Information regarding school dropout	
• Carrier aspiration, vocational training	
• Perception on relative educational attainment between girls	
• Status of remedial education	
<b>Section III: Nutrition</b>	
• Daily frequency of meals, knowledge of iron rich food items	
• Knowledge regarding balanced diet	
<b>Section IV: Anemia</b>	
• Knowledge of anemia and its prevention	
<b>Section V: Age at Marriage</b>	
• Perception on age at marriage	
<b>Section VI: Knowledge of Reproductive Health</b>	
• Physical changes in adolescent age	
• Perceptions on menstruation	
• Menstrual hygiene practices	
• Knowledge of conception	
• Knowledge of maternal health	

Heading	Page Number
• Knowledge of contraceptives	
<b>Section VII: One's Rights</b>	
• Knowledge of one's rights	
<b>Section VIII: Mobility, Decision Making and Communication</b>	
• Mobility	
• Decision making	
• Communication	
• Participation in community activities	
<b>Section IX: Perceptions About Gender</b>	
• Perception about gender	
<b>Section X: Personal Hygiene</b>	
• Knowledge about personal hygiene	
<b>Section XI: Panchayati Raj</b>	
• Knowledge about Panchayati Raj	
<b>Section XII: Knowledge about Self Confidence and Communication</b>	
• Knowledge about self confidence and communication	
<b>Section XIII: Self Reported Practical Skills</b>	
• Self reported practical skills	
<b>Section XIV: Eve teasing</b>	
• Self reported prevalence of eve teasing	
<b>Section XV: Self esteem and Self Efficacy</b>	
• Composite scale for self esteem	
• Composite scale for self efficacy	

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**Introduction, Research Objectives, Study Design  
and Methodology**

## **Introduction:**

IHMP is implementing an integrated program aimed at a. empowering unmarried girls, b. making young men gender sensitive and gender equitable, c. addressing the consequences of early conception with the aim of demonstrating a synergistic and sustainable impact on the reproductive and sexual health of unmarried and married adolescent girls in rural India.

The specific objectives of the intervention for empowerment of unmarried adolescent girls are:

### **Broad Objective:**

To impart cognitive and practical skills to unmarried adolescent girls with the aim of their empowerment, social development, and delay in age at marriage.

### **Specific Objectives:**

- To demonstrate a measurable increase in cognitive and practical skills in unmarried adolescent girls.
- To increase the duration of formal school education for unmarried adolescent girls.
- To delay age at marriage among unmarried adolescent girls.

### **Research Objective:**

To collect baseline information for an intervention for unmarried adolescent girls to be implemented in the villages of Jamkhed and Wadigodri PHC area covering 70,000 rural population in Jalna district. The direct beneficiaries are unmarried adolescent girls and their parents.

The objective of the baseline study is to obtain information on the knowledge, attitudes and practices of unmarried adolescent girls. It aims to study the prevalence and predictors of certain parameters. The baseline information will be used for management and evaluation of the intervention.

### **Specific Objectives of Baseline Study:**

- To identify the prevalence of out of school girls/dropouts among unmarried adolescent girls of age 11-19 years
- To study knowledge and attitudes of unmarried adolescent girls towards education

- To study knowledge, attitudes and practices of unmarried adolescent girls of age 11-19 years regarding nutrition and anemia
- To study knowledge and attitudes of unmarried adolescent girls of age 11-19 years regarding age at marriage
- To study knowledge, attitudes and practices of unmarried adolescent girls of age 11-19 years regarding reproductive health
- To study knowledge, attitudes and practices of unmarried adolescent girls of age 11-19 years regarding personal hygiene, basic practical skills
- To study knowledge of unmarried adolescent girls of age 11-19 years regarding Panchayat raj
- To identify the prevalence of low self esteem and self efficacy among unmarried adolescent girls of age 11-19 years

## **Study Design and Methodology**

### **Study Design:**

This study was conducted in three PHCs from Jalna district. A quasi-experimental study design has been adopted with pre-post test in both the study and control groups.

Study area – Villages under Jamkhed PHC and Wadigodri PHC of Ambad block, Jalna district

Control area - Villages under Sukhapuri PHC of Ambad block, Jalna district

**Sampling Unit:** Unmarried adolescent girls of age 11-19 years from study and control area.

**Inclusion Criteria for Study Respondents:** Unmarried adolescent girls of age 11-19 years that are permanent residents in the study and control villages will be included in the sampling frame.

**Sampling Frame:** Villages in the study and control area were mapped, and a complete census was conducted. All the unmarried adolescent girls in each village were listed, and their house location was mapped for future reference. The sampling frame consisted of all unmarried adolescent girls 11 to 19 years of age.

### **Sample Size:**

In order to detect a minimum difference of 10 percent in knowledge and self esteem over three years, assuming an alpha of 0.05 and using a two-sided test to achieve 80 percent power, it was determined that a sample size of 160 would be needed for each age group i.e. 11-14 years and 15-19 years at each site. (Fleiss et al, 2003).

To avoid replacement against non-covered individuals and to reduce the non-response error a random sample of 500 unmarried girls (250 unmarried adolescent girls 11-14 years of age and 250 unmarried adolescent girls 15-19 years of age) from the study area and a random sample of 500 unmarried girls from control area was decided.

### **Method of Data Collection - Interview Schedule:**

A uniform pre-coded interview schedule was designed for data collection. The interview schedule was designed in Marathi, and pre-tested by IHMP staff through 10 interviews completed in three villages outside the study and control sites. Based on the pre-test, appropriate modifications were made in the interview schedule, which was used to collect information from unmarried adolescent girls 11-19 years of age.

Interview schedule included questions on socio-demographic profile, educational status of the girl, reasons for school dropouts and never enrolled, vocational training and career aspirations, age at marriage, nutrition and anemia, reproductive health, women's rights, perceptions on gender, knowledge of panchayati raj institutions, personal hygiene and basic life skills, self esteem and self efficacy.

The interview schedule was converted into soft form through KoboCollect software and loaded onto android based cell phones that were used for data collection.

### **Data Collection and Processing:**

A total of 9 female investigators and two supervisors were recruited, based on their previous experience of data collection.

Investigators were trained for 3 days in the skills of interviewing, how to conduct oneself in the field and how to fill questionnaires using Computer Assisted Personal Interview (CAPI) tools. Explanation was given about each question in the tool. The main emphasis of the training was to impart practical skills to each person interviewing and filling the interview schedules using KoboCollect software. This was done with the help of dummy interviews, role plays and actual interviews in a village not included in the project.

After ensuring that each investigator could conduct interviews and fill the CAPI tool satisfactorily, the actual baseline data collection was initiated on 19<sup>th</sup> December 2018. Data collection team included 9 investigators, 3 supervisors, and one researcher for quality control.

The baseline data collection was carried out during December 2018 to February 2019. A total of 448 sampled unmarried adolescent girls of age 11-19 years from study area and 354 unmarried girls of age 11-19 years from control area were interviewed.

Data quality assurance: During data collection at the village level, supervisor observed at least one interview of each investigator every day. Data analysis for data quality

assurance was done regularly. Based on findings of the supervisor, feedback was given to data collection team regularly to standardize data quality.

**Data cleaning and analysis:**

Data was downloaded in the form of excel sheets from the server. Data was then transferred to 'STATA' software for cleaning and analysis. Chi-squared tests for discrete variables and t-tests for continuous variables were used to determine statistical significance.

Factor analysis using principle component was used to identify the main factors and to construct the scale for self esteem and self efficacy. Rotated factor loadings were computed, items with rotated factor loading higher than 0.40 were identified. Factors with Eigen value more than 1 were considered for analysis. Cronbach's alpha was computed to test reliability.

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**Section I: Socio-demographic Characteristics of  
the Respondent**

## Section I: Socio-demographic Information

This section comprised questions about socio-demographic characteristics of the respondent, parent's characteristics and family characteristics.

### Respondents' Characteristics:

Mean current age of respondents from the study area was 14.29 years and mean age of the respondents from the control area was 14.40 years. No significant difference is observed in the distribution of current ages of the respondents between study and control samples. 52.6 percent girls from the study area and 43.8 percent from the control area had completed schooling up to 7<sup>th</sup> standard, 36.2 percent from study area and 42.7 percent from control area had completed 8-10<sup>th</sup> standard. Majority of the girls' were attending school, girls who weren't attending school were engaged in household chores or agricultural activities. (Refer Table 1.1)

No significant difference is observed in the distribution of current age and occupation of the respondents between study and control sample.

