

# Menstrual Health and Hygiene among Adolescent Girls in Climate Vulnerable Areas in Maharashtra

PAN India Study

**Population Research Centre Pune**

**GOKHALE INSTITUTE OF POLITICS AND ECONOMICS,**

**PUNE MAHARASHTRA - 411004**

**Report submitted to the Ministry of Health and Family Welfare  
(Stats. Division)**

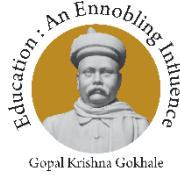
**Government of India, New Delhi**

# Menstrual Health and Hygiene among Adolescent Girls in Climate Vulnerable Areas in Maharashtra

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## **Executive Summary**

### **About the Study**

The study on Menstrual Health and Hygiene among adolescent girls in climate-vulnerable areas in Maharashtra is a PAN India study conducted in 16 states/UTs of India. In this report, the findings are presented from the Maharashtra state.

The study investigated adolescent girls' knowledge, attitude, and practices concerning menstrual health and hygiene, focusing on climate-vulnerable regions of the state. For the current study, 457 adolescent girls in the age group of 13 to 19 years were interviewed from drought and flood-affected areas. For this study, two drought-affected districts were selected, i.e., Ahmednagar and Sangli, and two flood-affected districts, i.e., Jalgaon and Mumbai.

### **Household Characteristics of Surveyed Adolescent Girls**

Individual characteristics analysis of the study revealed that 8 out of 10 girls were from the Hindu religion, which is comparatively higher in rural and drought-affected areas. The dominance of the nuclear families is observed with a 6.4 mean family size in these climate-vulnerable areas, as 7 out of 10 households were nuclear. Further, most adolescent girls were residing either in pucca or semi-pucca houses, mostly owned by their parents or grandparents.

More than half of the girl's households hold the BPL cards, and around 7 out of 10 owned agricultural land. Therefore, half of the girls reported cultivation as the primary source of income for their households, followed by salaried employment and business-related work. Salaried employment and business-related work are comparatively higher in urban than rural areas.

### **Individual and Parental Characteristics**

In this study, parental characteristics assessed include age, education, and parents' occupation. The assessment revealed that the coverage of adolescent girls' age group is equal for all age groups. Around 89 percent of adolescent girls stay with both parents. Concerning the parents' education, the study revealed that around one-tenth of the fathers are illiterate or literate but have no schooling, whereas this situation is 17 percent for mothers. Regarding parents' occupations, more than half of the parents were engaged in cultivation or labour work.

## **Education and Occupational Status of Adolescent Girls**

The study revealed that most interviewed adolescent girls are currently pursuing their education at different levels. However, a handful had never attended school (1.3 percent). Interestingly, most of these girls are from urban and flood-affected areas. In addition, around 4 percent of adolescent girls discontinued their education before completing 19 years.

Two third of the girls are enrolled in a government school, and most reside in rural and drought-prone areas (72 percent each). In urban areas, an equal number of girls are enrolled in government and private schools. Regarding the medium of instruction of the school-going girls, 62 percent of girls were pursuing education in the vernacular language (Marathi) and are mainly from rural and drought-prone areas. However, in urban areas, three fourth of the girls are pursuing education in English mediums. To reach out to the schools, more than half of girls usually travel more than 3 km either by walk or public transport.

Most of the currently studying girls want to aspire to continue UG/PG/Medical or other professional courses. The educational aspiration of the girls from the urban areas was to complete at least graduation or post-graduation (78 percent). Interestingly none of the girls from urban areas reported 10-12 years of education as their educational aspiration, whereas in rural areas, 16 percent of girls reported educational aspiration up to 10-12 years of education.

Girls' educational aspirations in climate-vulnerable regions suggest that more girls from flood-prone areas (66 percent) reported graduates/post graduates as against 45 percent of the girls from drought-prone areas who aspire for it. The parents' encouragement is also good for them as most of the girls had mentioned either very positive or positive encouragement, which is again higher in urban areas.

As for the other engagement and occupation status of the girls, most were engaged in various household activities related to cleaning, washing clothes/vessels, and bringing water. At the same time, around 7 percent of the girls were working outside, mostly on the family farm or doing agricultural-related labour work on an occasional or seasonal basis.

Notably, 57 percent of the girls in drought-prone areas and 51 percent in rural areas were also engaged in bringing water. The findings highlight the additional component of bringing water, etc., contributes toward the engagement in household activities and is found to be more in rural areas

than urban areas. Despite the amount of time and labor spent, overwhelmingly 93 percent reported their occupation as not working, and this perception indicates undermining of their engagement in household activities.

### **Menarche and Menstruation**

Most of the girls perceived that the usual girls attained menarche between 10 to 14 years, whereas most attained their menarche between 13 to 14 years, with a mean age of 13.3 years. Around 14 girls mentioned that a grand or formal ceremony was held while they attained the menarche. Similarly, around 47 percent of the girls took menarche as normal, whereas it was either an excited or frightened feeling for the remaining. Among these girls, around one-fourth had to change their dress pattern or playing activity, and one-third had to change their movement after attaining menarche.

The study also revealed that around one-third of the girls were unaware of menstruation before they attained it. However, once they attained menarche, they received knowledge about menstrual health hygiene. Most of the knowledge was received either from mothers or teachers, along with the family members of the household and ASHA workers. Among them, most girls have mentioned normal menstruation with an average of 4 to 5 days of bleeding.

### **Menstruation Hygiene Management**

In this study, most of the girls used sanitary napkins, of which only 44 percent had access to government-supplied napkins. Most of them had received these napkins monthly from ASHA/AWW, of which around 40 percent had received them free of cost. However, around one-fourth of girls are not satisfied with the quality of sanitary napkins supplied by the government. The possible reasons for the unsatisfaction were the leakages, deformation of the surface, sense of wetness, and need for frequent changes.

Around 37 percent of the girls mentioned that the government-supplied napkins were insufficient, leading them to purchase more sanitary napkins from shops or pharmacies. Although one-third of the girls used to give used sanitary napkins to garbage-collecting vehicles, however, more than half of the girls (55 percent) burn to them. In the study areas, girls usually change their sanitary napkins an average of 2.7 times during heavy bleeding, while during scanty bleeding, this average was 1.9 times. The criteria for changing the sanitary napkins were the sense of wetness and leakages.

Although the use of clothes in the study areas was very less, washing these clothes with hot water and drying them in Sunshine was also very less.

### **Menstrual Problems, Reproductive Tract Infection and Treatment Seeking Behaviour**

Problems during menstruation are common among girls, as around two-thirds of them had experienced any pain or felt discomfort during the menstruation period. However, around 60 percent had not sought treatment for these problems. Moreover, those who sought treatment first preferred home remedies and private clinic doctors. Regarding self-reported RTI symptoms, around one-fourth of girls have experienced any symptoms of RTI. Of which, around two-thirds have not sought treatments.

### **Marriage and Fertility**

No one was married in the study areas among the interviewed adolescent girls.

### **Cultural Practices around Menstruation**

The study also revealed that in the study areas, around one-third of girls had observed separation during the menstruation period. Also, most girls reported that they had observed that girls usually do not go to the worship center or Pooja rooms during menstruation. Interestingly, around 8 percent and 6 percent of girls were restricted from school-going activities and were not allowed to take baths, respectively.

### **Impact of National Programs on Adolescent Girls on Menstrual Hygiene**

Around one-third of the girls mentioned that they did not receive knowledge on menstruation health and hygiene program from frontline workers or school teachers. The remaining girls received knowledge from school teachers or ASHA workers at school/college or public health facilities, respectively. These knowledge were either on menstrual hygiene/cleanliness, menstrual problems, or nutritious food.

### **Climate Vulnerability and Menstrual Hygiene**

In the study areas, around 41 percent of girls mentioned that they experienced or faced crises due to flood or drought, usually for less than three months. Girls mentioned that not getting clean water for drinking, washing clothes, bathing, etc., are the main problems, especially in rural and drought areas. To manage such problems, tanks supply water, and boiled or bottled water is used for

drinking. Not washing clothes or bathing during such days is observed more in rural areas than urban areas, particularly drought-prone areas.



# CHAPTER 1

## Introduction and Methodology

---

### 1.0 Introduction

Adolescents signify a transition period between childhood and adulthood with needs distinctly different from children's and, therefore, often remain unaddressed. The Adolescent population constitutes more than 1.3 billion worldwide and adolescent constitutes 18 percent of India's Total population (UNICEF, 2023). The adolescent life phase is characterized by rapid changes in physical, cognitive, psychological, and social roles and expectations (Patton et al., 2012). Adolescent girls constitute a vulnerable group, particularly in India, where a female child is often neglected, and menstruation is still considered unclean or dirty (Dasgupta & Sarkar, 2008). Earlier studies have indicated that most girls attain menarche between 12-14 years in India (Tarannum et al., 2017; Kumari et al., 2020, Bali et al., 2020, Sinha & Sharan, 2020, Nikam, 2021). Climate change is a worldwide challenge and is a serious threat to children's and adolescents' mental health (Clemens et al., 2020). Furthermore, a number of studies recorded that adolescents experience more anxiety and worry, somatic complaints, mood difficulties, and behavioral changes than adults in the aftermath of severe climate events (Newnham et al., 2020; Meltzer et al., 2021). Adolescents are also more susceptible to indirect effects of climate-vulnerable regions, such as food insecurity (Oskorouchi & Sousa-Poza, 2021), economic instability (Behera et al., 2002), livelihood loss (Kumar et al., 2016), early age marriage (Ahmad et al., 2019), school dropout (Tuladhar et al., 2015; Alam & Singh, 2020), forced migration (Fisher, 2010), trafficking, and physical and sexual exploitation (Mainlay & Tan, 2012; Fisher, 2010).

Adolescence is a life phase in which the opportunities for health are great and future patterns of adult health are established (Sawyer et al; 2012). Adolescent girls and young married women (less than 18 years) disproportionately suffer more health consequences than boys (Bhadra, 2017; Pittaway et al., 2007). Menstrual hygiene management is a matter of concern among adolescent girls, particularly from low and middle-income countries. Poor water, sanitation, and hygiene facilities in school, inadequate puberty education, and lack of hygienic menstrual hygiene management items (MHM)-absorbents cause girls to experience menstruation as shameful and uncomfortable (Sommer, 2010; Mason, 2013; Mahon, 2010; McMohon, 2011). Further, the need

of adolescent girls to have accurate and adequate information about menstruation and its appropriate management is important (Thakre et al. 2011). However, as observed in earlier studies, very few girls are aware of menstruation before menarche. Menstrual problems are present in the majority of girls, and quite common are dysmenorrhea, irregular menses, and heavy menstrual bleeding (Kumari et al., 2020, Hirani & Hirani, 2020). Several studies have highlighted that the beliefs and restrictions associated with menstruation are barriers to education, health, and personal development (Chandra-Mouli & Patel, 2017; Fakhri et al., 2012; Grant et al., 2013; Miiro et al., 2018; Sommer & Sahin, 2013; Sumpter & Torondel, 2013; Tegegne & Sisay, 2014). Cultural taboos and limiting social norms make communicating and teaching about menstrual health in India challenging. Research studies have indicated a disconnect between parents' and teachers' expectations regarding who will introduce menstrual health to adolescents (Tuli et al., 2019). Adolescent girls have little or no knowledge of reproductive tract infections caused due to ignorance of personal hygiene during menstruation time (Kaur & Kaur, 2018). Poor hygienic practices make adolescent girls prone to Reproductive Tract Infections (Jyoti et al., 2020).

Earlier rounds of NFHS have clearly indicated low age at marriage, especially among the socio-economically deprived population and in certain geographical locations of the country (IIPS, 1992-21). Early marriages lead to teenage pregnancies and increase pregnancy complications, fetal loss, stillbirths, Low birth weight babies, and neonatal / infant mortality. As high as half of the married adolescent girls were found to experience menstrual disorders, vaginal discharge, itching, bad odor, or pain during intercourse, but only half of those who experience seek treatment (Barua & Kurz, 2001). Knowledge of RTI/STI is found to be very less among adolescents; however, quite a significant number of adolescent girls experience these symptoms.

A review of earlier studies and DHS indicates that poor menstrual health and hygiene, early marriages and teenage pregnancy, and high prevalence of anemia continue to be the major problems of adolescent girls in India, though significant improvement has taken place in these aspects during recent years due to many National Health programmes focused on adolescent girls like Rashtriya Kishor Swasthya Karyakram (RKSK), Peer education Programme, Adolescent Friendly Health Clinics and Anemia Mukta Bharat.

## **1.1 Climate vulnerability**

Though Climate change is a Global Phenomenon, its impacts are felt locally. The Government of India is implementing many comprehensive measures to reduce the impact of disasters. India is the seventh-most vulnerable country with respect to climate extremes (Germanwatch, 2020). An analysis by the Council on Energy, Environment and Water (CEEW) suggests that three out of four districts in India are extreme event hotspots, with 40 percent of the districts exhibiting a swapping trend, i.e., traditionally flood-prone areas are witnessing more frequent and intense droughts and vice-versa (Mohanty & Wadhawan, 2020). As per this analysis, 27 of 35 States and UTs are highly vulnerable to extreme hydro-met disasters and their compounded impacts. The analysis suggests that India's western and central zones are more vulnerable to drought-like conditions and compounding impacts. The northern and northeastern zones are more vulnerable to extreme flood events and compounding impacts. Meanwhile, India's eastern and southern zones are highly vulnerable to extreme cyclonic events and their impacts. The eastern and southern zones are also becoming extremely prone to cyclones, floods, and droughts combined.

The extent of Cyclones, Floods, and Droughts is considered in this study to define the climate vulnerability in each of the selected districts. To identify these districts with climate vulnerability, "Mapping India's Climate Vulnerability: A District Level Assessment" (2021), published by The Council of Energy, Environment and Water (CEEW), has been used (Mohanty & Wadhawan, 2020).

## **1.2 The Climate in Maharashtra and the selected district**

Maharashtra state has an area of 308000 km<sup>2</sup>, accounts for a 720 km long coastline along the Arabian Sea, and is fortified by Sahyadri and Satpuda mountain ranges. Maharashtra occupies the western & central parts of India. The state is surrounded by Gujarat to the northwest, Madhya Pradesh to the north, Chhattisgarh to the east, Telangana to the southeast, Karnataka to the south, and Goa to the southwest. The state has been divided into 36 districts and six revenue divisions for administrative convenience. The state's population is 11.24 crore, 9.3% of the All-India population as per Population Census 2011. The state ranks 2<sup>nd</sup> after Uttar Pradesh by population and 3<sup>rd</sup> in geographical area. Maharashtra is one of the most highly urbanized states (Census 2011: 45.2%) in India. The state enjoys a tropical monsoon climate. The hot scorching summer from March

onwards is followed by a monsoon in early June. The rich green cover of the monsoon season persists during the mild winter following an unpleasant October transition (Government of Maharashtra, 2023).

### **1.2.1 Meteorological Regions of Maharashtra**

There are four meteorological regions of Maharashtra, i.e., Konkan, Madhya Maharashtra, Marathwada, and Vidarbha (Ratna, 2012).

The 36 districts of Maharashtra are divided into these four following meteorological regions:

**Konkan:** This region spreads over Ratnagiri, Sindhudurg, Raigad, Thane, Palghar, Mumbai City, and suburban areas. This is the state's coastal region, and it experiences heavy rainfall among all the other districts.

**Madhya Maharashtra:** This region extends over the districts of Dhule, Nadurbar, Nashik, Jalgaon, Ahmednagar, Pune, Satara, Sangli, Kolhapur, Solapur, and Osmanabad. This area experiences rainfall after the Konkan region.

**Marathwada:** This region spreads over the districts of Aurangabad, Jalna, Parbhani, Hingoli, Nanded, Beed, and Latur. This is the most drought-affected region of Maharashtra.

**Vidarbha:** This region expands over the districts of Bhandara, Gondia, Gadchiroli, Nagpur, Chandrapur, Wardha, Amravati, Yavatmal, Akola, Washim, and Buldhana. This is also the drought-prone area of Maharashtra.

### **1.2.2 Climate Vulnerability in Maharashtra**

The climate of Maharashtra can be classified under the following main types:

**Monsoon:** Annual rainfall of more than 100 cm is confined to the coastal belt and the adjoining Ghats region covering the districts of Thane, Raigad, Ratnagiri, Sindhudurg, and the western hilly parts of Pune, Satara, and Kolhapur districts. The coastal region experiences a very small annual range of temperature, not exceeding 5°C. The mean daily temperature is above 22°C throughout the year.