**Table 1.1: Background characteristics of the respondent**

Variable	Category	Study area (n=448) Percent	Control area (n=354) Percent	p value
Current age of the respondent in completed years	11-14 years	56.7	51.4	0.136
	15-19 years	43.3	48.5	
	Mean age	14.29	14.40	
	SD	2.32	2.29	
Level of education in completed standard	Up to 7 <sup>th</sup> std	52.6	43.8	0.043
	8-10 <sup>th</sup> std	36.2	42.7	
	11-12 <sup>th</sup> std	11.2	13.5	
Occupation of girl	Student	93.7	91.5	0.495
	Household chores	03.6	05.6	
	Labourer	00.7	01.4	
	Farmer	01.3	00.8	
	Petty business	00.7	00.6	

### Parents' Characteristics:

In study area, the mean age of the respondents' mothers was 34.6 years, while the mean age of the fathers was 39.6 years.

34.2 percent mothers from study area and 36.0 percent from control area had no formal education. Most of the mothers from both the areas were educated up to 7<sup>th</sup> standard. Only 20.1 percent mother's from the study area and 16.3 percent from the control area were educated up to secondary school and above.

The majority of mothers in both groups were farmers, although there was a greater percentage in the control area (68.6 percent) than the study area (62.6 percent). The second most common occupation for mothers was laborer or agricultural laborer.

14.4 percent fathers from the study area and 16.9 percent from the control area had no education. 38.4 percent fathers from the study area and 33.6 percent from the control area had completed education up to 7 standard, followed by 23.4 percent from study area and 28.4 percent from control area that had completed the 8-10 std. A very low proportion of fathers had completed secondary education or above.

59.0 percent fathers in the study area and 61.0 percent in the control area were farmers, 17.1 percent from the study area and 13.8 percent from the control area were labourers. A small proportion in both areas were engaged in petty business (Refer Table 1.2)

**Table 1.2: Parents characteristics**

Variable	Category	Study area (n=448) Percent	Control area (n=354) Percent	p value
Mothers age	Mean age – in completed years	34.60	35.18	0.040
	SD	4.55	3.78	
Mothers education	Nil	34.2	36.0	0.382
	1-7 <sup>th</sup> std	45.6	47.6	
	8-10 <sup>th</sup> std	15.4	13.7	
	11-17 <sup>th</sup> std	04.7	02.6	
Mothers occupation	Farmer (own farm)	62.6	68.6	0.614
	Labourer	21.5	18.0	
	House wife	10.5	09.1	
	Petty business – Bangle shop, Fish/Veg. seller, Tailor shop, etc.	02.7	02.6	

Variable	Category	Study area (n=448) Percent	Control area (n=354) Percent	p value
	Service and others (ASHA workers/ ICDS worker)	02.5	01.7	
Fathers age	Mean age – in completed years	39.60	40.00	0.414
	SD	5.16	4.08	
Fathers education	Nil	14.4	16.9	0.195
	1-7 std	38.4	33.6	
	8-10 std	23.4	28.4	
	11-17 std	23.8	20.9	
Fathers occupation	Farmer	59.0	61.0	0.602
	Agricultural labourer	17.1	13.8	
	Labourer	09.3	08.3	
	Petty business	11.1	13.2	
	Service	02.1	02.9	
	Others	01.4	00.8	

### Household Characteristics:

Table 1.3 delineates information on household characteristics. 53.8 percent unmarried adolescent girls from the study area were staying in a nuclear family compared to 51.4 percent in the control area. A significantly lower proportion, 83.0 percent, respondents in the study area were Hindus compared to 91.8 percent in the control area, 12.1 percent respondents in study area were Muslim as compared to 3.7 percent in the control area.

When asked about the number of rooms in the house, 9.4 percent from study area and 10.4 percent from control area reported to have one room, and 44.2 percent from the study area and 32.5 percent from the control area reported having three or more rooms. Most of the families from both the areas had agricultural land. (Refer Table 1.3)

**Table 1.3: Household characteristics – Household members, family type, religion, and land holdings**

<b>Variable</b>	<b>Category</b>	<b>Study area (n=448) Percent</b>	<b>Control area (n=354) Percent</b>	<b>p value</b>
Household members	1-5 members	50.7	51.4	0.834
	6 and more	49.3	48.6	
Family type	Nuclear	53.8	54.5	0.838
	Joint	46.2	45.5	
Religion	Hindu	83.0	91.8	0.000
	Muslim	12.1	03.7	
	Buddhist	04.7	02.5	
	Christian	00.2	00.3	
	Jain	00.0	00.7	
Number of rooms to a house	One	09.4	10.4	0.003
	Two	46.4	57.1	
	Three and more	44.2	32.5	
Possession of agricultural land by the family	Yes	78.3	86.4	0.010

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**Section II: Education**

## Section II: Education

This section included questions on schooling status, reasons for school dropout, perceptions about continuing education, and vocational training.

### Schooling Status of the Girl:

93.8 percent of the respondents from the study area and 91.5 percent from control area were attending school at the time of the survey. The prevalence of out of school girls/dropouts is 6.0 percent in the study area and 8.2 percent in the control area. A small proportion of girls from both the areas were never enrolled in school. (Refer Table 2.1)

No significant difference was observed in the schooling status of the girls between study and control sample.

**Table 2.1: Schooling status of the girl**

Variable	Category	Study area (n=448) Percent	Control area (n=354) Percent	p value
Schooling status of girl	Currently school going	93.8	91.5	0.482
	School dropout	06.0	08.2	
	Never enrolled at school	00.2	00.3	

### Educational Aspirations of School Going Girl:

Information on girl’s aspiration regarding education, and parent’s aspiration about their daughter’s education was collected from girls who were currently attending school.

51.2 percent girls from the study area and 53.4 percent from the control area would like to complete at least 13 years of education or above. 44.3 percent girls from study area and 47.5 percent from the control area felt that their parents would like to continue and complete their education up to college. 65.5 percent girls from the study area and significantly less i.e. 37.5 percent from the control area reported that they faced problems at some time or other while attending school. (Refer Table 2.2)

**Table 2.2: Educational aspirations of school going girls**

Variable	Category	Study area (n=420) Percent	Control area (n=324) Percent	p value
Aspirations of the girls regarding education - Up to what level would you have liked to complete education?	Up to 10 <sup>th</sup> standard	05.0	06.8	0.391
	11-12 <sup>th</sup> standard	43.8	39.8	
	13 <sup>th</sup> and above standard	51.2	53.4	
Parent's aspiration regarding girl's education - up to what level would your parent like you to continue your education?	Up to 10 <sup>th</sup> standard	08.8	11.9	0.161
	11-12 <sup>th</sup> standard	46.9	40.6	
	13 <sup>th</sup> and above standard	44.3	47.5	
Problem faced by the girls while attending school	Faced any problem	65.5	37.5	0.000

**Information regarding School Dropout:**

The majority of girls in both the study (59.3 percent) and control (58.6 percent) areas had completed between the 8<sup>th</sup> and 10<sup>th</sup> standard when they dropped out. The average schooling completed was 8<sup>th</sup> standard. At the time of the survey, most children had been out of school for approximately one and half years. (Refer Table 2.3)

The predominant reasons for dropping out of school in the study area included lack of interest of parents in educating the girl child, lack of schooling facilities available for secondary education at the village level, lack of transportation facilities to reach school, weak economic condition. In the control area, the common reasons were lack of schooling facilities available for secondary education at the village level, weak economic condition of the household, poor in studies/failed. (Refer Table 2.3)

When girls were asked how much schooling they would like to complete, if they were given the chance, 33.3 percent from the study area and 20.0 percent from the control area answered 13 years of education and above. (Refer Table 2.3)



**Table 2.3: Information about adolescent girls dropping out of school**

Variable	Category	Study area (n=27) Percent	Control area (n=29) Percent	p value
Educational level at the time of dropout from school.	1-4 std	03.7	03.4	0.758
	5-7 std	14.8	24.1	
	8-10 std	59.3	58.6	
	11-12 std	22.2	13.9	
	Mean standard	08.9	08.6	
	SD	2.08	1.72	
Duration of dropout from school – in years	One year	51.8	55.2	0.658
	Two years	22.2	10.3	
	Three years	14.8	20.7	
	Four and more years	11.2	13.8	
	Mean duration	1.77	1.65	
	SD	1.52	1.71	
Reasons for dropout from school	No schooling facility available at school after primary education	18.5	37.9	
	Lack of transport to reach school in the other village	18.5	13.8	
	Weak economic condition of the household	07.4	06.9	
	Had to do household chores, look after younger siblings	00.0	17.2	
	Had to do agriculture work	14.8	00.0	
	Parents not permitted/lack of interest of parents	22.2	00.0	
	Lack of interest	11.1	10.3	
	Poor in studies	03.7	10.4	
	Failed	03.7	03.4	
If you were given the chance to continue your education, up to what level would you have liked to complete?	Up to 10 <sup>th</sup> standard	22.2	26.7	0.521
	Class 11-12	44.4	53.3	
	Class 13 and more	33.3	20.0	

### Career Aspiration, Vocational Training:

Respondents were asked what they would like to become when they grow up. In both the areas, common responses were: teacher, police, doctor and engineer. The majority of respondents in both areas 79.5 percent from the study area and 94.1 percent from the control area) had not received any vocational training, but among those that had, common skills included tailoring, rangoli and mehendi. (Refer Table 2.4)

A significantly high proportion of girls from the study area had undergone some vocational training as compared to girls from the control area.