**Dry Climate:** This type covers the semi-arid portions of Jalgaon, Nashik, Aurangabad, Pune, Beed, Satara, Osmanabad, and Kolhapur and almost the whole of Dhule, Nandurbar, Ahmednagar, Solapur, and Sangli districts. The mean daily temperature is between 18°C and 22°C during winter and above 22°C during the remaining months.

**Tropical Rainy:** Parts of Nashik, Jalgaon districts, eastern portions of Aurangabad, Jalna, Beed, and Osmanabad, as well as the remaining districts of Marathwada viz. Hingoli, Latur, Parbhani, Nanded, and Vidarbha have rainy tropical climates. The precipitation is confined to the monsoon season and is above 70 cm (Government of Maharashtra, 2021).

In Maharashtra, four districts were selected which are comparatively more climate vulnerable to conduct the survey. Two from the better-performing category and two from the poor-performing category, 2 of them were droughts affected, and 2 of them were flood/cyclone affected. Ahmednagar, Jalgaon, Mumbai, and Sangli were the four selected districts for the Maharashtra state. Out of them, Ahmednagar and Sangli are drought-prone areas, and Jalgaon and Mumbai are flood-affected areas. One block is selected from each district to conduct the survey. The climatic situation of the four selected districts is given below:

**Ahmednagar:** The climate of Ahmednagar district is generally hot and dry. In Maharashtra, Ahmednagar district is known mainly as a drought-prone area. The district has uneven rainfall. The average rainfall in the western part of Akola and Sangamner taluka is higher than in other talukas. However, it is not always regular (Government of India, 2011).

**Jalgaon:** Jalgaon district is known as a flood-prone area. In the monsoon, the district experiences strong winds and widespread rains. Jalgaon enjoys moderate rainfall. The central and eastern portions get slightly higher rainfall than the western parts of the district. The variation in the rainfall in the district from year to year is larger. The average annual rainfall is 763.6 mm. of which about 87 percent is received during the monsoon months of June to September, July being the month with the highest rainfall (Government of India, 2011).

**Mumbai:** Being a coastal District, the climate of Mumbai is equable. Generally, Mumbai District is more humid than the rest of Maharashtra. It is a flood-prone area. During the Southwest monsoon, the skies are generally heavily clouded. The average annual rainfall is 1800 mm.

However, about 600 mm, i.e., one-third of the rainfall occurs in July, the rainiest month. Some rainfall, mostly as thundershowers, is also received during post-monsoon months. (Government of India, 2011).

**Sangli:** The climate of this district is, on the whole, agreeable and is characterized by general dryness in the major part of the year. It is known as a drought-prone area. The cold season is from December to about the middle of February. The hot season which follows lasts till the end of May. June to September is the southwest monsoon season, and the two months, October and November, constitute the post-monsoon or retreating monsoon season. The rainfall generally decreases from the Western Ghats towards the eastern portions of the district. (Government of India, 2011).

### **1.3 Menstrual Health and Hygiene in Climate-Vulnerable areas**

Menstrual hygiene management in disaster-prone and fragile contexts is a challenge to adolescent girls and women. Studies provide evidence for the fact that at times of distress, the frequency of sanitary pads/cloths, appropriate disposal of pads, washing clothes, and proper cleaning of genitalia are usually given lesser focus (Krishnan & Twigg, 2016). Further, Schmitt & Clatworthy (2017) found that worldwide and especially in developing countries, secrecy, shame, and taboo that frequently surround menstruation hindered adequate assessment and identification of contextually appropriate solutions and emerged as a significant challenge in addressing menstrual hygiene management barriers in emergencies. In a study in flood-affected Assam, found no strategic plan or prior preparation for menstrual hygiene management despite the fact that floods are an annual occurrence (Bhattacharjee, 2019).

In this context, an attempt has been made to study and assess the knowledge, attitude, and practices of adolescent girls with respect to menstrual health and hygiene, focusing on climate-vulnerable regions with the following specific objectives.

- To assess the knowledge and attitude of adolescent girls on menstrual health & hygiene and reproductive health concepts
- To assess the status of menstrual and gynec health among adolescent girls and treatment-seeking behavior
- To understand the existing practices related to menstrual hygiene among adolescent girls

## 1.4 Methodology

### 1.4.1 Sample size

An estimated sample size of 480 was collected from the four selected districts. A sample of 120 interview respondents was collected from every district. A sample of 480 adolescent girls is required considering the non-response error of 20%. Information on menstrual health and hygiene was collected from adolescent girls. To find out the required sample size, the following formula has been applied:

$$\text{Sample Size (n)} = \frac{z^2 pq * (1 + R) * D \text{ eff}}{d^2}$$

Where: n = Sample size required

z = z value (1.96 at 5% level of significance)

p = prevalence of hygienic methods of protection during the menstrual period =77% (NFHS-5) q=1-p=23% R = non-response adjustment (assumed to be 15%) D eff= Design effect (assumed to be 1.25) d = margin of error (assumed to be 5%)

Therefore, 
$$n = \frac{((1.96)^2 * (0.77) * (0.23)) * (1.40) * (1.25)}{(0.05)^2} = 476$$

n = 476 (rounded to **480**)

In the present study, a total of 480 girls were contacted. Finally, with a 95.20 % response rate, about 457 girls who attained menarche were interviewed successfully. The remaining 23 girls had yet to attain menarche up to the time of the interview. The consent was taken from the girls aged 18 and 19 years, and the individual consent was taken from the parents of the girls who were below 18 years.

### 1.4.2 Selection of Districts, Talukas, PHC, and Adolescent girls

The study was conducted in the State of Maharashtra. All districts of Maharashtra State have been categorized into two groups based on the NFHS-5 indicator, 'Percentage of women aged 15-24

years who use hygienic methods of protection during their menstrual period' as '*better-performing districts*' (those above the State average) and '*poor performing districts*' (those below the State average). One *drought-affected* and one *flood/cyclone-affected* district has been selected from these two categories. To identify the districts, "Mapping India's Climate Vulnerability: A District Level Assessment" (2021), published by The Council of Energy, Environment and Water (CEEW), has been used. (Mohanty & Wadhawan, 2020).

Altogether four districts were selected – two from the *better performing category*, and two from the *poor performing category*, 2 of them *drought affected*, and 2 of them were *flood/cyclone affected*. For the Maharashtra state, Ahmednagar and Sangli were selected as drought-prone areas. Jalgaon and Mumbai were selected as flood-prone areas. The selection was made on the basis of the vulnerability index.

Within each selected district, 1 Taluka was selected, which is comparatively more climate-vulnerable. In each of the selected Talukas of three rural districts i.e., Ahmednagar, Jalgaon, and Sangli three rural Primary Health Centres (PHCs) were selected, and in urban district Mumbai, three PHCs were selected. A readily available list of adolescent girls (aged 13-19 years) was collected from the Health department (through ARSH Coordinator/ANMs/ASHAs/CHVs) covering all the 3 PHCs' geographical areas. From the final updated list, 120 Girls were selected using a systematic random sampling method considering the non-response rate and availability of the girls not attaining menarche in the age group 13-19 years. Finally, in total, 457 adolescent girls who have attained menarche, who were available during our visit, and who were willing to take part in the study were interviewed from a total of four districts.

The response rates for the present study conducted for the State of Maharashtra are presented according to the place of residence and climate-vulnerable regions (**Table 1.1**). A total of 480 adolescent girls were selected, of which 457 were successfully interviewed, with a response rate of 95.20 percent. About 4.8 percent of the adolescent girls could not be interviewed as they were yet to attain menarche at the time of the survey.

The below table 1.1 depicts the sample coverage in the selected districts of Maharashtra state. According to the sample size, 480 adolescent girls were contacted. 457 girls who had attained menarche were interviewed during the study. Among them, 337 were from rural areas, and 120 were from urban areas. Of them, 218 girls were from drought-prone areas, and 239 were from flood



areas. Around 23 girls were yet to attain menarche, all from rural areas. Among them, 22 girls were from drought-prone areas, and only one was from flood areas. The total adolescent response rate is 95.2 %, and in numbers, all 480 girls responded properly to the interviews. Of them, 360 sample sizes were from rural areas, and 120 were from urban areas.

**Table 1.1: Sample coverage in the selected districts of Maharashtra State**

Particulars	Place of residence		Climate vulnerability		Total
	Rural	Urban	Drought	Flood/Cyclone	
<b>ALL</b>					
<b>Interviewed</b>	337	120	218	239	457
<b>Not attained Menarche</b>	23	0	22	1	23
<b>District</b>					
<b>Ahmednagar</b>					
<b>Interviewed</b>	102	0	102	na	102
<b>Not attained Menarche</b>	18	0	18	na	18
<b>Jalgaon</b>					
<b>Interviewed</b>	119	0	na	119	119
<b>Not attained Menarche</b>	1	0	na	1	1
<b>Mumbai</b>					
<b>Interviewed</b>	0	120	na	120	120
<b>Not attained Menarche</b>	0	0	na	0	0
<b>Sangli</b>					
<b>Interviewed</b>	116	0	116	na	116
<b>Not attained Menarche</b>	4	0	4	na	4
<b>Adolescent response rate</b>	<b>93.6</b>	<b>100</b>	<b>90.8</b>	<b>99.6</b>	<b>95.2</b>
<b>Number</b>	<b>360</b>	<b>120</b>	<b>240</b>	<b>240</b>	<b>480</b>
<i>*na=Selected districts were either flood-prone or drought-prone</i>					

For the Ahmednagar district, a rural and drought-affected area, 102 girls who had attained menarche were interviewed, and 18 were yet to attain menarche. For the Jalgaon district, a rural and flood-affected area, 119 girls who had attained menarche were interviewed, and one was yet to attain menarche. Similarly, in the Mumbai district, an urban and flood-affected area, all the 120 girls who had attained menarche were interviewed. For the Sangli district, a rural and drought-prone area, 116 girls who had attained menarche were interviewed, and 4 were yet to attain menarche.

### 1.4.3 Study tools

A detailed schedule has been administered to eligible respondents in their vernacular language. A readily available questionnaire in the Marathi language was made for the easy understanding of the

respondents in Maharashtra. The questionnaire includes questions regarding the respondent's and Household/Parents' demographic and socioeconomic background; Knowledge, attitude, and practices of adolescent girls concerning Menstrual Health and Hygiene.

Following Broad areas were covered in the schedule.

➤ **Socioeconomic Characteristics of Household**

- Religion, caste, Family type, and size
- Water supply, Toilet facility, Fuel used
- Possession of valuable/material goods
- Own house/rent, land-owning
- Source of income
- BPL card

➤ **Background Characteristics of Parents**

- Age, marital status, education, occupation

➤ **Adolescent Girls**

- Age
- Education, reasons for drop out (related to menstruation/menarche and sanitation)
- HH work, occupation, individual income
- Marital status, age at marriage, and consummation of marriage

➤ **Reproductive Health Issues**

- Age at menarche, practices followed during menarche and menstruation
- Menstrual hygiene, absorbent used, frequency of change, its disposal, the cost involved
- Accessibility to Sanitary Napkins, quality/quantity of napkins given through Govt. systems and disposal.
- Menstrual problems, their impact on other activities, management
- Gynec problems, treatment seeking
- Myths and Misconceptions around menstruation
- Role of RKSK and Peer Education Programmes in imparting knowledge on Menstrual Health and Hygiene
- Menstrual health problems and challenges related to climate vulnerability

#### **1.4.4 Field data collection**

An elaborate training, including demonstration interviews, mock interviews, field practice, etc., has been organized for the Supervisor and field staff. A team of one Supervisor and 4 Female investigators was placed for the field data collection. The supervisor collected the lists from all the selected Talukas and wards a few days before the survey and made the final sampling frame as well as the selection of girls. Female investigators conducted 8 interviews per day. On average, the field data collection was completed in 3 days per district and altogether 18 days (i.e., 12 working days and 6 days for inter-district travel). Supervisors edited all the filled-in questionnaires.

Each team has been provided with reasonable accommodation at private lodges. The field team was provided with one vehicle of capacity 5. As most of the adolescent girls were at schools or colleges during the day time, efforts were made to contact these girls at their houses during evening time, weekends, and holidays. The data from all four districts were collected during January 2023.

#### **1.4.5 Data Processing**

Data processing work has been carried out with the help of CSPro 7.6.0 software developed at the PRC Dharwad. Data validation check was applied and data consistency were checked to avoid data entry errors. An error list of the data entered twice was generated and was verified for discrepancies with the help of the questionnaires. The required corrections were made in both data sets until no keying error was found. The whole data entry operation was supervised by trained supervisors. The entire data processing work was completed within 2 weeks by 4 Field Investigators. The analysis of the data has been done using CSPro 7.6.0 and STATA version 17.

## CHAPTER 2

### Adolescent Socio-Demographic Characteristics

---

#### 2.0 Introduction

This section presents a profile of the demographic and socioeconomic characteristics of households and individual-level characteristics of surveyed adolescent girls from the selected districts of Maharashtra covered in the survey.

#### 2.1 Household Characteristics

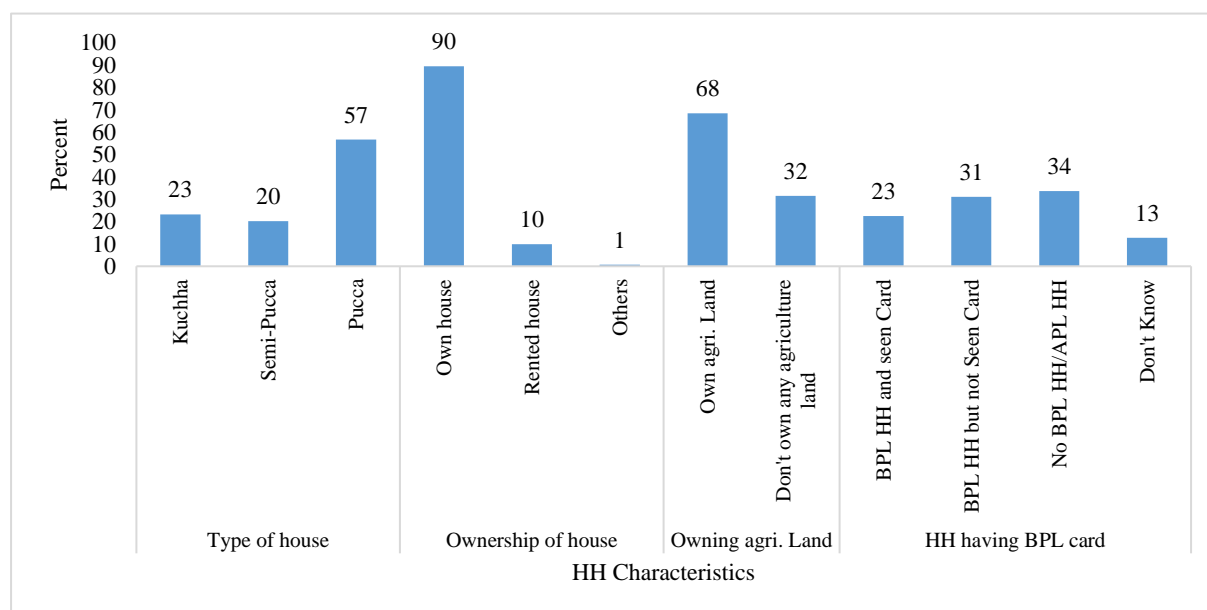
Household characteristics includes composition by religion, caste, the primary source of income, type of family, its size, and housing characteristics such as type of house, ownership of the house, owning any agricultural land, and primary source of income according to a place of residence and by climate vulnerability.

**Household characteristics** A preliminary analysis of the household influencing characteristics such as religion and caste, family type and size, household type, primary sources of income, and BPL status, is essential to determine the factors for prevailing beliefs related to menarche, awareness, and limitations and challenges in menstrual health management among the adolescence.

The distribution of surveyed adolescent girls by household characteristics classified by place of residence and climate-vulnerable regions has been presented in **Table 2.1**. A larger proportion of the surveyed adolescent girls were Hindus (81 percent), whereas the proportion of Muslims and other religions was 13 and 5 percent, respectively. By place of residence, in rural areas, 93 percent of the surveyed adolescent girls are Hindus. Whereas in urban areas, about half the number of surveyed adolescent girls (50 percent) are Hindus, followed by 36 percent of Muslims. The same is reflected in climate-vulnerable areas, as about 90 percent of the surveyed adolescent girls residing in drought-prone areas are Hindus, with only 8 percent of Muslims. In flood-prone areas, 74 percent of the surveyed adolescent girls are Hindus, followed by 19 percent of Muslims and about 7 percent from other religions. The composition of caste shows 42 percent of the adolescent girls are from Other Backward Classes, followed by general caste (26 percent).

The family structure of the adolescent girls reflects preponderance towards nuclear families (70 percent) with a mean family size of 6.2. A majority of the girls (90 percent) live in their own houses. However, by type of house, 57 percent of the surveyed girls were living in a pucca household, and about three fourth of it is from urban areas (77 percent). (**Figure 2.1**).

**Figure 2. 1: Distribution of adolescent girls by household characteristics, Maharashtra**



BPL status of the household reveals a little more than half of the surveyed adolescent girls belonged to BPL households (53 percent) and were predominately from drought-prone areas (58 percent) and rural areas (56 percent). Notably, 85 percent residing in drought-prone areas own agricultural land.

The percentage of the surveyed adolescent girls residing in rural areas and drought-prone areas (72 percent each) are from households reporting their primary source of income as cultivation. Whereas in urban areas, business-related and salaried employment (42 percent, and 50 percent, respectively) are the primary sources of income.

**Table 2. 1: Distribution of adolescent girls by household characteristics.**

Background characteristics	Place of residence		Type of climate vulnerability		ALL
	Rural	Urban	Drought	Flood	
<b>Religion</b>					
<b>Hindu</b>	92.6	50.0	89.9	73.6	81.4
<b>Muslim</b>	5.6	35.8	7.8	18.8	13.6

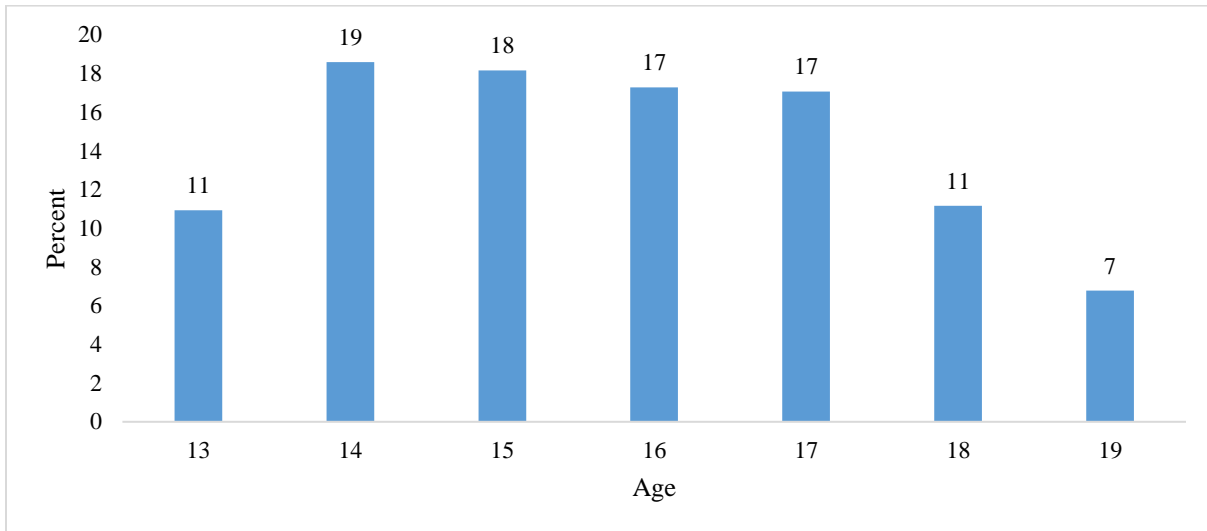
<b>Others</b>	1.8	14.2	2.3	7.5	5.0
<b>Caste</b>					
<b>Scheduled caste</b>	13.1	14.2	16.5	10.5	13.4
<b>Scheduled tribe</b>	17.2	0.8	12.8	13.0	12.9
<b>Other backward class</b>	43.9	35.8	36.7	46.4	41.8
<b>General/Forward</b>	24.9	30.0	33.0	20.1	26.3
<b>No caste</b>	0.9	19.2	0.9	10.1	5.7
<b>Type of family</b>					
<b>Nuclear</b>	69.1	71.7	58.3	80.3	69.8
<b>Extended</b>	8.3	0.0	11.9	0.8	6.1
<b>Joint</b>	22.6	28.3	29.8	18.8	24.1
<b>Family size</b>					
<b>1 - 4</b>	25.2	24.2	22.0	27.6	25.0
<b>5 - 6</b>	43.0	39.2	38.5	45.2	42.0
<b>More than 6</b>	31.8	36.7	39.5	27.2	33.0
<i>Mean</i>	6.2	6.4	6.6	6.0	6.2
<b>Type of house</b>					
<b>Kuchha</b>	31.2	0.8	33.5	13.8	23.2
<b>Semi-Pucca</b>	19.3	22.5	23.4	17.2	20.1
<b>Pucca</b>	49.6	76.7	43.1	69.0	56.7
<b>Ownership of house</b>					
<b>Own house</b>	95.3	73.3	97.3	82.4	89.5
<b>Rented house</b>	3.9	26.7	1.4	17.6	9.9
<b>Others</b>	0.9	0.0	1.4	0.0	0.7
<b>Owning agri. Land</b>					
<b>Own agri. Land</b>	82.2	30.0	84.9	53.6	68.5
<b>Don't own any agricultural land</b>	17.8	70.0	15.1	46.4	31.5
<b>HH having BPL card</b>					
<b>BPL HH and seen Card</b>	15.7	41.7	19.3	25.5	22.5
<b>BPL HH but not Seen Card</b>	41.0	3.3	39.0	23.9	31.1
<b>No BPL HH/APL HH</b>	36.5	25.8	34.4	33.1	33.7
<b>Don't Know</b>	6.8	29.2	7.3	17.6	12.7
<b>Primary source of income</b>					
<b>Cultivation</b>	72.4	0.0	72.5	36.0	53.4
<b>Agri/Non Agri Coolie</b>	12.5	0.0	11.9	6.7	9.2
<b>Business Related</b>	8.0	41.7	7.3	25.5	16.9
<b>Salaried Employment</b>	5.6	49.2	7.3	25.9	17.1
<b>Other</b>	1.5	9.2	0.9	5.9	3.5
<b>Number of adolescent Girls</b>	<b>337</b>	<b>120</b>	<b>218</b>	<b>239</b>	<b>457</b>

## 2.2 Individual and Parental Characteristics

The distribution of adolescent girls by individual and parental characteristics is depicted in **Table 2.2**. The percentage of adolescent girls for this study is the same in the age groups 15-16 years and

17 years and above (35 percent each). The mean age was 15.7 years; the single-year age-wise distribution illustrated in **Figure 2.2** reflects the least representation of adolescent girls from the age 19 (7 percent), followed by age 13 and 18 (11 percent each) in the rest of the age the representation of girls is more or less the same.

**Figure 2. 2: Single year Age distribution of adolescent girls, Maharashtra**



Most of the surveyed adolescent girls (90 percent) stay with both fathers and mothers. Considering the parents' age, 40 percent of each of the adolescent girls fathers were in the age group of 35-44 and 45-54 years, whereas 66 percent of the girls mothers were in the age group of 35-44 years. Parental education is important, mainly in disseminating reliable information to make the adolescent understand the reproductive system and cycles of menstruation, in particular for adolescent girls and mother education. Analysis suggests that about 17 percent of the mothers and 12 percent of fathers of adolescent girls had no formal schooling, whereas 36 percent of fathers and 35 percent of mothers of adolescent girls had attended 8-10 years of education. Only 10 percent of mothers and 22 percent of fathers had completed 11-12 years of education. Rural-Urban differentials were evident, with 50 percent of fathers of adolescent girls residing in urban areas with 8-10 years of education compared to 31 percent in rural areas.

Similarly, 32 percent of mothers residing in rural areas had 8-10 years of education compared to 45 percent of mothers residing in urban areas. However, 35 percent of mothers in drought-prone areas only have 1-7 years of education. Most of the adolescent girls parents were below ten years of education.

In line with household findings, cultivation was the primary source of income in rural areas and drought-prone areas; 65 percent of fathers are engaged in cultivation; the same is observed for mothers' occupations (60 percent). The father's occupations in urban areas are concentrated in business-related (44 percent) and salaried employment (41 percent), and for mothers, as household work (64 percent). Siblings having both boys and girls in a household will not only help disseminate knowledge but also enable them to understand the constraints, existing social norms, and possibly the constraints a girl faces during menarche. Thus, having a sibling might influence menstrual health hygiene and practices. In particular, having a sister as a sibling is vital in disseminating menstruation knowledge and the much-needed emotional support girls require during that period. Data suggest 39 percent of adolescent girls do not have sisters, and 16 percent do not have brothers. (Table 2.2).

**Table 2. 2: Distribution of adolescent girls by Individual and parental characteristics.**

Background characteristics	Place of residence		Type of climate vulnerability		ALL
	Rural	Urban	Drought	Flood	
<b>Age of adolescent girl</b>					
<b>13 - 14</b>	30.0	28.3	32.1	27.2	29.5
<b>15 - 16</b>	39.2	25.0	38.1	33.1	35.5
<b>17 and above</b>	30.9	46.7	29.8	39.8	35.0
<b>Mean age ± SD</b>	15.6 ± 1.6	16.1 ± 2.0	15.5 ± 1.6	15.9 ± 1.8	15.7 ± 1.8
<b>Staying with parents</b>					
<b>Yes, With Both Father and Mother</b>	89.3	88.3	88.5	89.5	89.1
<b>With Mother, Father Away</b>	1.8	0.8	1.8	1.3	1.5
<b>With Mother, Father Died</b>	7.4	5.8	7.3	6.7	7.0
<b>With Father, Mother Away</b>	0.3	0.8	0.5	0.4	0.4
<b>With Father, Mother Died</b>	0.9	4.2	1.4	2.1	1.8
<b>Both Father &amp; Mother Away</b>	0.3	0.0	0.5	0.0	0.2
<b>Age of father</b>					
<b>25-34</b>	1.2	0.0	1.4	0.4	0.9
<b>35-44</b>	47.2	22.5	48.2	33.9	40.7
<b>45-54</b>	34.7	52.5	32.6	45.6	39.4
<b>55 or above</b>	2.4	1.7	0.9	3.4	2.2
<b>Don't Know</b>	6.8	17.5	9.2	10.0	9.6
<b>Died</b>	7.7	5.8	7.8	6.7	7.2
<b>Age of mother</b>					
<b>25-34</b>	17.2	6.7	17.4	11.7	14.4
<b>35-44</b>	68.8	59.2	65.6	67.0	66.3
<b>45-54</b>	6.5	17.5	6.0	12.6	9.4
<b>55 or above</b>	0.6	0.0	0.5	0.4	0.4
<b>Don't Know</b>	5.6	12.5	8.7	6.3	7.4



Died	1.2	4.2	1.8	2.1	2.0
Education of father					
Illiterate	10.4	6.7	9.2	9.6	9.4
Lit. No Schooling	2.7	4.2	3.7	2.5	3.1
1 -7 std.	15.4	10.8	16.5	12.1	14.2
8-10 std.	31.2	50.0	27.1	44.4	36.1
11 - 12 std.	23.4	19.2	23.9	20.9	22.3
13 and above	9.2	3.3	11.9	3.8	7.7
Died	7.7	5.8	7.8	6.7	7.2
Education of mother					
Illiterate	15.4	11.9	17.0	12.2	14.5
Lit. No Schooling	2.1	2.5	3.2	1.3	2.2
1 -7 std.	32.9	27.1	35.3	27.9	31.4
8-10 std.	32.1	45.8	29.4	41.4	35.6
11 - 12 std.	12.5	5.1	9.2	11.8	10.6
13 and above	3.9	3.4	4.1	3.4	3.7
Died	1.2	4.2	1.8	2.1	2.0
Occupation of father					
Cultivation	<b>65.0</b>	<b>0.0</b>	<b>65.1</b>	<b>32.2</b>	47.9
Agricultural Coolie	7.7	0.0	8.7	2.9	5.7
Non-Agri. Coolie	2.1	0.0	0.5	2.5	1.5
Business Related	7.7	<b>44.2</b>	7.8	25.9	17.3
Salaried Employment	5.9	<b>40.8</b>	8.7	20.9	15.1
Self Employed (Artisan)	0.9	2.5	0.5	2.1	1.3
Other	3.0	6.7	0.9	6.7	3.9
NA/Died	7.7	5.8	7.8	6.7	7.2
Occupation of mother					
Cultivation	<b>60.2</b>	<b>0.0</b>	<b>58.7</b>	31.4	44.4
Agricultural Coolie	10.7	0.0	11.0	5.0	7.9
Non-Agri. Coolie	2.4	0.8	1.4	2.5	2.0
Business Related	1.2	7.5	0.5	5.0	2.8
Salaried Employment	4.5	17.5	4.6	10.9	7.9
Household/No Work	15.4	<b>64.2</b>	18.8	<b>36.8</b>	28.2
Self Employed (Artisan)	3.6	4.2	2.8	4.6	3.7
Other	0.9	1.7	0.5	1.7	1.1
NA/Died	1.2	4.2	1.8	2.1	2.0
Number of brothers					
No brothers	13.4	25.0	11.0	21.3	16.4
1 brother	<b>71.8</b>	<b>51.7</b>	<b>73.9</b>	<b>59.8</b>	66.5
2 brothers	14.5	16.7	15.1	15.1	15.1
3 or more brothers	0.3	6.7	0.0	3.8	2.0
Number of sisters					
No sister	<b>41.8</b>	32.5	36.2	<b>42.3</b>	39.4
1 sister	33.8	<b>43.3</b>	33.5	38.9	36.3

<b>2 sisters</b>	16.6	14.2	20.2	12.1	16.0
<b>3 or more sisters</b>	7.7	10.0	10.1	6.7	8.3
<b>Number of adolescent Girls</b>	<b>337</b>	<b>120</b>	<b>218</b>	<b>239</b>	<b>457</b>

### 2.3 Summary of Findings

Socio-demographic profiles of the survey adolescent girls show that most are Hindus (81 percent) and predominantly reside in rural areas. The family structure shows preponderance towards nuclear family as 70 percent of adolescent girls were from nuclear families, with marginal rural-urban differential. Data reveals parents' education is mainly concentrated below ten years. Most adolescent girls (90 percent) stay with both father and mother, and 40 percent of the adolescent girls fathers and 66 percent of girls mothers are in the middle age group of 35-44. BPL status of the household reveals a little more than half of the surveyed adolescent girls belonged to BPL households (53 percent) and was predominately from drought-prone areas (58 percent) and rural areas (56 percent). Notably, 85 percent residing in drought-prone areas own agricultural land. Rural-Urban differentials are mainly observed in the occupation, as cultivation is a major occupation for both father (65 percent) and the mother (64 percent). Whereas in urban areas, the fathers are mainly engaged in business-related (44 percent) and salaried employment (40 percent), and mothers in household work (64 percent). Data also suggest 39 percent of girls had no sisters, and 16 percent do not have brothers in the household.

## CHAPTER 3

### Educational and Occupational Status of Adolescent Girls

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#### 3.0 Introduction

Education is an important factor contributing to individual capacity building related to knowledge and awareness, disseminating reliable knowledge, and seeking health care services. Aspiration for education may vary depending upon prevailing individual circumstances and preferences. This section is related to the educational and occupational profiles of the surveyed adolescent girls. It explores the educational aspirations of both surveyed adolescent girls and parents, the reasons for discontinuing education, etc.

#### 3.1 Educational Status of Adolescent Girls

The educational characteristics of surveyed adolescent girls have been presented in **Table 3.1**. Results suggest that about 95 percent of girls are currently pursuing education, of which rural areas constitute 97 percent of girls and urban areas constitute 88 percent. About 4 percent of girls discontinued the study, and a hand full number of surveyed girls (1 percent) never visited the school. Of the school-going girls, most of the surveyed girls were studying in 9th to 10th standard (38 percent), closely followed by 37 percent studying above 10th standard. In urban areas, half the number of girls (50 percent) are currently studying in 10th standard and above.

Two third of the girls are enrolled in a government school, and most reside in rural and drought-prone areas (72 percent each). In urban areas, an equal number of girls are enrolled in government and private schools (50 percent). Regarding the medium of instruction of the school-going girls, 62 percent of girls were pursuing education in the vernacular language (Marathi) and are mainly from rural and drought-prone areas (72 percent each). However, in urban areas, three fourth of the girls are pursuing education in English mediums (76 percent), and a nearly equal number of girls (48 percent each) are from flood-prone areas pursuing education in English and Marathi mediums.

A coeducation environment providing education on health and hygiene can not only have a positive impact and understanding among their peer groups but also provide an opportunity to interact with

each other and understand the limitation and challenges from a broader perspective. Data suggests an overwhelming (94 percent) of the surveyed adolescent girls are enrolled in coeducation schools.