**Table 2.4: Career aspiration, vocational training**

Variable	Category	Study area (n=448) Percent	Control area (n=354) Percent	p value
What would you like to become when you grow up?	Teacher	27.5	28.3	
	Police	19.6	14.1	
	Doctor	22.3	21.5	
	Engineer	06.0	05.9	
	IAS officer	01.3	01.9	
	IPS officer	02.5	02.8	
	Bus conductor	00.0	00.8	
	House wife	05.6	07.3	
	Lecturer	00.5	00.8	
	Chartered accountant	00.7	00.8	
	Gramsevak	00.5	00.3	
	Farmer	00.4	00.3	
	Service	00.2	00.0	
	Nurse	01.6	01.4	
	Tailor	02.5	00.8	
	Bank manager	02.5	04.2	
	Self business	00.2	00.8	
	Agricultural officer	00.0	00.3	
	Lawyer	00.7	00.8	
	Singer	00.9	00.8	
	Beautician	00.0	00.3	
	Village development officer	00.4	00.0	
	Social worker	00.2	00.3	
	Others	02.0	00.3	
Not yet decided	01.8	03.9		
Can't say	00.2	00.8		

Variable	Category	Study area (n=448) Percent	Control area (n=354) Percent	p value
Have undergone vocational training	Yes	20.5	05.9	0.000
Type of vocational training received  (Multiple answers)	Tailoring	28.3	47.6	
	Rangoli	61.9	14.3	
	Mehndi	28.3	09.5	
	Computer	03.3	23.8	
	Typing	00.0	04.7	
	Beauty parlor	03.3	04.7	
	n	92	21	

### Perception of the Relative Educational Attainment between Girls:

When respondents were asked to estimate how many out of 10 adolescent girls in their neighborhood would complete class 10, a substantially lower proportion i.e. 5.6 percent from the study area and around 7.6 percent from control area estimated 8-10 girls. 70.4 percent from the study area and around 65.0 percent from control area estimated 0-4 girls would not complete 10 years of schooling. Their reasons for not completing class 10 were poor economic condition of the household, early marriage; parents will not allow to continue schooling, girl's lack of interest in continuing education. (Refer Table 2.5)

**Table 2.5: Respondent's perception of educational attainment among girls in the village**

Variable	Category	Study area (n=448) Percent	Control area (n=354) Percent	p value
Out of ten adolescent girls in your neighbourhood, how many do you feel will not complete Class 10?	0-4 girls	70.5	65.0	0.064
	5-7 girls	19.2	18.6	
	8-10 girls	05.6	07.6	
	Don't know	04.7	08.8	
Reasons for not completing Class 10  (Multiple answers)	Poor economic condition of the household	62.7	54.2	0.018
	Early marriage	57.6	32.8	0.000
	Reached menarche	02.1	03.1	0.394
	No further schooling facility available in the village	14.1	14.6	0.846

Variable	Category	Study area (n=448) Percent	Control area (n=354) Percent	p value
	Lack of transport to reach school	18.0	17.0	0.720
	Parents did not allow	57.8	49.8	0.029
	Lack of interest in continuing education	28.8	24.5	0.184
	Difficulty in understanding school subjects	12.6	07.1	0.014
	Fear of school	02.6	02.2	0.717
	Weak in studies	06.6	04.9	0.355
	Household chores, to look after siblings	08.4	04.6	0.41
	Had to do agricultural work	15.7	10.2	0.029
	Temporary migration	05.6	03.1	0.100
	Illness	01.4	00.3	na
	Can't say	02.1	12.4	0.000
	n	427	323	

#### Status of Remedial Education:

35.2 percent girls from study area and significantly less i.e. 16.4 percent from control area reported that they are currently attending remedial education. A vast majority of the girls from both the areas are not attending any remedial education. (Refer Table 2.6)

**Table 2.6: Status of remedial education**

Variable	Category	Study area (n=420) Percent	Control area (n=324) Percent	p value
Currently attending remedial education	Yes	35.2	16.4	0.000
	No	64.8	83.6	

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**Section III: Nutrition**

### Section III: Nutrition

This section includes questions on knowledge of nutrition and dietary practices

#### Daily Frequency of Meals, Knowledge of Iron Rich Food Items:

A majority of respondents from both the areas (92.9 percent from study area and 87.9 percent from control area) believed that an adolescent girl should eat three times in a day, but only 71.0 percent from study area and 69.5 percent respondents from the control area had eaten three times on the day before the survey. (Refer Table 3.1)

A significantly high proportion of respondents from the study area (72.7 percent) were able to correctly list the name of at least one iron rich food as compared to only 29.9 percent from the control area. (Refer Table 3.1)

**Table 3.1: Daily frequency of meals, knowledge of iron rich food items**

Variable	Category	Study area (n=448) Percent	Control area (n=354) Percent	p value
How many times a day should adolescent girls eat?	<=2 times in a day	07.1	12.1	0.016
	Three times in a day	92.9	87.9	
How many times did you eat yesterday?	<=2 times in a day	29.0	30.5	0.646
	Three times in a day	71.0	69.5	
Knowledge of iron rich food items	Know at least one iron rich item	72.7	29.9	0.000
	Don't know	27.3	70.1	

#### Knowledge regarding Balanced Diet:

A vast majority of respondents from the study as well as from the control area answered that *Jowar* is the best when they were asked to choose from among a list of options of dietary source for energy. 52.0 percent from study area and 56.5 percent from the control area answered that potato is the best dietary source of energy. (Refer Table 3.2)

More than 90 percent girls from the study and control areas knew that legumes in daily food are required for growth of height and weight. (Refer Table 3.2)

Most girls knew of the benefits of jowar, potato, legumes and dal.

**Table 3.2: Balanced diet**

Variable	Category	Study area (n=448) Percent	Control area (n=354) Percent	p value
Which of the food items provide energy required for our body?	Matki - Correct answer – No	12.7	06.8	0.006
	Jowar - Correct answer – Yes	88.2	90.4	0.573
	Bottlegourd - Correct answer – No	30.8	23.7	0.000
	Potato - Correct answer – Yes	52.0	56.5	0.400
Are legumes and dals required to be eaten daily for increase in height and weight?	Correct	92.2	96.3	0.014
	Wrong	07.8	03.7	

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**Section IV: Anemia**



## Section IV: Anemia

In this section five questions were asked to assess the respondent's knowledge of anemia.

### Knowledge of Anemia and its Prevention:

A substantially low proportion of respondents from both the areas (27.0 percent from study area and 13.3 percent from control area) knew the normal Haemoglobin (Hb) range for adolescent girls. Merely 44.6 percent girls from the study area and 4.2 percent from the control area knew at least one symptom of anemia. However, a majority correctly answered that eating green leafy vegetables results in an increase in Hb levels; and that the consumption of fruits with vitamin C helps absorb iron (83.9 percent girls from study area and 88.1 percent from control area). (Refer Table 4.1)

Knowledge levels of girls from study area is significantly higher as compared to girls from the control area, however the majority of respondents had no knowledge regarding normal Hemoglobin (Hb) range, the symptoms of anemia or how to prevent anemia.

**Table 4.1: Knowledge of Anemia and its Prevention**

Variable	Category	Study area (n=448) Percent	Control area (n=354) Percent	p value
Knowledge regarding normal Hb range	Normal Hb range – 12-14 gm/dl	27.0	13.3	0.000
	Other than 12-14 gm/dl	40.4	25.7	
	Don't know	32.6	61.0	
Knowledge regarding symptoms of anemia	Knows at least one symptom of anemia	44.6	04.2	0.000
	Don't know any symptom of anemia	55.4	95.8	
How can one prevent anemia? (Multiple choice)	Eating iron rich food	24.3	01.7	0.000
	Taking iron supplementation	11.4	01.7	0.000
	Don't know	53.1	94.6	
Eating green leafy vegetables results in increase in Hb levels	Correct	99.3	98.0	0.075
Fruits with Vit. C help in absorption of iron	Correct	83.9	88.1	0.070

**Integrated project for the Reproductive and  
Sexual Health and Development of  
unmarried adolescent girls, adolescent  
married girls and their spouses**

**Knowledge, Attitudes and  
Practices of Unmarried Adolescent  
Girls**

**Section V: Age at Marriage**

## Section V: Age at Marriage

This section included questions on knowledge and perceptions related to age at marriage.