Distance to school from home plays a crucial role in access to education. Results suggest that about 35 percent of the school-going girls mentioned that their schools are around 2-5 km, followed by 23 percent each mentioned that the school's distance from their residence is less than a kilometre and more than 5 km, respectively. The remaining 19 percent of girls mentioned that their school is only 1 km away from their residence. No major difference was observed for school distance by place of residence and by climate vulnerabilities.

Regarding means of transportation used to reach school, around 51 percent of the respondents reported that they go by walking, followed by public transport (28 percent) and Bicycle (14 percent). A minor percentage of girls reported using motorcycles or private transport. Further, a sizeable difference was observed in public transportation as more girls from urban and flood-affected areas (44 percent each) use public transport than girls from rural and drought-affected areas.

As far as time is considered around 64 percent of the girls reported that it takes around 10-30 minutes to reach the school, and around one-fourth reported that it takes less than 10 minutes to reach school. Time to reach school varies by place of residence; for instance, about 9 percent of urban girls reported that it takes 30-60 minutes to reach school, whereas this figure for rural areas is 13 percent.

**Table 3. 1: Educational status of adolescent girls and details of educational institutions they are attending by place of residence and climate vulnerability.**

Particulars	Place of residence		Type of climate vulnerability		ALL
	Rural	Urban	Drought	Flood	
<b>Educational status</b>					
<b>Studying at present</b>	97.0	88.3	97.2	92.5	94.7
<b>Discontinued/Dropped out</b>	2.1	9.2	1.8	5.9	3.9
<b>Never gone to school</b>	0.9	2.5	0.9	1.7	1.3
<b>Number of adolescent girls</b>	<b>337</b>	<b>120</b>	<b>218</b>	<b>239</b>	<b>457</b>
<b>Std. at which studying</b>					
<b>7th-8th std.</b>	28.4	15.1	28.8	21.7	25.2
<b>9th-10th std.</b>	38.8	34.9	42.0	33.9	37.9

>10th std.	32.7	50.0	29.3	44.3	37.0
<b>Type of school/college</b>					
<b>Private</b>	27.8	50.0	28.3	38.0	33.3
<b>Government</b>	72.2	50.0	71.7	62.0	66.7
<b>Medium of instruction</b>					
<b>Marathi</b>	76.5	17.0	76.4	48.0	61.9
<b>English</b>	23.6	75.5	23.6	48.4	36.3
<b>Urdu</b>	0.0	7.6	0.0	3.6	1.9
<b>Co-educated</b>					
<b>Co-educated</b>	95.7	86.8	98.1	89.1	93.5
<b>Girls only</b>	4.3	13.2	1.9	10.9	6.5
<b>Distance of school/college from house</b>					
<b>Less than 1 km</b>	22.3	23.6	17.9	27.2	22.6
<b>1 km</b>	19.3	18.9	23.1	15.4	19.2
<b>2-5 km</b>	33.0	40.6	40.1	29.9	34.9
<b>&gt;5 km</b>	25.4	17.0	18.9	27.6	23.3
<b>Means of transportation used to reach school/college</b>					
<b>By Walk</b>	50.5	53.8	51.4	51.1	51.3
<b>Bicycle</b>	18.4	0.0	25.5	2.7	13.9
<b>Motor Cycle</b>	4.3	0.9	6.1	0.9	3.5
<b>Public Transport</b>	23.2	44.3	12.3	43.9	28.4
<b>Private Transport</b>	3.7	0.9	4.7	1.4	3.0
<b>Time taken to reach school/college</b>					
<b>10 min or less</b>	23.6	23.6	24.5	22.6	23.6
<b>&gt;10 min to 30 min</b>	62.7	67.0	58.5	68.8	63.7
<b>&gt;30 min to 1 hour</b>	13.2	9.4	17.0	7.7	12.2
<b>More than 1 hour</b>	0.6	0.0	0.0	0.9	0.5
<b>Number of adol. Girls going to school/college</b>	<b>327</b>	<b>106</b>	<b>212</b>	<b>221</b>	<b>433</b>

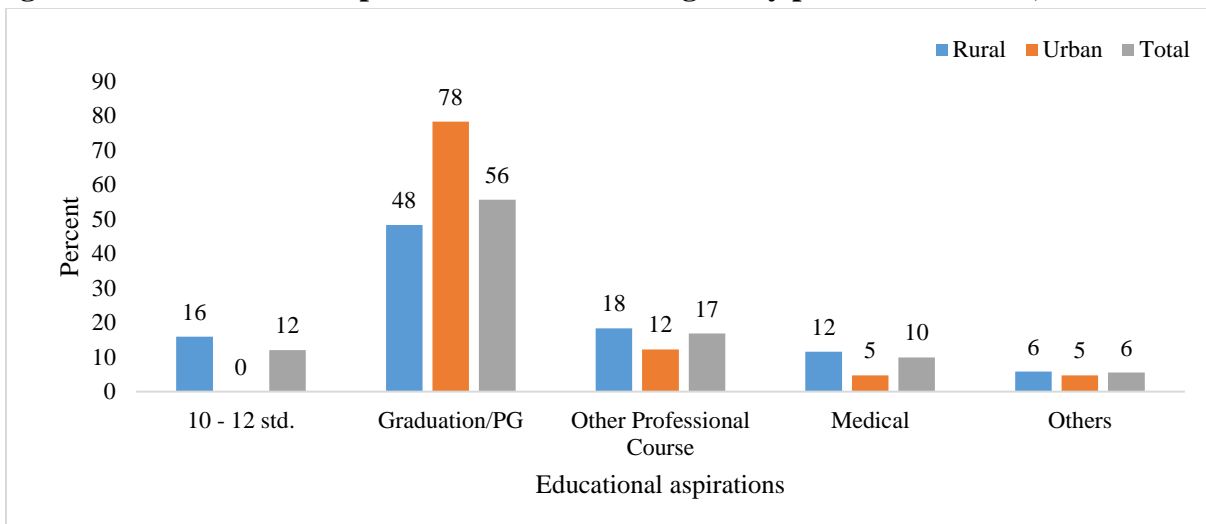
### 3.2 Educational Aspirations of Adolescent Girls

The inability to manage challenges related to menstrual health and hygiene may have a negative impact on an individual in continuing education and, thereby, less aspiration for a girl to go for higher education. One of the important factors governing educational achievement is aspiration, and it is not only individual aspiration but parental aspiration that is also key to the adolescence aspiration. The educational aspirations of adolescent girls and perceived encouragement received from parents and aspirations of parents for their daughters have been analyzed by place of residents and climate-vulnerable regions and presented in **Table 3.2**. Data suggests that 56 percent of the

girls aspire to complete either graduation or post-graduation, followed by professional courses (17 percent) and Medical (10 percent). In terms of place of residence, more adolescent girls from urban areas reported opting for graduation/PG (78 percent) compared to girls from rural areas (48 percent) (Figure 3.1). **The educational aspiration of the girls from the urban areas was to complete at least graduation or post-graduation (78 percent). Interestingly none of the girls from urban areas reported 10-12 years of education as their educational aspiration, whereas in rural areas, 16 percent of girls reported educational aspiration up to 10-12 years of education.**

Furthermore, girls from rural areas aspire to complete at least other professional courses (18 percent), whereas, in urban areas, it is 12 percent. **Girls' educational aspirations in climate-vulnerable regions suggest that more girls from flood-prone areas (66 percent) reported graduates/post graduates as against 45 percent of the girls from drought-prone areas who aspire for it.**

**Figure 3. 1: Educational aspirations of Adolescent girls by place of residence, Maharashtra**



Overwhelmingly, 96 percent of the girls perceived the encouragement from parents to be very high and positive. Only a minuscule (2 percent) of the girls from the rural areas perceived parents' encouragement to be neutral and negative. In accordance with the educational aspiration of girls, the educational aspiration of parents to complete graduation/post-graduation was 56 percent, with considerable differences between rural (50 percent) and urban (75 percent) areas as well as between drought (45 percent) and flood-prone areas (66 percent). Overall, girls' and parents' aspirations for higher education are higher in urban areas than in rural areas.

**Table 3. 2: Educational aspirations of adolescent girls and perceived encouragement received from parents and aspirations of parents for their daughters by place of residence and climate vulnerability**

Particulars	Place of residence		Type of climate vulnerability		ALL
	Rural	Urban	Drought	Flood	
<b>Educational aspirations of adolescent girls</b>					
<b>10 - 12 std.</b>	15.9	0.0	13.2	10.9	12.0
<b>Graduation/PG</b>	48.3	78.3	45.3	65.6	55.7
<b>Other Professional Course</b>	18.4	12.3	19.3	14.5	16.9
<b>Medical</b>	11.6	4.7	14.6	5.4	9.9
<b>Others</b>	5.8	4.7	7.6	3.6	5.5
<b>Perceived encouragement received from parents</b>					
<b>Very High</b>	21.4	39.6	21.7	29.9	25.9
<b>Positive</b>	73.1	59.4	73.6	66.1	69.8
<b>Neutral</b>	2.5	0.0	2.4	1.4	1.9
<b>Negative</b>	2.1	0.0	0.9	2.3	1.6
<b>Can't Say</b>	0.9	0.9	1.4	0.5	0.9
<b>Perceived educational aspirations of parents</b>					
<b>10 - 12 std.</b>	15.6	0.0	13.7	10.0	11.8
<b>Graduation/PG</b>	49.9	74.5	45.3	66.1	55.9
<b>Other Professional Course</b>	14.7	12.3	14.2	14.0	14.1
<b>Medical</b>	9.2	4.7	11.3	5.0	8.1
<b>Others</b>	10.7	8.5	15.6	5.0	10.2
<b>Number of adolescent Girls going to school/college</b>	<b>327</b>	<b>106</b>	<b>212</b>	<b>221</b>	<b>433</b>

### 3.3 Dropout from Formal Education and Reasons for drop out

Further, the reasons for dropout in the education of the surveyed adolescent girls are given in Table 3.3. There are only 24 girls among the adolescents surveyed girls who have discontinued their education. Family and financial problems were the main reason for discontinuing education, and none of the girls reported discontinuing education due to menstruation. The findings thus negate the role of menstruation management as a reason for discontinuing education.

**Table 3. 3: Standard at which discontinued studies, perceived regularity in studies, and reasons for discontinuing/never attending school among adolescent girls who are not going to school/college by place of residence and climate vulnerability**

Particulars	Place of residence		Type of climate vulnerability		ALL
	Rural	Urban	Drought	Flood	
<b>Std. at which discontinued studies*</b>					

<b>7 – 9 std.</b>	14.3 (1)	36.4 (4)	25.0 (1)	28.6 (4)	27.8 (5)
<b>10 std.</b>	28.6 (2)	45.5 (5)	25.0 (1)	42.9 (6)	38.9 (7)
<b>11 – 12 std.</b>	57.1 (4)	18.2 (2)	50.0 (2)	28.6 (4)	33.3 (6)
<b>Regular during attended school?</b>					
<b>Regular</b>	85.7 (6)	90.9 (10)	100.0 (4)	85.7 (12)	88.9 (16)
<b>Irregular</b>	14.3 (1)	9.1 (1)	0.0	14.3 (2)	11.1 (2)
<b>Number of adolescent Girls discontinued their education</b>	<b>7</b>	<b>11</b>	<b>4</b>	<b>14</b>	<b>18</b>
<b>Reasons for discontinuing /never attending school</b>					
<b>Family Problems</b>	40.0 (4)	7.1 (1)	50.0	11.1 (2)	20.8 (5)
<b>Financial Problems</b>	50.0 (5)	7.1 (1)	33.3	22.2 (4)	25.0 (6)
<b>Family not permitted</b>	0.0	28.6 (4)	0.0	22.2 (4)	16.7 (4)
<b>Not interested/failed</b>	10.0 (1)	42.9 (6)	16.7	33.3 (6)	29.2 (7)
<b>Due to menarche/menstruation</b>	0.0	0.0	0.0	0.0	0.0
<b>Others</b>	0.0	14.3 (2)	0.0	11.1 (2)	8.3 (2)
<b>Number of girls discontinued /never attending school</b>	<b>10</b>	<b>14</b>	<b>6</b>	<b>18</b>	<b>24</b>

\*No cases below seven standard

Accomplishing household chores has been considered crucial and untenable for Indian girls. **Table 3.4** throws light on the household chores engagement of surveyed girls and the nature of work according to the place of residence and by climate-vulnerable region.

### **3.4 Household activities**

Regarding household activities engagement, results suggest that every 9 out of 10 girls were engaged in cleaning the house (90 percent) activity. In addition, around three-fourths of these girls were also engaged in washing clothes/utensils (76 percent) and cooking (74 percent). Furthermore, nearly half of these girls (48 percent) were fetching water, and around one-third were cleaning the cattle shed (32 percent) and taking care of small children (30 percent).

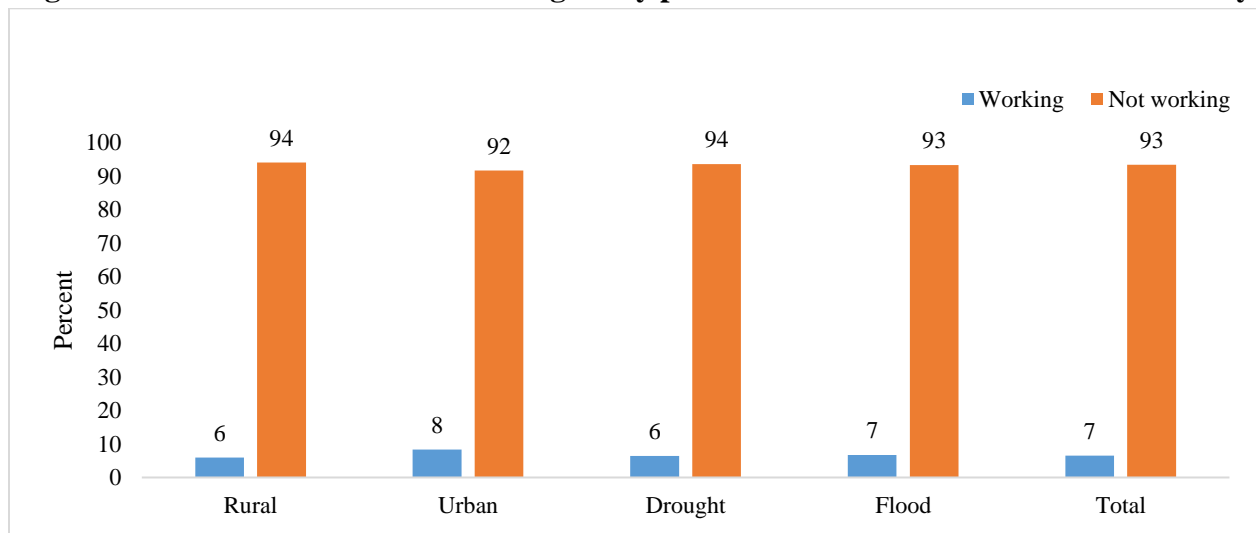
A sizable variation has been observed by place of residence, particularly engagement in household activities such as cleaning house in rural and urban areas, with 97 percent and 69 percent, respectively, followed by Washing Clothes/Vessels in rural and urban areas, with 81 percent and 61 percent respectively. Similarly, significant differences have been observed in the case of climate-vulnerable regions, particularly for cleaning houses in drought-prone and flood-prone regions, 96 percent and 83 percent, respectively. In drought-prone regions, both for Washing Clothes/Vessels and for cooking (82 percent), and in flood-prone regions for cooking (66 percent).



### 3.5 Occupational status of adolescent girls

Regarding the occupational status of surveyed adolescent girls (Table 3.4 & Figure 3.2), data suggest that around 7 percent of the girls are working, and these girls are mainly working as agricultural coolies (27 percent), followed by 20 percent each in business houses and others. Additionally, around 23 percent of the girls are also working on their family farms, for which they are not getting paid. Although there was no huge differentiation of working status among all four categories, however, most of the work related to agriculture is being done by girls from rural (40 percent) and drought-affected (50 percent) areas. Whereas work related to business or institute is being done by girls from urban (50 percent) and flood-affected areas (38 percent). Notably, 57 percent of the girls in drought-prone areas and 51 percent in rural areas were also engaged in bringing water. The findings highlight the additional component of bringing water, etc., contributes toward the engagement in household activities and is found to be more in rural areas than urban areas. Despite the amount of time and labor spent, overwhelmingly 93 percent reported their occupation as not working, and this perception indicates undermining of their engagement in household activities.

**Figure 3. 2: Work status of Adolescent girls by place of residence and climate vulnerability**



The analysis also suggests that 60 percent of the girls were engaged as part-time workers, whereas 20 percent each as full-time and seasonal/occasional workers. However, there was no major difference in full-time jobs among all four categories, but a sizeable difference was observed for part-time jobs. For all these works, 80 percent of the girls were getting paid, and the remaining 20

percent were not paid as they worked on their family farms.

Among these working girls or who worked previously, 42 percent had worked more than 6 hours per day, followed by 38 percent for 4 – 6 hours per day. Most of these girls were getting paid on their mother's hand/bank account, followed by the self-bank account/cash. No major differences were observed for working hours and mode of salaries in all four categories.

**Table 3. 4: Percentage of girls engaged in household activities, working outside, nature of work, cash handling by place of residence, and climate vulnerability**

Particulars	Place of residence		Type of climate vulnerability		ALL
	Rural	Urban	Drought	Flood	
<b>Prop. of girls engaged in household activities</b>					
<b>Cooking</b>	80.4	54.2	81.7	66.1	73.5
<b>Cleaning house</b>	96.7	69.2	96.3	83.3	89.5
<b>Cleaning Cattle shed</b>	31.5	34.2	33.9	30.5	32.2
<b>Washing Clothes/Vessels</b>	81.3	60.8	81.7	70.7	75.9
<b>Bringing Water</b>	51.0	37.5	56.9	38.9	47.5
<b>Assist in Field Activities</b>	16.9	5.8	19.3	9.2	14.0
<b>Outside Dealing/Shopping</b>	22.6	23.3	28.0	18.0	22.8
<b>Caring for Small Children</b>	38.6	6.7	43.1	18.4	30.2
<b>Grazing/Caring Animals</b>	18.4	0.0	24.3	3.8	13.6
<b>Collect Fire Wood/Cow Dung</b>	10.1	0.0	15.1	0.4	7.4
<b>Occupational status of adolescent girls</b>					
<b>Working</b>	5.9	8.3	6.4	6.7	6.6
<b>Not working</b>	94.1	91.7	93.6	93.3	93.4
<b>Number of adolescent Girls</b>	<b>337</b>	<b>120</b>	<b>218</b>	<b>239</b>	<b>457</b>
<b>Nature of work</b>					
<b>Family Farm</b>	35.0 (7)	0	42.9 (6)	6.3 (1)	23.3 (7)
<b>Family Business</b>	0	10.0 (1)	0.0	6.3 (1)	3.3 (1)
<b>Agricultural Coolie Work</b>	40.0 (8)	0	50.0 (7)	6.3 (1)	26.7 (8)
<b>Non-Agricultural Coolie Work</b>	5.0 (1)	0	0.0	6.3 (1)	3.3 (1)
<b>Work In Factory/Institute</b>	0	10.0 (1)	0.0	6.3 (1)	3.3 (1)
<b>Work In Business House</b>	5.0 (1)	50.0 (5)	0.0	37.5 (6)	20.0 (6)
<b>Others</b>	15.0 (3)	30.0 (3)	7.1 (1)	31.3 (5)	20.0 (6)
<b>Type of work</b>					
<b>Full Time</b>	20.0 (4)	20.0 (2)	21.4 (3)	18.8 (3)	20.0 (6)
<b>Part Time</b>	55.0	70.0 (7)	50.0 (7)	68.8	60.0
<b>Seasonal/Occasional</b>	25.0 (5)	10.0 (1)	28.6 (4)	12.5 (2)	20.0 (6)
<b>Get cash/kind</b>					

<b>Get cash</b>	75.0	90.0 (9)	64.3 (9)	93.8	80.0
<b>Don't get cash</b>	25.0 (5)	10.0 (1)	35.7 (5)	6.3 (1)	20.0 (6)
<b>Number of girls working outside</b>	<b>20</b>	<b>10</b>	<b>14</b>	<b>16</b>	<b>30</b>
<b>Works hours per day</b>					
<b>Less than 4 hours</b>	13.3 (2)	33.3 (3)	10.0 (1)	28.6 (4)	20.8 (5)
<b>4-6 hours</b>	40.0 (6)	33.3 (3)	50.0 (5)	28.6 (4)	37.5 (9)
<b>&gt;6 hours</b>	46.7 (7)	33.3 (3)	40.0 (4)	42.9 (6)	41.7
<b>Number of girls work full time/part time</b>	<b>15</b>	<b>9</b>	<b>10</b>	<b>14</b>	<b>24</b>
<b>Who takes salary</b>					
<b>Self</b>	26.7 (4)	33.3 (3)	33.3 (3)	26.7 (4)	29.2 (7)
<b>Father</b>	20.0 (3)	0.0	11.1 (1)	13.3 (2)	12.5 (3)
<b>Mother</b>	53.3 (8)	55.6 (5)	55.6 (5)	53.3 (8)	54.2
<b>Other Family Member</b>	0.0	11.1 (1)	0.0	6.7 (1)	4.2 (1)
<b>Number of Girls get salary as cash</b>	<b>15</b>	<b>9</b>	<b>9</b>	<b>15</b>	<b>24</b>
<b>All</b>	100.0	0.0	100.0	25.0 (1)	57.1 (4)
<b>Major Part</b>	0.0	33.3 (1)	0.0	25.0 (1)	14.3 (1)
<b>Very Little/None</b>	0.0	66.7 (2)	0.0	50.0 (2)	28.6 (2)
<b>Number of girls take salary in their hand</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>7</b>

### Summary of Findings

The educational characteristics of surveyed adolescent girls indicate high aspiration and positive attitudes towards education as 95 percent of girls are currently pursuing education, of which rural areas constitute 97 percent of girls and urban areas constitute 88 percent. However, about 4 percent of girls discontinued the study, and a hand full number of surveyed girls (1 percent) have yet to visit the school. Difference by place of residence is evident as two third of the girls are enrolled in a government school, and most reside in rural and drought-prone areas (72 percent each). In urban areas, an equal number of girls are enrolled in government and private schools (50 percent). In rural and drought-prone areas, 62 percent of girls were pursuing education in the vernacular language (Marathi). In urban areas, three fourth of the girls were pursuing education in English medium. Distance to school was less than 5 km for about 58 percent of the school-going girls. Negligible difference was observed for school distance by place of residence and by climate vulnerabilities. Regarding time, around 64 percent of the girls reported that it takes around 10-30 minutes to reach the school, and around one-fourth reported that it takes less than 10 minutes to reach school. The educational aspiration of the girls from the urban areas was to complete at least graduation or post-graduation (78 percent).

Overwhelmingly, 96 percent of the girls perceived the encouragement from parents to be very high and positive. The educational aspiration of parents to complete graduation/post-graduation was 56 percent, with considerable differences between rural (50 percent) and urban (75 percent) areas as well as between drought (45 percent) and flood-prone areas (66 percent). Overall, girls' and parents' aspirations for higher education are higher in urban areas than rural areas. Only 24 girls among the adolescents surveyed have discontinued their education, mainly due to family and financial problems. The findings negate the role of menstruation management as a reason for discontinuing education, as none of the girls reported discontinuing education due to menstruation. Most of the girls, 9 out of 10 girls, were engaged in cleaning the house. Notably, 57 percent of the girls in drought-prone areas and 51 percent in rural areas were also engaged in bringing water. Despite the amount of time and labor spent, overwhelmingly 93 percent reported their occupation as not working, and this perception indicates undermining of their engagement in household activities.

## CHAPTER 4

### Menarche and Menstruation

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#### 4.0 Introduction

The onset of menstruation means a new phase and new vulnerabilities in the lives of adolescents. Yet, many adolescent girls face stigma, harassment, and social exclusion during menstruation. Although menstruation is a natural process, it is linked with several perceptions and practices within the community, which sometimes may result in adverse health outcomes (Yasmin, 2013).

Menstruation is a natural process that indicates the transition from childhood to adulthood and represents a delicate period of physical transformation. Due to the social taboos, not much is discussed, and the menstrual health hygiene aspect is often neglected and not addressed. In addition, if harmful, the prevailing social beliefs and practices may act as a catalyst for morbidity. The age at the onset of menarche is primarily in the adolescent age group of 13-19 years. The awareness, knowledge, and practices gained during this period will likely prevail as one age. Hence providing reliable information about menstruation, awareness, hygiene, and practices is crucial to their lifelong well-being. Although hygiene practices vary from Individual to Individual, maintaining hygiene is also a matter of the availability of the infrastructure and privacy. The lack of infrastructure and awareness related to menstrual health hygiene can create a barrier to menstrual health hygiene practices. This section explores the menstrual hygiene practices of the surveyed adolescent girls and the challenges of maintaining hygiene during menstruation. Also, the study attempts to explore the knowledge and menstrual hygiene practices among adolescent girls from climate-vulnerable regions.

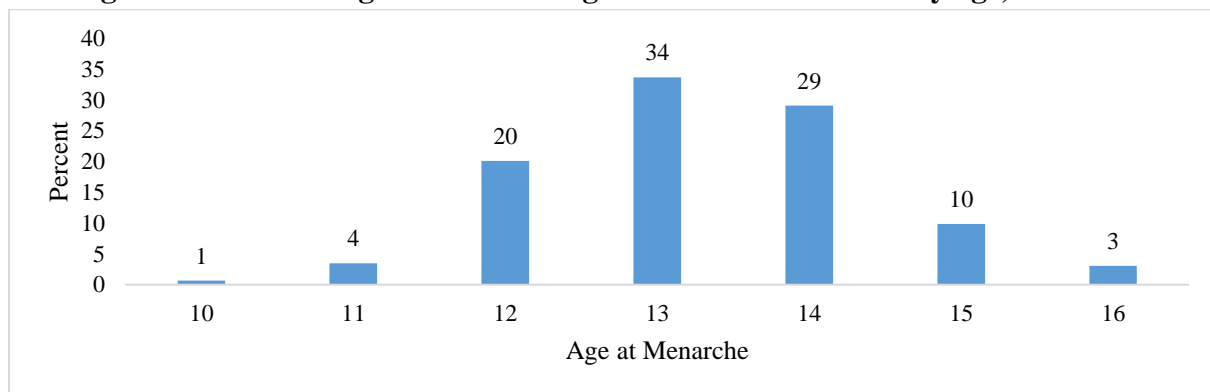
#### 4.1 Age at Menarche and Practices around Menarche

Perceived knowledge of age at menarche, the actual age of their menarche, and their reaction to it by place of residence and climate vulnerability have been presented in **Table 4.1**. results suggest that nearly half the number of adolescent girls (49 percent) reported the perceived age of menarche as 13-14 years, whereas 45 percent reported it as 10-12 years. A marginal proportion of girls reported that the age at menarche is 15-16 years (3.9 percent). Overall, 2.2 percent of adolescent

girls were unaware of their age at menarche; 3 percent were from rural areas, and 4.6 percent were from drought-prone areas.

Age at menarche is usually well-recalled and is reflected in our findings, where most respondents attained menarche between 13-14 years (63 percent), followed by 11-12 years (23 percent). A marginal proportion of girls attained menarche at 16 years (3 percent) and at 10 years of age (1 percent) (**Figure 4.1**). The mean age of menarche of the respondents was 13.3 years, with a negligible difference by place of residence.

**Figure 4. 1: Percentage of adolescent girls attained menarche by age, Maharashtra**



It is a paradox; despite the shame and social taboos attached to menstruation in some cultures, it is also celebrated and has regional and contextual significance. However, among the surveyed adolescent girls, only 2 percent reported having a grand ceremony, and 12 percent had a formal ceremony to initiate menarche with a marginal rural-urban differential. An equal number of the girls (47 percent each) reported their reaction towards first menstruation as normal and frightened, with a negligible difference by place of residence.

**Table 4.1: Perceived knowledge on age at menarche, actual age at menarche, a ceremony organized, and reaction towards attaining menarche by place of residence and climate vulnerability**

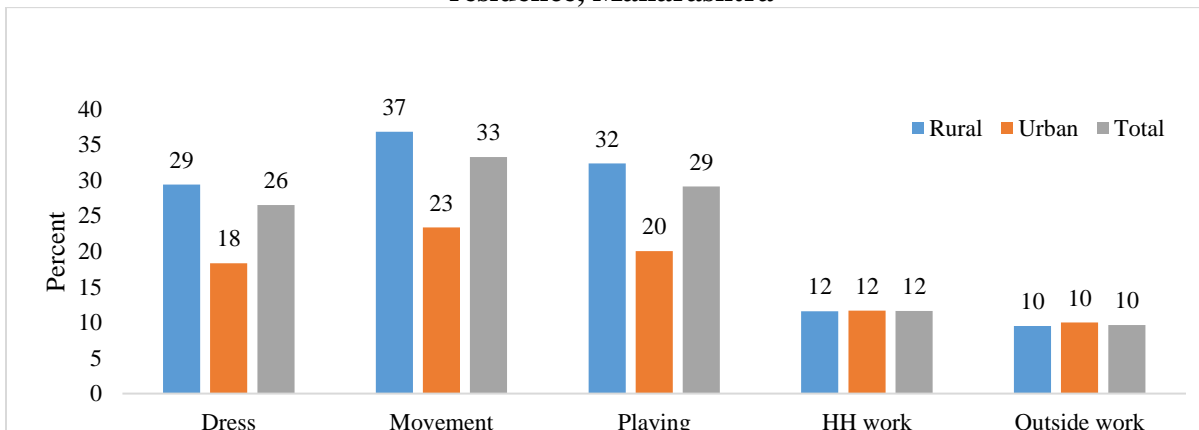
Particulars	Place of residence		Type of climate vulnerability		ALL
	Rural	Urban	Drought	Flood	
<b>Perceived knowledge on age at menarche</b>					
<b>10-12 years</b>	40.7	56.7	54.6	36.0	44.9
<b>13-14 years</b>	54.0	35.0	39.5	57.7	49.0
<b>15-16 years</b>	2.4	8.3	1.4	6.3	3.9

<b>Don't know</b>	3.0	0.0	4.6	0.0	2.2
<b>Age at menarche of adolescent Girls</b>					
<b>11-12 years</b>	19.9	36.7	21.6	26.8	24.3
<b>13-14 years</b>	67.1	50.8	67.9	58.2	62.8
<b>15-16 years</b>	13.1	12.5	10.6	15.1	12.9
<b>Mean</b>	<i>13.4</i>	<i>13.0</i>	<i>13.3</i>	<i>13.3</i>	<i>13.3</i>
<b>The ceremony was organized at menarche.</b>					
<b>Grand Ceremony</b>	3.0	0.8	3.7	1.3	2.4
<b>Just Formal Ceremony</b>	13.4	6.7	16.1	7.5	11.6
<b>No Ceremony</b>	83.7	92.5	80.3	91.2	86.0
<b>The reaction towards first menstruation</b>					
<b>Normal</b>	44.8	53.3	46.8	47.3	47.1
<b>Excited</b>	4.5	3.3	5.5	2.9	4.2
<b>Frightened</b>	48.7	41.7	44.5	49.0	46.8
<b>Other</b>	2.1	1.7	3.2	0.8	2.0
<b>Number of adolescent Girls</b>	<b>337</b>	<b>120</b>	<b>218</b>	<b>239</b>	<b>457</b>

#### 4.2 Perceived changes due to menarche

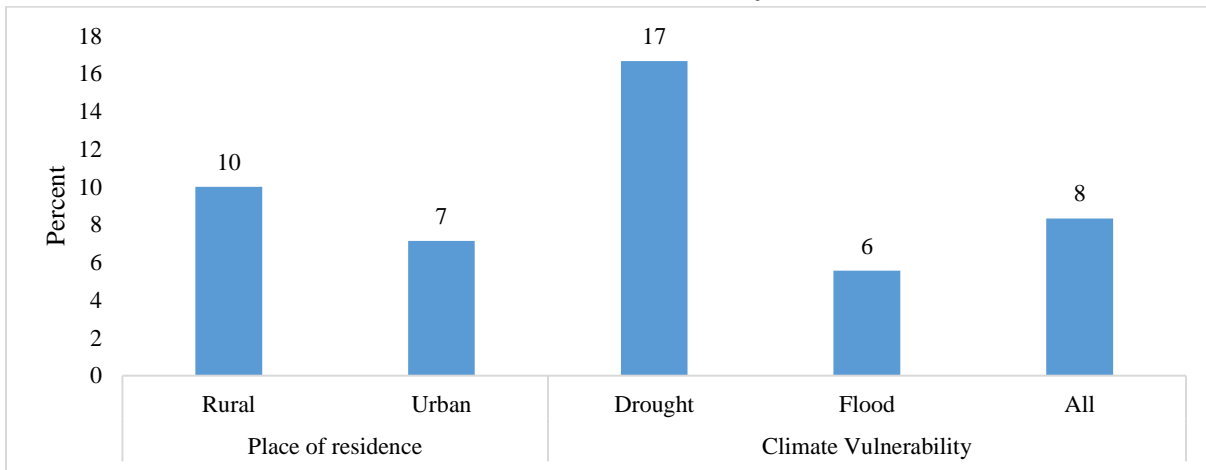
The study further tries to find if any changes have occurred in adolescent girls due to menarche, like changes in dress, movement, playing, household work, and outside work. Table 4.2 shows that 33 percent of the adolescent girls reported change in movement, and is reported higher among the girls in drought-prone areas (45 percent). Girls also reported changes in playing (29 percent) and dress (26 percent), mainly by girls in drought-prone areas in playing (36 percent) and dress (41 percent). About 8 percent of the girls reported dropout in education due to menstruation and are more from drought-prone areas (17 percent).