### Perception on Age at Marriage:

Both the study and control areas are approximately evenly split between girls that want to marry at the age of 18 and girls that want to get married after the age of 19. Merely 1.1 percent of respondents in the study area want to marry before the age of 17, compared to 2.0 percent in the control area. All the girls were asked– at what age would your parents like to arrange your marriage? A vast majority of the girls from both the areas reported that their parents would like to arrange their marriage when they reach 18 years of age. 61.2 percent girls from the study area and 59.0 percent from control area reported that 18 was the ideal age for a girl to get married. (Refer Table 5.1)

In both the areas, the common reported consequences of a girl getting married before 18 years age included not being able to take household responsibilities, risk of having illness, risk of maternal and neonatal deaths, risk of complications during pregnancy and delivery. However, a vast majority of the respondents from control area (43.8 percent) were not aware of the consequences of a girl getting married before the age of 18 years as compared to girls from study area (12.7 percent). (Refer Table 5.1)

51.8 percent girls from study area and 40.1 percent from control area perceived that 1-4 of 10 adolescent girls in their neighborhood were married before the age of 18. 9.4 percent girls from study area and 12.4 percent from control area perceived that 8-10 adolescent girls in their neighborhood were married before age of 18. Finally, a majority in both the groups (84.8 percent from study area and 75.7 percent from control area) strongly perceived (67-100 paise in a rupee) that they would be able to convince their parents to delay their marriage till the age of 18 years. (Refer Table 5.1)

**Table 5.1: Age at marriage**

Variable	Category	Study area (n=448) Percent	Control area (n=354) Percent	p value
At what age do you want to marry? (In years)	<=17 years	01.1	02.0	0.524
	18 years	21.2	23.4	
	19+ years	77.0	73.5	
	Don't know	00.7	01.1	
At what age would your parent like to arrange your marriage? (In years)	<=17 years	06.5	05.9	0.067
	18 years	25.4	27.7	
	19+ years	66.5	61.9	
	Don't know	01.6	04.5	

Variable	Category	Study area (n=448) Percent	Control area (n=354) Percent	p value
What is the ideal age at which a girl should get married? (In years)	<=17 years	01.1	02.6	0.167
	18 years	61.2	59.0	
	19+ years	37.5	37.3	
	Don't know	00.2	01.1	
Knowledge about risks if a girl is married before reaching 18 years of age	Risk of having complications during pregnancy	16.1	13.8	0.381
	Risk of anemia	01.3	00.8	
	Risk of having complications during delivery	10.5	09.3	0.583
	Risk of having illness	38.8	21.5	0.000
	Not able to take household responsibilities	36.4	26.6	0.003
	Risk of not completing education	33.7	15.5	0.000
	Risk of getting early conception	18.8	10.7	0.002
	Risk of abortion	30.4	10.7	0.000
	Risk of maternal death	32.1	11.3	0.000
	Risk of neonatal death	30.1	06.5	0.000
	Risk of neonatal complications	07.1	03.1	0.012
	Risk of domestic violence	08.7	07.9	0.686
	Risk of having infertility problem	14.5	06.5	0.000
	Risk of having problems during sexual intercourse	02.5	00.8	0.084
Don't know	12.7	43.8	0.000	
Out of 10 adolescent girls in your neighborhood, how many do you think got married before 18 years of age?	Nil	06.9	14.4	0.000
	1-4	51.8	40.1	
	5-7	29.0	24.3	
	8-10	09.4	12.4	
	Don't know	02.9	08.8	

<b>Variable</b>	<b>Category</b>	<b>Study area (n=448) Percent</b>	<b>Control area (n=354) Percent</b>	<b>p value</b>
How many Paise in a rupee do you think you can convince your parents to delay marriage till the age of 18 years	0-33 paise	03.5	02.8	0.001
	34-66 paise	11.2	18.9	
	67-100 paise	84.8	75.7	
	Can't say	00.5	02.6	

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**Integrated project for the Reproductive and  
Sexual Health and Development of  
unmarried adolescent girls, adolescent  
married girls and their spouses**

**Knowledge, Attitudes and  
Practices of Unmarried Adolescent  
Girls**

**Section VI: Knowledge of Reproductive Health**

## Section VI: Knowledge of Reproductive Health

This section measured the levels of knowledge of the following dimensions:

- Physical changes that occur in girls during adolescence.
- Knowledge of menarche.
- Menstrual hygiene practices.
- Knowledge of conception.
- Knowledge of contraception and some commonly used contraceptive methods.

### Physical Changes during Adolescence:

Around 42.2 percent of girls from the study area and 55.6 percent from the control area noticed physical changes in their body between the ages of 13-14 years; 7.1 percent girls from the study area and 7.3 percent from the control area noticed physical changes in their body between 15-17 years. The common physical changes that were noticed included: rapid increase in height and weight, breasts starting to grow.

A significantly higher proportion of girls from the study area (41.3 percent) correctly listed at least one organ of the female reproductive system compared to (17.2 percent) girls from the control area.

A vast majority of the girls from both the areas (62.9 percent from study area and 56.9 percent from control area) reported that physical growth of adolescent girls continues till the age of 18 years. A substantially low proportion of the girls from both the areas (26.1 percent from study area and 13.7 percent from control area) said that physical growth of adolescent girls continues till the 19<sup>th</sup> year.

A majority of the girls from control area either do not know or have wrong knowledge regarding the age till when reproductive organs continue to grow in adolescent girls. A significantly lower proportion of girls from both the areas (2.7 percent from the study area and 2.3 percent from the control area) knew that reproductive organs continue to grow till the age of 24 years. (Refer Table 6.1)

**Table 6.1: Physical changes in adolescence**

Variable	Category	Study area (n=448) Percent	Control area (n=354) Percent	p value
At what age, do girls first notice physical changes in their body?	Up to 10 years	06.5	01.7	0.000
	11-12 Years	36.8	26.0	
	13-14 Years	42.2	55.6	
	15-17 Years	07.1	07.3	
	Can't say	07.4	09.4	

Variable	Category	Study area (n=448) Percent	Control area (n=354) Percent	p value
	Mean	12.58	12.9	
	SD	01.49	01.3	
Physical changes noticed by the girl  (Multiple answer)	Rapid increase in height and weight	89.9	83.3	0.006
	Breast started to grow	42.0	28.5	0.000
	Enlargment of waist and thighs	19.9	06.2	0.000
	Hair started to grow in genital area	07.6	03.1	0.006
	Pimples on face	21.2	10.2	0.000
	Hair started to grow in arm pit	18.1	09.0	0.000
	Cant say	06.9	11.0	0.041
List four organs of the female reproductive system	Listed correctly at least one organ	41.3	17.2	0.000
	Don't know	58.7	82.8	
Till what age does physical growth continue in adolescent girls?	Upto 17 years	07.6	15.7	0.000
	18 years	62.9	56.9	
	19 and more years	26.1	13.7	
	Don't know	03.4	13.7	
Till what age do reproductive organs of an adolescent girl continue to grow?	Upto 17 years	06.0	04.8	0.000
	18 years	50.9	31.0	
	19 to 24 years	21.9	07.1	
	25+ years	02.7	02.3	
	Don't know	18.5	54.8	

### Perceptions about Menstruation:

Respondents were asked about age at menarche. 51.3 percent girls from study area and 60.2 percent from control area reported that they had started their periods. 43.8 percent girls from study area and 51.7 percent from control area reported that they started their periods before they had turned 14 years. In the study sample, the mean age at menarche was 13.68 years and in the control sample, the mean age at menarche was 13.76 years. (Refer Table 6.2)



**Table 6.2: Perceptions about Menstruation**

Variable	Category	Study area (n=448) Percent	Control area (n=354) Percent	p value
At what age did you get your first menstrual period?	<=12 Years	04.5	02.3	0.011
	13-14 Years	39.3	49.4	
	15-17 Years	07.5	08.5	
	Yet to get periods	48.7	39.8	
	Mean	13.68	13.76	
	SD	0.928	0.826	

**Menstrual Hygiene Practices:**

More than seventy percent respondents from both areas (71.3 percent from study area and 79.8 percent from control area) use sanitary pads during menstruation. A higher proportion of girls from the study area (25.2 percent) reported that they use locally prepared cloth pads compared to (18.3 percent) girls from the control area. More than 80 percent girls from both the areas change pads/cloths 1-2 times a day. Around 47.4 percent girls from the study area and 46.0 percent from the control area reported that 6-10 out of their 10 closest friends use sanitary pads during menstruation. (Refer Table 6.3)

48.3 percent girls from the study area and a significantly lower proportion of girls (28.2 percent) from the control area reported that they wash the perineum with soap before changing the sanitary pad /cloth. (Refer Table 6.3)

Seven to eight girls (out of 10) from study and control areas reported use of sanitary pads during menstruation.