**Figure 4. 2: Percentage of adolescent girls perceived changes after menarche by place of residence, Maharashtra**



The changes in movement, dress, and playing are reported more by girls in rural areas than in urban areas, whereas the percentage of girls reporting changes in household work (12 percent) and outside work (10 percent) are the same in both rural and urban areas (**Figure 4.2**).

**Figure 4. 3: Percentage of adolescent girls who discontinued school after menarche by place of residence and climate vulnerability, Maharashtra**



**Table 4. 1: Perceived changes occurred in dress, movement, playing, work, and studies due to menarche by place of residence and climate vulnerability**

Particulars	Place of residence		Type of climate vulnerability		ALL
	Rural	Urban	Drought	Flood	
Change in dress	29.4	18.3	41.3	13.0	26.5
Change in movement	36.8	23.3	45.4	22.2	33.3
Change in playing	32.3	20.0	36.2	22.6	29.1
Change in HH work	11.6	11.7	14.7	8.8	11.6
Change in outside work	9.5	10.0	12.8	6.7	9.6
Number of adolescent Girls	<b>337</b>	<b>120</b>	<b>218</b>	<b>239</b>	<b>457</b>
Discontinued studies	10.0	7.1	16.7	5.6	8.3
Number of girls not attending school/college	<b>10</b>	<b>14</b>	<b>6</b>	<b>18</b>	<b>24</b>

### 4.3 Knowledge of Menarche and Menstruation

Knowledge of menstruation and its management is crucial to maintaining a healthy, hygienic life. Equally important is disseminating correct and timely information. Hence, it is pertinent that reliable and useful information is shared with the girls. However, it is observed that due to shame and social taboos associated with menstruation, such topics are rarely discussed. Even if it is discussed, they are limited to peer groups or among the woman and girls from the same household. Here the active participation and communication by community health workers, teachers, doctors,



etc., can play a key role in disseminating knowledge and awareness related to menstrual health hygiene practices. Table 4.3 shows the source of knowledge by place of residence and type of climate vulnerability. Data suggest that 34 percent of adolescent girls did not know about menarche prior to attaining menarche, which was lower in urban areas (23 percent).

About 80 percent of the girls reported that they had received knowledge about menstruation from their mothers, followed by teachers (52 percent) and friends (33 percent). Also, girls reported sisters (26 percent) and doctors/health staff (25 percent) as the source of knowledge before attaining menarche. A considerable rural-urban difference was observed, as 65 percent of girls residing in urban areas reported their mother as a source of knowledge compared to girls from rural areas (86 percent). Similarly, more girls from urban areas reported their source of knowledge on menarche as teachers (74 percent) compared to rural areas (42 percent).

**Table 4. 2: Percentage of girls who received knowledge on menarche before attaining menarche, knowledge on menstrual hygiene before or soon after menarche, and source of knowledge by place of residence and climate vulnerability**

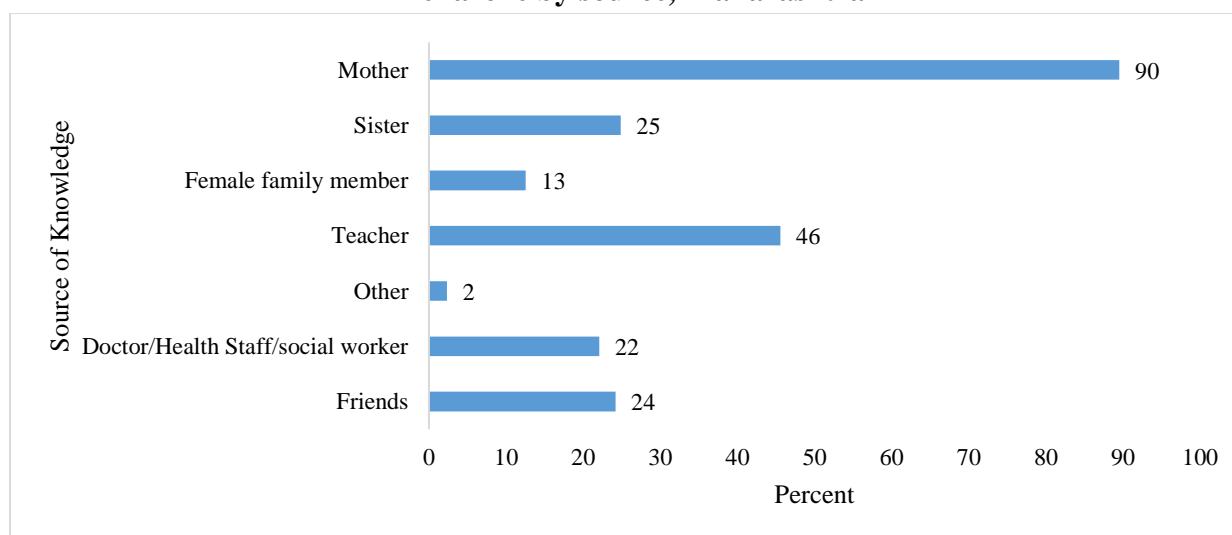
Particulars	Place of residence		Type of climate vulnerability		ALL
	Rural	Urban	Drought	Flood	
<b>Knew about menarche before attaining menarche</b>					
<b>Didn't know</b>	38.3	23.3	35.3	33.5	34.4
<b>Number of adolescent Girls</b>	<b>337</b>	<b>120</b>	<b>218</b>	<b>239</b>	<b>457</b>
<b>Source of knowledge*</b>					
<b>Mother</b>	86.1	65.2	86.5	73.6	79.7
<b>Sister</b>	29.3	19.6	31.2	22.0	26.3
<b>Female family member</b>	13.5	15.2	13.5	14.5	14.0
<b>Teacher</b>	42.3	73.9	33.3	68.6	52.0
<b>Friends</b>	31.7	37.0	27.7	38.4	33.3
<b>Doctor/Health Staff</b>	31.7	8.7	42.6	8.8	24.7
<b>Social Worker</b>	10.6	4.4	14.9	3.1	8.7
<b>Other</b>	0.5	2.2	0.7	1.3	1.0
<b>A number of girls knew about menarche earlier</b>	<b>208</b>	<b>92</b>	<b>141</b>	<b>159</b>	<b>300</b>
<b>Received knowledge of menstrual hygiene before or soon after attaining menarche</b>					
<b>Received knowledge</b>	94.1	94.2	95.4	92.9	94.1
<b>Not received</b>	5.9	5.8	4.6	7.1	5.9
<b>Number of girls</b>	<b>337</b>	<b>120</b>	<b>218</b>	<b>239</b>	<b>457</b>
<b>The person gave knowledge*</b>					
<b>Mother</b>	92.7	80.5	91.8	87.4	89.5
<b>Sister</b>	27.8	16.8	32.7	17.6	24.9

<b>Female family member</b>	14.8	6.2	18.3	7.2	12.6
<b>Teacher</b>	41.6	56.6	39.4	51.4	45.6
<b>Friends</b>	26.8	16.8	27.4	21.2	24.2
<b>Doctor/Health Staff/social worker</b>	28.1	5.3	36.5	8.6	22.1
<b>Other</b>	3.2	0.0	1.9	2.7	2.3
<b>The number of girls who received knowledge</b>	<b>317</b>	<b>113</b>	<b>208</b>	<b>222</b>	<b>430</b>

Note : \*Percentage will not add up to 100 as multiple responses are received.

A majority of the girls (94 percent) of girls received the knowledge of menstrual hygiene before or soon after attaining menarche. Figure 4.4 shows that the mother (90 percent) is the primary source of knowledge provider on menarche soon after menarche, followed by the teacher (46 percent), sister (25 percent), and friend (24 percent). The doctor/health staff/ social workers also contributed to providing knowledge (22 percent) and was prominently observed in rural areas (28 percent) and drought-prone areas (36 percent), highlighting the role of community health workers in rural areas.

**Figure 4. 4: Percentage of adolescent girls received knowledge on menarche soon after menarche by source, Maharashtra**



#### 4.4 Menstruation

The perceived knowledge of adolescent girls related to menstruation is important to understand the awareness and understanding of menstruation. Table 4.4 shows the perceived knowledge of adolescent girls related to the regularity of menstruation, duration, and flow of bleeding, the material used to absorb bleeding by place of residence, and climate vulnerability. About 88 percent of girls perceived their menstruation as regular, and the remaining (12 percent) perceived their menstruation as irregular, with a negligible difference by place of residence and type of climate

vulnerability. Concerning the duration of menstruation, about 65 percent of girls are experiencing 4-5 days of bleeding, followed by more than five days of bleeding (19 percent) and 1-3 days of bleeding (16 percent). Similarly, 83 percent of girls were experiencing a normal flow of bleeding, 14 percent were experiencing a heavy flow of bleeding, and 3 percent were experiencing a scanty flow of bleeding. A rural-urban and climate vulnerability differential in the flow of bleeding is quite visible as about 85 percent of rural girls and 87 percent of girls from drought-prone areas reported normal bleeding, whereas the corresponding figure for urban and flood-prone areas are 77 percent and 79 percent, respectively. About 18 percent of girls from flood-prone areas reported having heavy bleeding, whereas about 11 percent of girls from drought-prone areas reported the same. About 21 percent of urban and 12 percent of rural girls reported heavy bleeding.

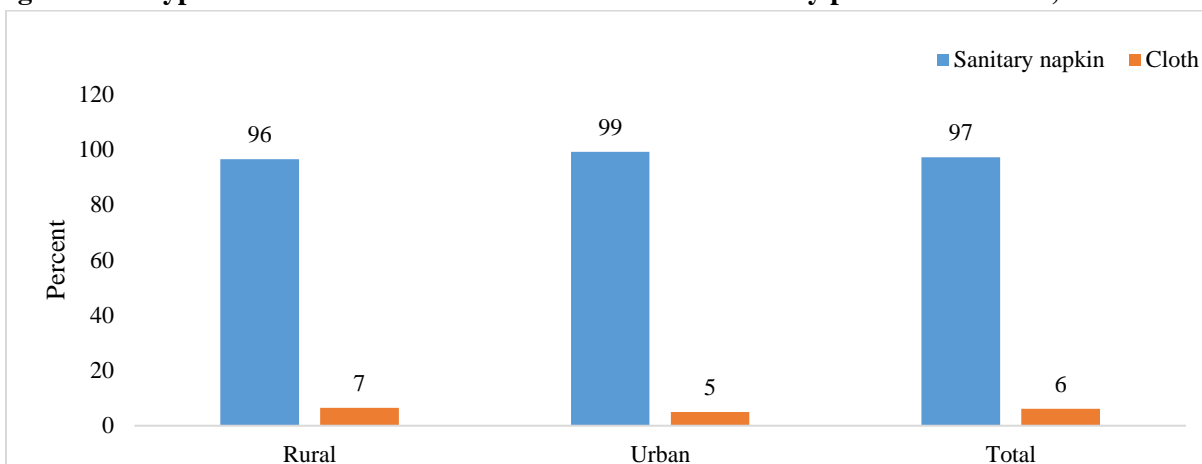
**Table 4. 3: Regularity of menstruation, duration, and flow of bleeding, a material used to absorb bleeding by place of residence, and climate vulnerability**

Particulars	Place of residence		Type of climate vulnerability		ALL
	Rural	Urban	Drought	Flood	
<b>Regularity of menstruation</b>					
<b>Regular</b>	86.9	90.0	90.4	85.4	87.8
<b>Irregular</b>	13.1	10.0	9.6	14.6	12.3
<b>Duration of bleeding</b>					
<b>1-3 days</b>	1.5	10.0	15.1	15.9	15.5
<b>4-5 days</b>	68.0	60.0	67.9	64.0	65.9
<b>More than 5days</b>	14.5	30.0	17.0	20.1	18.6
<b>Perceived flow of bleeding</b>					
<b>Normal</b>	84.9	76.7	86.7	79.1	82.7
<b>Heavy</b>	12.2	20.8	10.6	18.0	14.4
<b>Scanty</b>	3.0	2.5	2.8	2.9	2.8
<b>The material used to absorb menstrual blood*</b>					
<b>Sanitary napkin</b>	96.4	99.2	98.6	95.8	97.2
<b>Cloth</b>	6.5	5.0	5.5	6.7	6.1
<b>Number of adolescent Girls</b>	<b>337</b>	<b>120</b>	<b>218</b>	<b>239</b>	<b>457</b>

Note : \*Percentage will not add up to 100 as multiple responses are received.

The following figure 4.5 shows the type of absorbents used to absorb menstrual blood by place of residence. Overall, 97 percent of girls use sanitary napkins to absorb menstrual blood and around 6 percent use cloth. The usage of sanitary napkins and cloth is similar by place of residence and type of climate vulnerability. None of the surveyed adolescent girls has ever used menstrual cups.

**Figure 4. 5: Type of absorbents used to absorb menstrual blood by place of residence, Maharashtra**



#### 4.5 Summary of Findings

Menarche is an important milestone in a girl's life as this signifies a woman's fertility. According to the study, the majority of the respondents attained menarche between the ages of 13-14 years (63 percent), followed by 12 years (20 percent) and 15 years (10 percent). The mean age for attaining menarche is 13.3 years. In many parts of the country, initiation of the menarche is celebrated and has its own regional and contextual significance. Overall, 2 percent of girls reported having a grand ceremony, 12 percent had a formal ceremony, and 86 percent reported no ceremony for initiating menarche. The different types of changes occur in adolescent girls due to menarche, as the changes occurred in movement (33 percent), followed by playing (29 percent), followed by wearing a dress (26 percent), followed by household work (12 percent), and outside work (10 percent). About 34 percent of adolescent girls did not know about menarche before attaining menarche. About 80 percent of the girls reported that they had received knowledge about menstruation from their mothers, teachers (52 percent), and friends (33 percent) before attaining menarche. Similarly, the mother (90 percent) is the primary source of knowledge provider for girls soon after menarche. About 88 percent of girls have reported that they have regular menstruation, and only 12 percent of girls were experiencing irregular menstruation. Regarding the flow of bleeding, about 65 percent of girls are experiencing 4-5 days of bleeding, 19 percent are experiencing more than 5 days of bleeding, and 16 percent are experiencing 1-3 days of bleeding. Similarly, 83 percent of girls were experiencing a normal flow of bleeding, 14 percent were experiencing a heavy flow of bleeding, and 3 percent were experiencing a scanty flow of bleeding.

Ninety-seven percent of girls use sanitary napkins to absorb menstrual blood, and around 6 percent use cloth. None of the surveyed adolescent girls has ever used menstrual cups.

## CHAPTER 5

### Menstrual Hygiene Management

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#### 5.0 Introduction

Menstrual Hygiene Management (MHM) refers to the management of hygiene associated with the menstrual process. There is marked variation in MHM practices based on geographical location, cultural behaviour, economic condition, educational background, and social and religious beliefs among the Indian Population (Kaur et al., 2018).

The Swachh Bharat Mission (SBM) launch in October 2014 was turning point for India's sanitation and hygiene status, including MHM. Since then, India has improved greatly on MHM with strong guidance from the government and diverse actions by civil society, the private sector, manufacturers, and entrepreneurs. WHO and UNICEF Joint Monitoring Programme has defined menstrual hygiene as using clean menstrual management material to absorb or collect menstrual blood that can be changed in privacy as often as necessary and having facilities to dispose of it (WHO & UNICEF, 2012). Sustainable Development Goals (SDGs) 6.2 acknowledges the right to menstrual health and hygiene, with special attention to those in vulnerable situations by 2030 (UNICEF, 2019). Thus management of menstrual hygiene during adolescence has been acknowledged as a critical concern for overall reproductive health among girls (Garg et al., 2012; El-Gilany et al., 2005). Poor menstrual hygiene makes them susceptible to severe gynecological problems.

Therefore, to understand the consequences and importance of menstrual hygiene practices among adolescent girls, it was important to study the current practices in vulnerable areas so that future interventions can be planned accordingly (Sharma et al., 2017).

In the current study, we asked about various MHM issues, such as absorbents used for menstrual bleeding, access to government-supplied sanitary napkins, purchasing of sanitary napkins, frequency of changing them, and their use disposals.

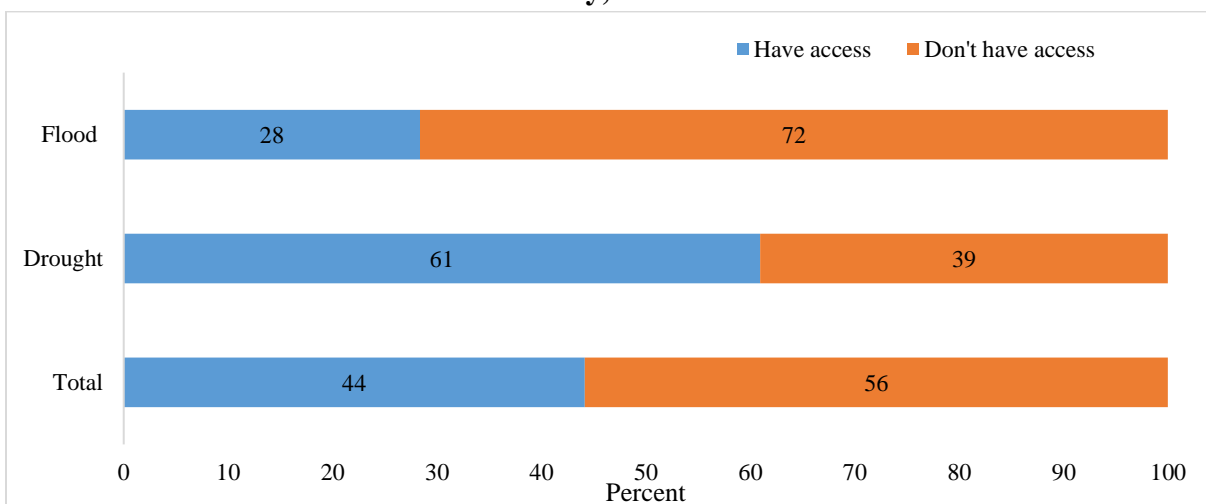
## 5.1 Access to government-supplied sanitary napkins

In 2011, the Ministry of Health and Family Welfare introduced a scheme for promoting menstrual hygiene among adolescent girls aged 10-19 years in rural areas. The scheme was initially implemented in 107 selected districts in 17 States wherein a pack of six sanitary napkins called "Freedays" was provided to rural adolescent girls for Rs. 6.

From 2014 onwards, funds are now being provided to States/U.T.s under the National Health Mission for decentralized procurement of sanitary napkins packs for provision to rural adolescent girls at a subsidized rate of Rs 6 for a pack of 6 napkins. The ASHA will continue to be responsible for the distribution, receiving an incentive of ₹1 per pack sold and a free pack of napkins every month for her personal use. She will convene monthly meetings at the Anganwadi Centres or other such platforms for adolescent girls to focus on the issue of menstrual hygiene and also serve as a platform to discuss other relevant Sexual and Reproductive Health issues (Hallad et al., 2023).

Among 457 interviewed adolescent girls, 97 percent mentioned that they ever used sanitary napkins. These 444 girls were further asked about access to government-supplied sanitary napkins, including the place from where they get these napkins, whether they have to pay anything to get them, the frequency of getting government-supplied sanitary napkins, and whether they are satisfied with the quality and quantity of sanitary napkins supplied by government as well as their perception on various issues related to quality and problems faced in using these napkins were assessed. Responses of the girls to these issues are presented in **Table 5.1**.

**Figure 5. 1: Having access to government-supplied sanitary napkins by type of climate vulnerability, Maharashtra**



### 5.1.1 Place and Provider of Government supplied sanitary napkins

Figure 5.1 illustrates the access to government-supplied sanitary in climate-vulnerable areas. Among 444 girls using sanitary napkins, only 44 percent reported that they had access to government-supplied sanitary napkins, and are reported mainly from girls residing in drought-prone areas (61 percent) than in flood-prone areas (28 percent).

Healthcare workers such as ASHA, ANM, and AWW workers, schools, colleges, and public health facilities mainly distribute sanitary napkins. In rural areas, the ASHA/ANM/AWW are the major providers of sanitary pads (91 percent) for adolescent girls, whereas in urban areas, it is provided through school/college (68 percent). Only 2 percent of the adolescent girls reported receiving government-supplied pads from public health facilities like Primary Health Centre, Sub District Hospitals, District Hospitals, etc. In urban areas, 96 percent of the adolescent girls received government-supplied sanitary pads free of cost, which was only 31 percent in rural areas. About 60 percent of the girls paid for the government-supplied packs, which cost around Rs. 6 per pack.

**Table 5. 1: Percentage of adolescent girls having access to government supplied sanitary napkins and place, cost, frequency of getting them, and girls' opinion on their quality by place of residence and climate vulnerability**

Particulars	Place of residence		Type of climate vulnerability		ALL
	Rural	Urban	Drought	Flood	
Percentage of adol. Girls using sanitary napkins	96.4	99.2	98.6	95.8	97.2
Total number of adol. Girls	337	120	218	239	457
Percentage having access to Govt. supplied sanitary napkins					
Have access	52.6	21.0	60.9	28.4	44.1
Don't have access	47.4	79.0	39.1	71.6	55.9
Number of adol. Girls using sanitary napkins	325	119	215	229	444
Place of getting Govt. supplied sanitary napkins*					
School/College	13.5	68.0	15.3	30.8	20.4
ANM/ASHA/AWW	91.2	28.0	90.1	69.2	83.2
PHC/CHC/SDH/DH	0.6	16.0	0.8	6.2	2.6
Prop. Received free of cost					
Paid	68.4	4.0	59.5	61.5	60.2
Free of cost	31.6	96.0	40.5	38.5	39.8
Frequency of getting Govt. supplied sanitary napkins					
Monthly	91.2	92.0	89.3	95.4	91.3
Quarterly	8.8	8.0	10.7	4.6	8.7
No. of sanitary napkins received at one time					



<b>1</b>	78.4	92.0	77.1	86.2	80.1
<b>2</b>	8.2	8.0	8.4	7.7	8.2
<b>3 - 8</b>	13.5	0.0	14.5	6.2	11.7
<b>Satisfied with Govt. supplied napkins?</b>					
<b>Satisfied</b>	69.6	76.0	74.8	61.5	70.4
<b>Not satisfied</b>	28.7	16.0	23.7	33.9	27.0
<b>Can't say</b>	1.8	8.0	1.5	4.6	2.6
<b>Do you get sufficient supply of napkins</b>					
<b>Sufficient</b>	33.3	64.0	29.0	53.9	37.2
<b>Insufficient</b>	66.7	36.0	71.0	46.2	62.8
<b>Opinion on quality of govt. supplied napkins</b>					
<b>Better Absorption</b>	74.3	76.0	79.4	64.6	74.5
<b>Sense Of Dryness</b>	48.5	52.0	55.0	36.9	49.0
<b>Leakage Prevention</b>	57.9	64.0	61.1	53.9	58.7
<b>Thickness</b>	47.4	60.0	48.9	49.2	49.0
<b>Soft Surface/ Not Causing Skin Irritation</b>	45.6	80.0	54.2	41.5	50.0
<b>Flexibility/ Not Limiting Mobility</b>	43.3	40.0	52.7	23.1	42.9
<b>Having Wings</b>	56.7	88.0	68.7	44.6	60.7
<b>Adhesion To the Underwear</b>	44.4	56.0	51.9	33.9	45.9
<b>Long Time Usability</b>	46.8	64.0	54.2	38.5	49.0
<b>Odour Prevention</b>	43.3	48.0	52.7	26.2	43.9
<b>Being Long</b>	42.7	36.0	54.2	16.9	41.8
<b>Problems faced in Govt. supplied napkins</b>					
<b>Leakage</b>	27.5	36.0	22.1	41.5	28.6
<b>Not To Take Shape</b>	21.6	16.0	16.8	29.2	20.9
<b>Deformation Of the Surface</b>	19.9	12.0	8.4	40.0	18.9
<b>Sense Of Wetness</b>	24.0	36.0	21.4	33.9	25.5
<b>Need Of Frequent Changes</b>	29.2	24.0	21.4	43.1	28.6
<b>Causing Irritation</b>	7.0	32.0	6.9	16.9	10.2
<b>Causing Skin Rash</b>	5.3	36.0	6.1	15.4	9.2
<b>Cause Bacteria/Fungal Infection</b>	4.7	8.0	6.1	3.1	5.1
<b>Stiffness</b>	9.9	4.0	6.9	13.9	9.2
<b>Excess Adhesion to Underwear</b>	5.9	16.0	6.1	9.2	7.1
<b>Insufficient Adhesion to Underwear</b>	12.9	4.0	14.5	6.2	11.7
<b>Number of adol. Girls having access to Govt. supplied napkins</b>	<b>171</b>	<b>25</b>	<b>131</b>	<b>65</b>	<b>196</b>

Note: \*Percentage will not add up to 100 as multiple responses are received

### 5.1.2 Frequency and quantity of getting government supplied napkins

Table 5.1 shows the frequency and quantity of getting government-supplied sanitary napkins. A total of 196 adolescent girls (42 percent) have received government-supplied sanitary napkins. The number of girls who reported receiving government sanitary napkins varies from only 25 adolescent girls in urban areas to 171 girls in rural areas. Thus 87 percent of the surveyed adolescent girls who receive government-supplied napkins are from rural areas. Ninety-one percent of the adolescent girls received government-supplied napkins monthly, with a marginal difference

observed by area-wise. About 80 percent of the respondents reported they receive one pack consisting of 6 - 10 pads. Around 80 percent have reported that they had received one pack of sanitary napkins at a time, 8 percent of girls had received two packs at a time, and 12 percent of girls received 3-8 packs of sanitary napkins at a time. The girls who reported receiving 3 to 8 sanitary napkins are only from rural areas.

**Figure 5. 2: Getting sufficient supply of Govt. supplied sanitary napkins by place of residence and climate vulnerability, Maharashtra**

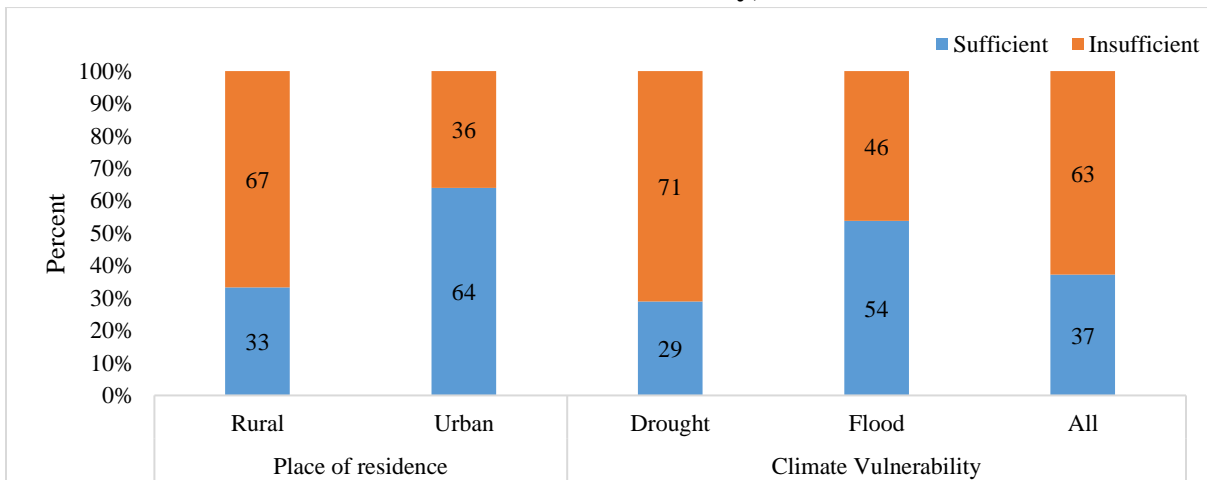


Figure 5.2 illustrates the sufficiency of government-supplied sanitary napkins as reported by adolescent girls classified by place of residence and climate-vulnerable areas. Sixty-three percent of the adolescent girls reported the government-supplied sanitary napkins to be insufficient. It was mainly reported among the adolescent girls residing in rural areas (67 percent) and those residing in drought-prone areas (71 percent). In contrast, 64 percent of the girls residing in urban areas and 54 percent in flood-prone areas reported it as sufficient.

### 5.1.3 Quality of government-supplied napkins

A key aspect the menstrual health management is the quantity of sanitary napkins. Sanitary napkins with a better absorbent and easily disposable are important while considering the quality aspect of menstrual health management. Hence, the opinion of the adolescent girls was sought regarding the quality of the sanitary napkins supplied by the government. All the 196 adolescent girls who use government-supplied sanitary napkins were further probed on all the key quality components, such as better absorption, sense of dryness, leakage problems, etc. (Table 5.1).

Three fourth of the adolescent girls are of the opinion that these napkins have better absorption, followed by 61 percent of the girls who reported the sanitary napkin has wings, and 59 percent of the girls are of the opinion that these napkins provide leakage prevention. Although only 25 girls from urban areas reported using government-supplied napkins, 88 percent reported that the napkins have wings, 80 percent are the opinion that napkin has a soft surface and do not cause skin irritation, 64 percent are the opinion that pads prevents leakage, and last longer, etc.

#### **5.1.4 Problems experienced while using government supplied sanitary napkins**

On the other hand, the girls were asked about the problems they faced using these governments supplied napkins Further, on probing about the main problems with government-supplied napkins, nearly 27 percent of the girls in rural areas believe it needs to be changed frequently due to leakage (27 percent) and wetness (21 percent). Overall the main problem with government-supplied napkins was absorption and leakage issues, whereas, in urban areas, it was leakage, sense of wetness, and skin irritation (36 percent) each). Although fewer respondents reported problems, the main concern regarding the quality of sanitary pads was leakage and wetness, due to which napkins need to be constantly changed. Hence better absorption of sanitary napkins is required. At the same time, adolescent girls should be educated about the health risk and unhygienic practices of using sanitary napkins for prolonged hours.

#### **5.2 Place and Options considered while purchasing sanitary napkins.**

Table 5.2 depicts the place of purchase and options the surveyed adolescent girls considered while purchasing sanitary napkins classified by place of residence and climate vulnerability. All the 444 girls who use sanitary napkins were asked whether they buy sanitary napkins any time, and only 3 percent of the girls mentioned that, as such, they do not buy sanitary napkins as they use only those napkins which are supplied at schools/colleges and otherwise use cloths. Thus, although 42 percent reported receiving government-supplied napkins, some still purchase them or use clothes if there is a shortfall. Shops and Pharmacies are the main places to purchase sanitary napkins, as 57 percent of adolescent girls reported purchasing from these places. In urban areas, 73 percent purchase it from pharmacies, whereas only a little variation is found in rural areas.

Contrary to our expectations, brand consciousness was a major consideration while purchasing sanitary pads (71 percent). A relatively higher percentage of it was reported from girls residing in

rural areas (80 percent) compared to 47 percent in urban areas. In urban areas, performance (56 percent), followed by price (38 percent), is considered while purchasing sanitary pads.

**Table 5. 2: Place of purchasing sanitary napkins and options considered while purchasing them by place of residence and climate vulnerability**

Particulars	Place of residence		Type of climate vulnerability		ALL
	Rural	Urban	Drought	Flood	
<b>Place of purchasing sanitary napkins*</b>					
<b>Do not buy</b>	3.7	2.5	2.3	4.4	3.4
<b>Shops</b>	56.0	28.6	52.1	45.4	48.7
<b>Pharmacy</b>	51.7	73.1	67.9	47.6	57.4
<b>Online</b>	0.3	1.7	0.0	1.3	0.7
<b>Other</b>	8.3	0.8	2.3	10.0	6.3
<b>Number of adol. Girls using sanitary napkins</b>	<b>325</b>	<b>119</b>	<b>215</b>	<b>229</b>	<b>444</b>
<b>Options considered while purchasing sanitary napkins</b>					
<b>Performance Properties</b>	47.0	56.0	53.3	45.7	49.4
<b>Price</b>	56.9	37.9	59.5	44.3	51.8
<b>Brand</b>	80.8	46.6	80.5	63.0	71.6
<b>Having perfume</b>	7.0	6.9	9.1	5.0	7.0
<b>Made Of Natural Raw Materials</b>	2.6	3.5	1.4	4.1	2.8
<b>Biodegradability</b>	0.6	1.7	0.5	1.4	0.9
<b>Other</b>	3.8	5.2	3.8	4.6	4.2
<b>Number of adol. Girls purchasing sanitary napkins</b>	<b>313</b>	<b>116</b>	<b>210</b>	<b>219</b>	<b>429</b>

Note: \*Percentage will not add up to 100 as multiple responses are received

### 5.3 Disposal of sanitary napkins

Disposal of sanitary pads is a major concern considering the rise in the usage of sanitary pads and the lack of guidance and awareness on proper disposal of sanitary napkins. Further, all 444 adolescent girls who mentioned that they use sanitary napkins were asked how they usually dispose of the used napkins, and the findings are presented in **Table 5.3**.