**Table 6.3: Menstrual Hygiene Practices**

Variable	Category	Study area (n=230) Percent	Control area (n=213) Percent	p value
Material used for menstrual hygiene	Locally prepared napkins	25.2	18.3	0.134
	Polyester cloth	02.6	01.9	
	Sanitary pads	71.3	79.8	
	Nothing used	00.9	00.0	
	n	230	213	

Variable	Category	Study area (n=230) Percent	Control area (n=213) Percent	p value
Frequency of changing pads/cloth in a day during menstruation	Nil	00.9	01.4	0.115
	1-2 times	80.4	86.8	
	3 and more times	18.7	11.8	
Out of 10 close friends, how many use sanitary pads during menstruation	Nil	00.9	02.3	0.087
	1-5 girls	46.1	40.4	
	6-10 girls	47.4	46.0	
	Don't know	05.6	11.3	
Do you use soap for cleaning before changing pad/cloth during menstruation	Yes	48.3	28.2	0.000

#### Knowledge about Conception:

A substantially low proportion of respondents from both the areas (55.6 percent from study area and 81.1 percent from control area) did not know about human conception. A substantially low proportion of respondents from both the areas (20.5 percent from study area and 7.3 percent from control area) knew that sperms and ovum are required for conception. (Refer Table 6.4)

Around 47.3 percent of respondents from the study area and 26.8 percent from the control area knew that men are responsible for the sex of the child. (Refer Table 6.4)

**Table 6.4: Knowledge of conception**

Variable	Category	Study area (n=448) Percent	Control area (n=354) Percent	p value
What is required for conception to occur?	Sperm and Ovum	20.5	07.3	0.000
	Other response	23.9	11.6	
	Don't know	55.6	81.1	
Who is responsible for the sex of the child?	Woman	18.5	15.3	0.000
	Man	47.3	26.8	
	Other	08.7	02.3	
	Don't know	25.5	55.6	

### Knowledge of Maternal Health:

Two questions were asked to assess knowledge regarding registration for antenatal care and consumption of IFA during pregnancy.

60.9 percent of girls from the study area and a significantly lower proportion, i.e. 24.3 percent from control area, knew that a woman should go for the first antenatal check up within 12 weeks of pregnancy. A significantly higher proportion of respondents from the control area (77.7 percent) did not know how many IFA tablets should be consumed by a pregnant woman during pregnancy as compared to (25.9 percent) girls from the study area. About 44.9 percent girls from the study area and a significantly lower i.e. 7.9 percent girls from the control area answered correctly that a pregnant woman should take at least 90 IFA tablets during her pregnancy. (Refer Table 6.5)

**Table 6.5: Knowledge of Maternal Health**

Variable	Category	Study area (n=448) Percent	Control area (n=354) Percent	p value
When should a woman go for first check-up if she missed periods?	<=12 weeks	60.9	24.3	0.000
	After 12 weeks	19.4	14.1	
	Don't know	19.5	61.6	
Number of IFA tablets should consumed by the pregnant mother during pregnancy	At least 90 tablets	44.9	07.9	0.000
	Other response	29.2	14.4	
	Don't know	25.9	77.7	

### Knowledge of Contraceptives:

The respondents were asked to list any three methods of contraception.

40.9 percent respondents from the study area and 13.0 percent from control area correctly listed at least one contraceptive method, whereas a very low proportion of respondents correctly listed at least three contraceptive methods. (Refer Table 6.6)

Majority of respondents from both areas (59.1 percent from study area, 87.0 percent from control area) did not know of any contraceptives that could be used to prevent pregnancy. (Refer Table 6.6)

Around 38.2 percent respondents from study area and only 12.2 percent from control area listed out oral contraceptive pills as one of the methods used by women to prevent

pregnancy. 23.7 percent respondents from the study area and 4.2 percent from the control area stated that condom is a method used by men to delay pregnancy. (Refer Table 6.6)

**Table 6.6: Knowledge of contraceptives**

Variable	Category	Study area (n=448) Percent	Control area (n=354) Percent	p value
List at least three methods used to prevent pregnancy.	Correctly listed one method	14.5	07.6	0.000
	Correctly listed two methods	09.4	02.2	
	Correctly listed three methods	12.5	01.9	
	Don't know	59.1	87.0	
List the methods used by women to delay pregnancy (Multiple answer)	Oral contraceptive pills	38.2	12.2	
	Sterlization operation	06.5	03.4	
	Condom	00.2	00.0	
	Copper T	22.3	02.5	
	Injections	08.9	03.9	
	Don't know	58.7	86.7	
List the methods used by men to delay pregnancy	Condom	23.7	04.2	
	Sterlization operation	04.0	02.8	
	Natural methods	00.5	00.0	
	Don't know	74.1	93.8	

**Integrated project for the Reproductive and  
Sexual Health and Development of  
unmarried adolescent girls, adolescent  
married girls and their spouses**

**Knowledge, Attitudes and  
Practices of Unmarried Adolescent  
Girls**

**Section VII: One's Rights**

## Section VII: One's Rights

### Knowledge of One's Rights:

The respondents were asked what documents/papers are needed to be preserved as 'proof of marriage'. 73.7 percent respondents from the study area and 58.2 percent from the control area stated that they would preserve the marriage invitation card as a record. 67.9 percent from the study area and 45.5 percent from control area said that the wedding photograph is an important part of documentation. Around 32.6 percent from the study area and 20.3 percent from the control area said that the marriage certificate is an important document. A significantly higher proportion of respondents from the control area (24.3 percent) did not know which documents need to be preserved as 'proof of marriage' as compared to the girls from study area (7.1 percent). (Refer Table 7.1)

Respondents were asked what documents they need to preserve for further education and future career. 86.6 percent respondents from the study area and 85.6 percent from the control area said that they would preserve the school leaving certificate as a record. About 85.3 percent from study area and 70.6 percent from control area said that the Aadhar card is an important document. 31.7 percent from the study area and 33.6 percent from the control area said that the SSC/HSC certificate is an important document. (Refer Table 7.1)

A significantly higher proportion of girls from study area (35.0 percent) as compared to 8.8 percent girls from the control area stated that family court is the place where hearings of family level disputes are conducted

About 11.6 percent respondents from the study area and 36.4 percent from control area don't know the place where family level disputes are resolved. (Refer Table 7.1)

A significantly higher proportion of girls from the study area demonstrated knowledge about the 7/12 certificate compared to girls from control area. However, majority of respondents from both the areas (58.7 percent from study area and 74.0 percent from control area) were not aware about the content of the 7/12 certificate. (Refer Table 7.1)

**Table 7.1: Knowledge of One's Rights**

Variable	Category	Study area (n=448) Percent	Control area (n=354) Percent	p value
What documents do you need to keep after marriage as your record?  (Multiple Answer)	Marriage invitation card	73.7	58.2	0.000
	Marriage Photograph	67.9	45.5	0.000
	Marriage certificate	32.6	20.3	0.000
	Get your name on the ration card of the married	08.0	01.7	0.000

Variable	Category	Study area (n=448) Percent	Control area (n=354) Percent	p value
	family			
	Don't know	07.1	24.3	
What documents do unmarried adolescent girls need to keep for the purpose of higher education or career? (Multiple answers)	School leaving certificate	86.6	85.6	0.680
	Aadhar card	85.3	70.6	0.000
	Caste certificate	38.6	30.5	0.017
	SSC/HSC certificate	31.7	33.6	0.565
	Don't know	01.6	07.1	
Place where hearings of family disputes are conducted	Court	36.6	30.8	0.084
	Family court	35.0	08.8	0.000
	Other	33.0	29.9	
	Don't know	11.6	36.4	
What is content included in a 7/12 certificate?	Details of land – place, location and size	33.5	18.9	0.000
	Current owners name	37.7	21.5	0.000
	Don't know	58.7	74.0	

**Integrated project for the Reproductive and  
Sexual Health and Development of  
unmarried adolescent girls, adolescent  
married girls and their spouses**

**Knowledge, Attitudes and  
Practices of Unmarried Adolescent  
Girls**

**Section VIII: Mobility, Decision Making,  
Communication**



## Section VIII: Mobility, Decision Making, Communication

### Mobility:

In this section, questions related to geographical mobility, both within and outside the village were asked.

When respondents were asked whether they could go to various places alone; 68.3 percent girls from the study area and 71.7 percent from control area reported that within the village, they were allowed to visit a friend unaccompanied. Around 50.4 percent of the respondents from the study area and 43.8 from control area replied that they could go to the ICDS center, but only 16.1 percent of the respondents from the study area and 13.0 percent from control area responded that they could access health services in their village. A significantly higher proportion of girls from the control area (36.7 percent) reportedly travel to other villages as compared to girls from the study area (19.6 percent). A substantially low proportion of girls from both the areas (15.4 percent from study area, 14.5 percent from control area) reportedly go alone to the bank. (Refer Table 8.1)

**Table 8.1: Mobility**

Variable	Category	Study area (n=448) Percent	Control area (n=354) Percent	p value
Can you go to the following places alone?	To visit a friend in your village	68.3	71.7	0.291
	To go to weekly market in another village	23.2	12.4	0.000
	ICDS centre	50.4	43.8	0.061
	Bank	15.4	14.5	0.645
	Health services in your village	16.1	13.0	0.222
	Travel other village	19.6	36.7	0.000
	At work place	32.6	36.4	0.254

### Decision Making:

Questions on decision-making capacity, which included the acts of purchasing one's clothes, continuing one's education, etc., were asked.

A majority of respondents (87.7 percent from the study area and 85.3 percent from the control area) assign 67-100 paise in a rupee to their perception that adolescent girls should be given the right to take decisions regarding continuing their education. (Refer Table 8.2)

89.1 percent girls from study area and 84.5 percent from control area strongly felt (67-100 paise) that adolescent girls should be given the right to take decisions regarding purchase of their clothes. (Refer Table 8.2)

82.1 percent girls from study area and 79.1 percent from control area strongly felt (67-100 paise) that adolescent girls should be given the right to take decisions regarding their marriage. (Refer Table 8.2)

Around 85.9 percent girls from study area and 89.3 percent from control area strongly felt (67-100 paise) that the adolescent girls should be given the right to take decisions regarding their career. (Refer Table 8.2)

Most girls replied that the decisions about continuing their education were taken by family members. But around 73.2 percent girls from study area and 70.1 percent from control area strongly felt (67-100 paise) that they could decide how to spend a little bit of money that they earned during their school holidays. (Refer Table 8.2)

**Table 8.2: Decision making**

Variable	Category	Study area (n=448) Percent	Control area (n=354) Percent	p value
How many Paise in a rupee do you feel that Adolescent girls should be given the right to take decisions regarding continuing their education	0-33 paise	01.8	01.7	0.344
	34-66 paise	10.5	12.4	
	67-100 paise	87.7	85.3	
	Don't know	00.0	00.6	
How many Paise in a rupee do you feel that Adolescent girls should be given the right to take decisions of making choice during purchasing cloths for them	0-33 paise	02.2	01.7	0.097
	34-66 paise	08.7	13.6	
	67-100 paise	89.1	84.5	
	Don't know	00.0	00.2	
How many Paise in a rupee do you feel that Adolescent girls should be given the right to take decisions regarding their marriage	0-33 paise	02.7	01.4	0.114
	34-66 paise	14.3	17.0	
	67-100 paise	82.1	79.1	
	Don't know	00.9	02.5	

Variable	Category	Study area (n=448) Percent	Control area (n=354) Percent	p value
How many Paise in a rupee do you feel that Adolescent girls should be given the right to take decisions regarding their career	0-33 paise	00.5	01.4	0.043
	34-66 paise	13.4	08.5	
	67-100 paise	85.9	89.3	
	Don't know	00.2	00.8	
Who mainly takes the decision regarding continuing your education?	Respondent	03.8	05.9	0.000
	Others	28.6	50.6	
	Jointly with others	67.2	42.9	
	Can't say	00.5	00.6	
How many Paise in a rupee do you feel that you can decide how to spend the money earned by you?	0-33 paise	04.0	03.1	0.355
	34-66 paise	22.6	26.0	
	67-100 paise	73.2	70.1	
	Don't know	00.2	00.8	

### Communication:

These questions assess who adolescent girls communicate with during stressful times.

Around 83.0 percent of the respondents from the study area and 85.9 percent from the control area said that they discussed their experience of first menstruation with the mother. (Refer Table 8.3)

The question: "Suppose a boy were to bother or harass you, who are you most likely to talk to about this?" was asked. A majority, from both the areas said that they would talk to their mother. (Refer Table 8.3)

About 43.7 percent girls from the study area and 44.4 percent from the control area said that they would communicate freely with their mothers for comfort and support if they had a personal problem. In the study area a slightly higher proportion of girls (32.1 percent) reported that they would communicate freely with their teacher for support if they had a personal problem compared to 29.4 percent in the control area. (Refer Table 8.3)

The majority of respondents go to their mothers at stressful times such as menarche, harassment by boys, or a problem in school with a friend. The other important confidantes were, other female member of the household concerning menarche, father regarding harassment by boy, and teacher regarding problem in school.

**Table 8.3: Communication**

Variable	Category	Study area (n=448) Percent	Control area (n=354) Percent	p value
At the time when you had your first menstrual period, with whom did you discuss about it?	Mother	83.0	85.9	0.734
	Sister	06.5	05.6	
	Other female member in the household	05.2	04.7	
	Other family member	00.8	01.4	
	Friend	03.0	02.3	
	Teacher	00.4	00.0	
	Nobody	00.9	00.0	
	n	230	213	
Suppose a boy is bothering you, who are you most likely to talk about this?	Mother	62.5	68.1	0.010
	Father	19.4	20.9	
	Brother	02.1	02.8	
	Other family member	02.7	03.1	
	Friend	05.1	01.7	
	Teacher	06.9	02.5	
	Others	01.1	00.3	
	Nobody	00.2	00.6	
If you have a personal problem e.g. in school, with a friend, etc. who would you turn to for comfort and support?	Mother	43.7	44.4	0.355
	Father	07.8	06.8	
	Brother	00.5	01.1	
	Other family member	00.7	02.3	
	Friend	12.3	11.3	
	Teacher	32.1	29.4	
	Others	00.9	01.4	
	Nobody	02.0	03.4	

**Participation in Community Activities:**

A significantly higher proportion of girls from the study area (48.4 percent) reported that they were members of a group in the village as compared to 4.8 percent girls from the control area. (Refer Table 8.4)

A majority of the respondents from the study area (71.1 percent) as well as from the control area (67.4 percent) have participated in cultural activities at school. Only 26.1 percent girls from the study area and a significantly lower i.e.12.7 percent from control area had ever participated in cultural activities at the village level. (Refer Table 8.4)

**Table 8.4: Participation in community activities**

<b>Variable</b>	<b>Category</b>	<b>Study area (n=448) Percent</b>	<b>Control area (n=354) Percent</b>	<b>p value</b>
Are you a member of any group in your village?	Yes	48.4	04.8	0.000
Ever participated in cultural activities at school	Yes	71.1	67.4	0.257
Ever participated in cultural activities at village level	Yes	26.1	12.7	0.000

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**Integrated project for the Reproductive and  
Sexual Health and Development of  
unmarried adolescent girls, adolescent  
married girls and their spouses**

**Knowledge, Attitudes and  
Practices of Unmarried Adolescent  
Girls**

**Section IX: Perceptions about Gender**

## Section IX: Perceptions about Gender

A set of seven questions were asked regarding perceptions about gender.

### Perceptions about Gender:

Around 42.4 percent girls from the study area and 38.7 percent from control area strongly agree (67-100 paise) with the statement “Boys can’t play the games that girls play like ‘Zimma’, ‘Fugadi”, etc”. 26.1 percent girls from the study area and 31.9 percent from control area strongly agree with the statement “Only boys can play the games like football and cricket”. (Refer Table 9.1)

87.5 percent girls from the study area and 91.5 percent from the control area said that women should have the same opportunities as men to hold leadership positions in the government. (Refer Table 9.1)

A vast majority of respondents from both the areas felt strongly that women should get the same wages as compared to men at their work place. 7.6 percent girls from the study area and 7.1 percent from study area strongly disagree with the statement “Only adolescent boys required nutritious diet”. 43.8 percent girls from the study area and 47.5 percent from the control area strongly felt that only adolescent girls are responsible to help their mother in household work. A substantially higher proportion of girls from both the areas (78.4 percent from study area and 77.1 percent from control area) strongly felt that brothers should help their mothers in household work during their sister’s school examinations. (Refer Table 9.1)

Some questions elicited strongly felt positive responses from a large majority of girls. These were pertaining to women having equal opportunities as men to hold leadership positions in government, equal wages for equal work, and brother’s helping with household chores during the sister’s exams. Other questions regarding whether boys should play games girls normally play, whether only boys can play certain games like cricket and football, and whether only boys need nutritious diet during adolescence, elicited less strongly felt responses by the majority of respondents. (Refer Table 9.1)

**Table 9.1: Perceptions about gender**

Variable	Category	Study area (n=448) Percent	Control area (n=354) Percent	p value
How many Paise in a rupee do you feel that boys can’t play the games that girls play like ‘Zimma’, ‘Fugadi”, etc	0-33 paise	11.2	11.9	0.012
	34-66 paise	46.3	47.2	
	67-100 paise	42.4	38.7	
	Don’t know	00.0	02.3	

Variable	Category	Study area (n=448) Percent	Control area (n=354) Percent	p value
How many Paise in a rupee do you feel that only boys can play the games like Football/cricket	0-33 paise	14.7	10.2	0.001
	34-66 paise	59.2	55.6	
	67-100 paise	26.1	31.9	
	Don't know	00.0	02.3	
How many Paise in a rupee do you feel that women should have the same opportunities as men to hold leadership positions in the government	0-33 paise	00.9	00.8	0.225
	34-66 paise	11.4	07.1	
	67-100 paise	87.5	91.5	
	Don't know	00.3	00.6	
How many Paise in a rupee do you feel that women should get the same wages as compared to men at their work place?	0-33 paise	00.7	00.3	0.176
	34-66 paise	11.4	08.5	
	67-100 paise	87.9	90.7	
	Don't know	00.0	00.5	
How many Paise in a rupee do you feel that only adolescent boys required nutritious diet?	0-33 paise	07.6	07.1	0.013
	34-66 paise	67.9	61.6	
	67-100 paise	24.5	29.7	
	Don't know	00.0	01.6	
How many Paise in a rupee do you feel that, only adolescent girls are responsible to help their mother in household chores?	0-33 paise	07.1	04.8	0.290
	34-66 paise	49.1	47.5	
	67-100 paise	43.8	47.5	
	Don't know	00.0	00.2	
How many Paise in a rupee do you feel that, brother should help her mother in household chores during his sisters' school examinations?	0-33 paise	01.1	05.1	0.004
	34-66 paise	20.5	17.5	
	67-100 paise	78.4	77.1	
	Don't know	00.0	00.3	



**Integrated project for the Reproductive and  
Sexual Health and Development of  
unmarried adolescent girls, adolescent  
married girls and their spouses**

**Knowledge, Attitudes and  
Practices of Unmarried Adolescent  
Girls**

**Section X: Personal Hygiene**

## Section X: Personal Hygiene

### Knowledge about Personal Hygiene:

This section describes respondents' knowledge regarding personal hygiene. It includes knowledge of home based remedies for management of toothache, causes of conjunctivitis, care of eyes, knowledge about good care of skin, and habits that keeps healthy.

### Knowledge about Personal Hygiene:

88.4 percent girls from the study area and 86.4 percent from the control area correctly reported that adolescent girls should brush teeth two times in a day. 39.9 percent girls from the study area and 43.5 percent from the control area were aware of methods to be used to free hair of lice. A substantially low proportion of the girls (18.1 percent from study area and 3.7 percent from control area) knew that a virus causes conjunctivitis. About 60.7 percent girls from the study area and a significantly low proportion i.e. 45.2 percent from control area correctly answered that the green leafy vegetables and yellow fruits should be included in daily meals for keeping eyes healthy. Most of the girls from both the areas knew the methods to take care of skin. (Refer Table 10.1)

**Table 10.1: Knowledge about personal hygiene**

Variable	Category	Study area (n=448) Percent	Control area (n=354) Percent	p value
How many times in a day should adolescent girls brush their teeth?	Once in a day	04.2	05.6	0.517
	Twice in a day	88.4	86.4	
	Three and more times	07.4	07.6	
	Don't know	0.00	00.3	
Licel or medicare cannot be used to free hair of lice	Correct	39.9	43.5	0.022
	Wrong	59.8	54.5	
	Don't know	00.2	01.9	
What is the cause of conjunctivitis?	Correct answer – virus	18.1	03.7	0.000
	Wrong answer	47.9	43.5	
	Don't know	33.9	52.8	
Food items to be included in daily meals for keeping eyes healthy	Correct answer - green leafy vegetables and yellow fruits	60.7	45.2	0.000
	Wrong answer	34.8	40.1	
	Don't know	04.5	14.7	

Variable	Category	Study area (n=448) Percent	Control area (n=354) Percent	p value
Knowledge about how to take good care of skin  (Multiple answer)	Bathing properly with soap each day	90.4	86.4	0.079
	Drying the skin with a clean towel after bath	35.5	20.9	0.000
	Applying or massaging the skin with coconut oil if it is dry	13.6	03.9	0.000
	Don't know	01.8	10.4	

**Integrated project for the Reproductive and  
Sexual Health and Development of  
unmarried adolescent girls, adolescent  
married girls and their spouses**

**Knowledge, Attitudes and  
Practices of Unmarried Adolescent  
Girls**

**Section XI: Panchayati Raj**

## Section XI: Panchayati Raj

### Knowledge about Panchayati Raj:

53.1 percent of the respondents from control area and significantly low i.e. 23.7 percent from the study area did not know where to fill application forms to contest gram panchayat elections. 40.4 percent girls from the study area and only 16.7 percent from the control area correctly answered that the Tehsil office is the place where the application forms are filled to contest gram panchayat elections. (Refer Table 11.1)

28.8 percent girls from the study area correctly stated the three tiers of the Panchayat Raj system, as compared to only 8.2 percent from the control area. 41.7 Percent of the girls from the study area and a significantly low i.e. 28.5 percent from the control area knew that the Gramsevak looks after the administrative work of the Gram Panchayat. (Refer Table 11.1)

58.7 percent girls from the study area and 42.1 percent from the control area reported that “Dawandi” is the method used for announcing the Gramsabha meeting. Majority of the girls from control area didn’t know the method used to invite the community to the Gramsabha. (Refer Table 11.1)

A majority of respondents had no knowledge of Panchayati Raj. Knowledge was found to be significantly higher among girls from the study area as compared to the control area.

**Table 11.1: Knowledge about Panchayat Raj**

Variable	Category	Study area (n=448) Percent	Control area (n=354) Percent	p value
Where are application forms filled to contest Gram Panchayat elections.	Correct answer – Tehsil office	40.4	16.7	0.000
	Other answer	35.9	30.2	
	Don't know	23.7	53.1	
Panchyati Raj has a three tier system, State the three tires?	Correct answer	28.8	08.2	0.000
	Other answer	15.6	10.2	
	Don't know	55.6	81.6	
Who looks after the administrative work of the Gram Panchayat?	Sarpanch	43.6	40.7	0.000
	Talathi	02.9	03.7	
	Gramsevak	41.7	28.5	
	Others	00.4	01.1	
	Don't know	11.4	26.0	
Method used for inviting	Publicity through dawandi	58.7	42.1	0.000

<b>Variable</b>	<b>Category</b>	<b>Study area (n=448) Percent</b>	<b>Control area (n=354) Percent</b>	<b>p value</b>
community for Gram Sabha (Multiple answer)	Fixing notice at common places at the community level	14.3	08.2	0.007
	Visits of Gram Panchayat peon to all households for conveying message of Gram Sabha	28.1	15.0	0.000
	Don't know	12.5	39.3	

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**Integrated project for the Reproductive and  
Sexual Health and Development of  
unmarried adolescent girls, adolescent  
married girls and their spouses**

**Knowledge, Attitudes and  
Practices of Unmarried Adolescent  
Girls**

**Section XII: Knowledge about Self Confidence  
and Communication**

## Section XII: Knowledge about Self Confidence and Communication

### Knowledge about Self Confidence and Communication:

Majority of respondents from both the areas replied that self-identity depends on individual characteristics. However, 47.9 percent respondents from the study area and 77.7 percent from the control area could not state the four components of self confidence or two types of communication. A small proportion of girls from the study area and few from the control area correctly stated the types of communication. (Refer Table 12.1)

**Table 12.1: Knowledge about self confidence and communication**

Variable	Category	Study area (n=448) Percent	Control area (n=354) Percent	p value
Self identity depends on individual characteristics that we possess	True	96.9	96.9	
	False	03.1	01.9	
	Don't know	00.0	01.1	
State four components of self confidence (Multiple answer)	Feeling capable of performing tasks	41.7	15.8	0.000
	Being capable of express ourselves without fear	38.6	13.3	0.000
	Being capable of taking decisions	31.5	11.9	0.000
	Being capable to act responsibly	14.3	02.8	0.000
	Other answer	00.5	00.6	
	Don't know	47.9	77.7	
State two types of communication (Multiple answer)	One to one voice communication	50.9	24.3	0.000
	Communicating via expressions/actions	30.8	10.5	0.000
	Don't know	43.7	69.5	



**Integrated project for the Reproductive and  
Sexual Health and Development of  
unmarried adolescent girls, adolescent  
married girls and their spouses**

**Knowledge, Attitudes and  
Practices of Unmarried Adolescent  
Girls**

**Section XIII: Self Reported Practical Skills**

## Section XIII: Self Reported Practical Skills

### Self Reported Practical Skills:

Checking regulator and stove buttons is one of the precautions to be taken during leakage of cooking gas was corrected stated by 88.8 percent girls from the study area and 87.6 percent from the control. Only 12.7 percent respondents from the study area and 14.4 percent from control area reported that they had changed a gas cylinder without taking anybody's help. 55.6 percent girls from the study area and 55.4 percent from control area reported that they possess the skills of changing an electric bulb. (Refer Table 13.1)

A substantially low proportion of respondents from both the areas (16.5 percent from study area and 16.4 percent from control area) said that they ever withdraw money independently from a bank or ATM machine. (Refer Table 13.1)

85.7 percent girls from the study area and a significantly lower i.e. 67.5 percent from the control area correctly reported that a FIR after a crime is filed at a police station. On the other hand, a significantly low proportion of girls from the control area compared to girls from the study area knew that a copy of the FIR needs to be kept by the complainant. (Refer Table 13.1)

A vast majority of girls (93.3 percent from the study area and 86.2 percent from the control area) have skills of using mobile phones despite the fact that they do not possess mobile phones. Most of the girls (87.8 percent from the study area and 86.6 percent from control area) reportedly use mobile phones for voice communication with relatives and friends; a substantial proportion i.e. 68.4 percent from study area and 60.0 percent from control area have played games; 54.1 percent from study area and 51.8 percent from control area have used mobile phones for listening to music. (Refer Table 13.1)

15.6 percent girls from the study area and 9.0 percent from the control area have reportedly undergone training in computer operations. Only 13.2 percent girls from the study area and 9.3 percent from the control area reportedly had skills of operating tablets. (Refer Table 13.1)

The only skill which the majority of girls had was the use of mobile phones, which were used by the majority for communicating with friends and relatives.

**Table 13.1: Self reported practical skills**

Variable	Category	Study area (n=448) Percent	Control area (n=354) Percent	p value
Precautions to be taken during leakage of cooking gas (Multiple answer)	Open all doors and windows	55.1	33.3	0.000
	Check regulator and stove buttons	88.8	87.6	0.579
	Avoid turning electrical switches on/off	26.3	10.4	0.000
	Don't know	02.2	08.5	
Have you ever change gas cylinder at your own?	Yes	12.7	14.4	0.488
Do you have a skill of changing the electric bulb at your own?	Yes	55.6	55.4	0.952
Ever withdraw money independently from bank?	Yes	16.5	16.4	0.960
Place where FIR for any crime to be placed (Multiple answer)	Police station	85.7	67.5	
	Court	15.4	07.1	
	Other	03.6	01.6	
	Don't know	09.6	27.1	
Who should keep the copy of FIR (Multiple answer)	Self	63.4	33.9	
	Police	57.6	40.7	
	Police station	25.7	14.4	
	Court	12.0	04.8	
	Don't know	10.7	32.8	
Ever used mobile phone	Yes	93.3	86.2	0.001
For what purpose mobile phone was used? (Multiple answer)	Communication with relatives/friends	87.8	86.6	0.621
	To play games	68.4	60.0	0.019
	Listening music	54.1	51.8	0.547
	For sending SMS	13.9	07.5	0.008
	To take photograph	43.3	26.2	0.000
	Listen radio	00.9	00.7	

<b>Variable</b>	<b>Category</b>	<b>Study area (n=448) Percent</b>	<b>Control area (n=354) Percent</b>	<b>p value</b>
	To see video	37.1	22.0	0.000
	Information collection using internet	37.8	42.0	0.258
	Alarm / clock	07.4	06.6	0.656
	Perform calculations	21.3	13.1	0.005
	n	418	305	
Received training for computer operations	Yes	15.6	09.0	0.005
Having skills of operating tablet	Yes	13.2	09.3	0.090

**Integrated project for the Reproductive and  
Sexual Health and Development of  
unmarried adolescent girls, adolescent  
married girls and their spouses**

**Knowledge, Attitudes and  
Practices of Unmarried Adolescent  
Girls**

**Section XIV: Eve Teasing**

## Section XIV: Eve teasing

### Self reported Prevalence of Eve teasing:

8.0 percent of the girls from the study area and 8.5 percent from the control area reported that they had experienced eve teasing in the last one year. (Refer Table 14.1)

3.1 percent girls from study and 3.4 percent from the control area reported that they had experienced an unacceptable physical touch in the past one year. (Refer Table 14.1)

There was no significant difference in the prevalence of eve teasing between the study and control areas.

**Table 14.1: Self reported prevalence of eve teasing**

Variable	Category	Study area (n=448) Percent	Control area (n=354) Percent	p value
Did you experience any form of eve teasing in the last one year	Yes	08.0	08.5	
	No	92.0	91.5	0.822
Did you experience an unacceptable physical touch in the past one year?	Yes	03.1	03.4	0.833

**Integrated project for the Reproductive and  
Sexual Health and Development of  
unmarried adolescent girls, adolescent  
married girls and their spouses**

**Knowledge, Attitudes and  
Practices of Unmarried Adolescent  
Girls**

**Section XV: Self Esteem and Self Efficacy**

## Section XV: Self Esteem and Self Efficacy

### Design and Development of Tool for Measuring Self-esteem and Self-efficacy in Adolescent Girls:

Two composite instruments were designed, incorporating factors from well known international scales, as well as factors derived from qualitative research conducted with rural adolescent girls.

The Pachod Paisa Scale was used to measure how strongly the adolescent girls agreed or disagreed with the attitudinal statements comprising the two scales. (*Kapadia-Kundu, Dyalchand; Demography India, June 2007*)

### Quantitative Study Related to Self Esteem

448 randomly selected girls were asked to respond to the statements on Self esteem and Self efficacy from the study area and 354 randomly selected girls from the control area responded to the two instruments. A total of 802 adolescent girls were interviewed from the study and control sites after written consent had been obtained from the adolescent girls and their parents.

After the data was collected, factor analysis was performed using principal component method to identify significant factors that could constitute a culturally appropriate scale for measuring self esteem in rural girls in India.

**Composite Scale for Self Esteem:** Out of a total of 17 factors 12 factors loaded significantly for the Self Esteem scale. Of the 12 factors that loaded significantly 6 were based upon IHMP's qualitative research and the remaining 6 were based on the Rosenberg Scale. The 12 factors which have highest factor loading (factor loading >0.40) were used to build a composite self esteem scale. For each case, individual score of each individual was computed by adding the scores for all 12 items. After addition, the composite score is then categorized using 50 percent cutoffs.

Table 15.1 indicates that 2.2 percent girls from the study area and 1.9 percent from control area had low self esteem. Girls with the lowest self esteem had few or no aspirations and appeared depressed. These girls and their parents are in need of counseling.

Conversely, 20.3 percent girls from the study area and 25.7 percent from control area had medium level of self esteem and 77.5 percent from the study area and 72.3 percent from the control area had high self esteem. (Refer Table 15.1)



**Table 15.1: Levels of Self Esteem**

Self esteem category	Study area	Control area	p value
n	448	354	
Low (0-600)	02.2	01.9	
Medium (601-900)	20.3	25.7	0.193
High (901-1200)	77.5	72.3	

**Composite Scale for Self Efficacy:** Out of a total of 27 factors 15 factors loaded significantly for the Self Efficacy scale. Of the 15 factors that loaded significantly; 5 were based upon IHMP’s qualitative research and the remaining 10 were based on the Matthias Jerusalem and Ralf Schwarzer scale. The 15 factors which have the highest factor loading (factor loading >0.40) were used to build a composite self efficacy scale. The individual score of each respondent was computed by adding the scores for all 15 items. After addition, the composite score is then categorized using 50 percent cutoffs.

Table 15.2 indicates that 4.5 percent girls from the study area and 3.1 percent from control area had low self efficacy. These girls and their parents are in need of counseling services.

Conversely, 21.9 percent girls from the study area and 27.7 percent from control area had medium level of self efficacy. 73.7 percent from the study area and 69.2 percent from the control area had high self efficacy. (Refer Table 15.2)

**Table 15.2: Levels of Self Efficacy**

Self efficacy category	Study area	Control area	p value
n	448	354	
Low (0-750)	04.5	03.1	
Medium (751-1125)	21.9	27.7	0.121
High (1126-1500)	73.7	69.2	