**Table 5. 3: Ways of disposing used sanitary napkins and preparations made before disposing them by place of residence and climate vulnerability**

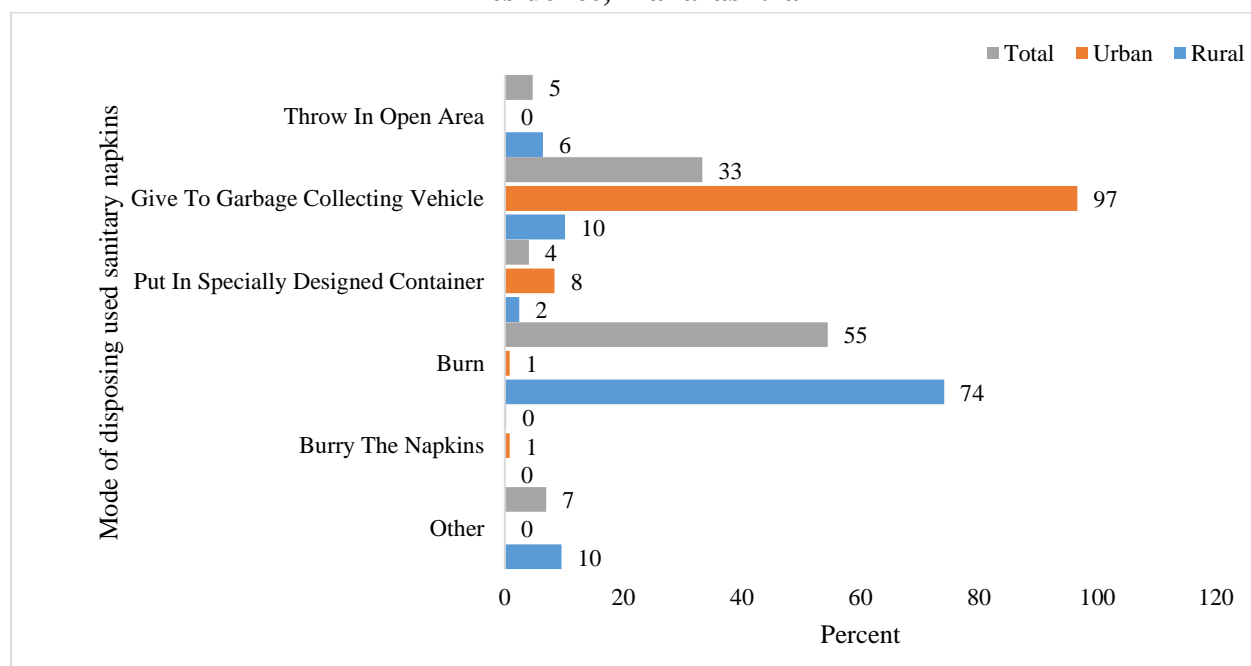
Particulars	Place of residence		Type of climate vulnerability		ALL
	Rural	Urban	Drought	Flood	
<b>Ways of disposing used sanitary napkins*</b>					
<b>Throw In Open Area</b>	6.5	0.0	2.3	7.0	4.7
<b>Give To Garbage Collecting Vehicle</b>	10.2	96.6	1.9	62.9	33.3

<b>Put In Specially Designed Container</b>	2.5	8.4	1.4	6.6	4.1
<b>Burn</b>	74.2	0.8	94.4	17.0	54.5
<b>Burry The Napkins</b>	0.0	0.8	0.0	0.4	0.2
<b>Other</b>	9.5	0.0	0.9	12.7	7.0
<b>Preparation done before disposing sanitary napkins</b>					
<b>Throw as it is</b>	2.8	0.0	3.3	0.9	2.0
<b>Wrap with newspaper</b>	77.9	55.5	76.7	67.3	71.9
<b>Wrap sanitary napkin cover</b>	1.9	23.5	0.9	14.0	7.7
<b>Put it in biodegradable bag</b>	0.0	1.7	0.0	0.9	0.5
<b>Put it in plastic bag</b>	13.5	19.3	13.0	17.0	15.1
<b>Other</b>	4.0	0.0	6.1	0.0	2.9
<b>Number of adol. Girls using sanitary napkins</b>	<b>325</b>	<b>119</b>	<b>215</b>	<b>229</b>	<b>444</b>

Note: \*Percentage will not add up to 100 as multiple responses are received

Findings suggest considerable differences in rural and urban areas while disposing of sanitary pads, with 74 percent of the girls from rural areas and 94 percent from drought-prone areas burning the pads. In urban areas, 97 percent of the girls give it to the garbage collecting vehicle for disposal.

**Figure 5. 3: Ways of disposing used sanitary napkins by adolescent girls by place of residence, Maharashtra**



### 5.3.1 Preparation made before disposal of sanitary napkins

Further, 78 percent of the girls residing in rural areas wrap their sanitary napkins in newspapers, whereas in urban areas, 55 percent wrap in newspapers and 24 percent in sanitary napkin covers

before disposal. The number of girls using biodegradable bags to dispose of sanitary napkins was negligible (Figure 5.3). Burning is the main method to dispose of sanitary napkins in rural and drought-prone areas, which is unfavorable for the environment. Hence, not only educating girls on the proper disposal method but also there should be some provision at the village level to dispose of sanitary napkins scientifically.

#### 5.4 Frequency of changing sanitary napkins

All 457 adolescent girls (who use sanitary napkins and cloth to absorb menstrual bleeding) were asked how often they usually change their sanitary napkins or cloth daily. This question was asked separately for heavy and scanty bleeding days and the criteria they considered to change the absorbent.

**Table 5. 4: Frequency of changing the sanitary napkins/cloths and criteria considered to change them by place of residence and climate vulnerability**

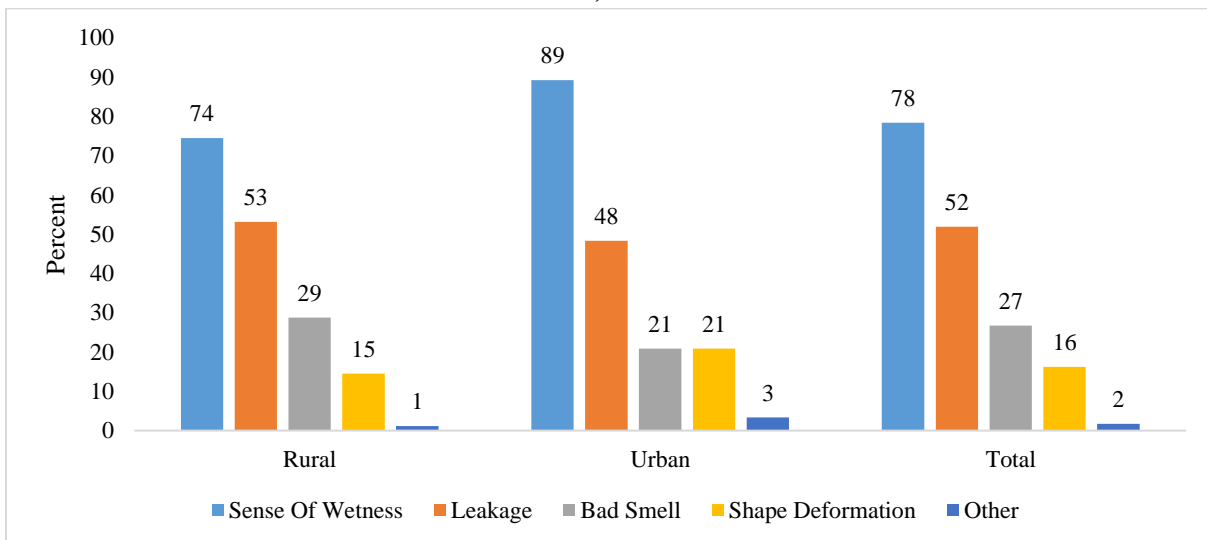
Particulars	Place of residence		Type of climate vulnerability		ALL
	Rural	Urban	Drought	Flood	
<b>Number of times changed during heavy bleeding</b>					
<b>Once</b>	3.6	3.3	0.9	5.9	3.5
<b>Twice</b>	43.3	38.3	28.0	54.8	42.0
<b>Thrice</b>	37.4	43.3	48.6	30.1	38.9
<b>More than 3 times</b>	15.7	15.0	22.5	9.2	15.5
<b>Mean</b>	2.7	2.7	3.0	2.4	2.7
<b>Number of times changed during Scanty Bleeding</b>					
<b>Once</b>	22.8	35.0	29.8	22.6	26.0
<b>Twice</b>	64.4	55.8	60.6	63.6	62.1
<b>Thrice</b>	8.9	5.8	6.0	10.0	8.1
<b>More than 3 times</b>	3.9	3.3	3.7	3.8	3.7
<b>Mean</b>	1.9	1.8	1.8	1.9	1.9
<b>Criteria considered to change sanitary napkin/cloth*</b>					
<b>Sense Of Wetness</b>	74.5	89.2	76.2	80.3	78.3
<b>Leakage</b>	53.1	48.3	51.8	51.9	51.9
<b>Bad Smell</b>	28.8	20.8	33.0	20.9	26.7
<b>Shape Deformation</b>	14.5	20.8	10.1	21.8	16.2
<b>Other</b>	1.2	3.3	1.4	2.1	1.8
<b>Number of adol. Girls</b>	<b>337</b>	<b>120</b>	<b>218</b>	<b>239</b>	<b>457</b>

Note: \*Percentage will not add up to 100 as multiple responses are received

Table 5.4 shows the frequency of changing sanitary napkins/cloths and the criteria to change them by place of residence and climate vulnerability. Ideally, sanitary napkins should not be used for more than 6 to 7 hours, regardless of blood flow. However, data suggests that during the heavy flow of blood, only 15 percent of the girls changed sanitary pads more than three times in a day, 42 percent of the girls changed twice in a day, and 39 percent of girls thrice in a day, and 4 percent only once in a day. In rural areas, 43 percent of the girls change sanitary pads twice daily during the heavy flow of blood, whereas the same percent in urban areas change the sanitary pads thrice a day. Forty-nine percent of the girls residing in drought-prone areas change their sanitary napkins thrice a day during heavy blood flow. On average, girls change 2.7 times during heavy bleeding days, which indicates unhygienic practices. Hence, it is important to educate the girls on the health risk of using sanitary napkins for longer.

During scanty bleeding, 62 percent of girls change their sanitary napkins twice a day, and 26 percent of girls change their napkins once a day, and it was more or less the same in rural areas and drought and flood-prone areas. Among the surveyed girls living in urban areas, 35 percent change only once a day and 56 percent twice a day than in rural areas (23 percent) by rural-urban differentials. Sense of wetness (78 percent), leakage (52 percent), bad smell (26 percent, and shape deformation (16 percent) are the criteria considered to change napkins.

**Figure 5. 4: Criteria considered by adolescent girls to change sanitary napkin/cloth by place of residence, Maharashtra**



## 5.5 Cleaning and drying of cloth used to absorb menstrual bleeding.

Out of 457 girls, only 28 girls are using a cloth to absorb menstrual bleeding, which accounts for only 6 percent.

**Table 5. 5: Procedure followed to clean and dry the cloth used to absorb menstrual bleeding by place of residence and climate vulnerability**

Particulars	Place of residence		Type of climate vulnerability		ALL
	Rural	Urban	Drought	Flood	
<b>Percentage of girls using cloth</b>					
<b>Use Cloth</b>	6.5	5.0	5.5	6.7	6.1
<b>Don't Use cloth</b>	93.5	95.0	94.5	93.3	93.9
<b>Total number of adol. Girls</b>	<b>337</b>	<b>120</b>	<b>218</b>	<b>239</b>	<b>457</b>
<b>Procedure to clean the cloth used to absorb bleeding</b>					
<b>Hot Water &amp; Sun Shine</b>	40.9	16.7	33.3	37.5	35.7
<b>Hot Water &amp; Shade Place</b>	4.6	0.0	8.3	0.0	3.6
<b>Ordinary Water &amp; Sun Shine</b>	31.8	16.7	33.3	25.0	28.6
<b>Ordinary Water &amp; Shade Place</b>	18.2	16.7	16.7	18.8	17.9
<b>Don't Use More Than Once</b>	4.6	33.3	8.3	12.5	10.7
<b>Number of adol. Girls using cloth</b>	<b>22</b>	<b>6</b>	<b>12</b>	<b>16</b>	<b>28</b>

Among the 28 girls using cloth, 36 percent said they clean with hot water and dry under the Sun, and 29 percent said they clean with ordinary water but dry under the sun. Only 4 percent of the girls dry under shade though washed in hot water, and 18 percent dry under shade after washing in ordinary water.

## 5.6 Summary of Findings

Sanitary napkin is the versatile choice of menstrual absorption used by 97 percent of the surveyed adolescent girls during menstruation. A total of 196 girls have received government-supplied sanitary napkins, out of which only 25 are from urban areas. In rural areas, ASHA/ANM/AWW are the major providers of sanitary napkins (91 percent), whereas, in urban areas, it is provided to adolescent girls through school/college (68 percent). Even though 80 percent have reported receiving one pack of sanitary napkins consisting of 6 pads, it is insufficient, as reported by 67 percent of girls residing in rural areas. Whereas 64 percent of the girls residing in urban areas and 54 percent in flood-prone areas reported it as sufficient. Three fourth of the adolescent girls are of the opinion that these napkins have better absorption. Only 3 percent of the girls use clothes for



menstrual absorption during menstruation. Among the surveyed adolescent girls (57 percent), including some girls who have received government-supplied sanitary napkins, mainly purchases from Shops and pharmacies. Contrary to our expectations, brand consciousness was a major consideration while purchasing sanitary napkins (71 percent). A relatively higher percentage was reported from girls residing in rural areas (80 percent) compared to 47 percent in urban areas. In urban areas, performance (56 percent), followed by price (38 percent), is mainly considered while purchasing sanitary napkins. Disposal of sanitary napkins is of major concern, especially if it is not reusable and if the material is synthetic. We found striking rural-urban differences in the disposal of sanitary napkins, with 74 percent of the girls from rural areas and 94 percent from drought-prone areas burning the napkins, whereas 97 percent of girls in urban areas give to the garbage collecting vehicles for disposal. The number of girls in the survey who use biodegradable bags for disposal was negligible. Disposal of sanitary pads, especially in rural areas and drought-prone areas, is of major concern as they burn sanitary napkins after using them.

Menstrual hygiene is a concern as, on average, girls change 2.7 times during heavy bleeding days. Only 28 girls are using a cloth to absorb menstrual bleeding. Among the 28 girls using cloth, 36 percent said they clean with hot water and dry under the Sun, and 29 percent said they clean with ordinary water but dry under the Sun.

## CHAPTER-6

# Menstrual problems, Reproductive Tract Infections (RTI), and Treatment seeking behaviour

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### 6.0 Introduction

Menstrual-related health issues are rarely discussed and accepted as normal in many cultures and societies. Girls are made to believe it is natural and eventually accept it. Menstrual-related problems might not be life-threatening but can significantly impact girls' quality of life. Hence it is pertinent to understand the impact of menstruation on the quality of life to provide quality healthcare services (Azurah et al., 2013). The situation is further worsened by the widespread ignorance around puberty and menstruation, the lack of access to menstrual hygiene products, and the absence of adequate water, sanitation, and hygiene facilities, leading to poor menstrual hygiene practices (Sharma et al., 2017; Yaliwal et al., 2020).

Many studies have cited that poor menstrual hygiene practices may cause reproductive and urinary tract infections, rashes, itching, foul odour, and other reproductive health morbidities. Lack of knowledge or fear and embarrassment of gynecological examination may hinder adolescents from seeking treatment related to menstruation. As time progresses, it amplifies the health problem. Hence, proper knowledge and treatment-seeking behaviour are to be inculcated in childhood (Chang et al., 2009). RTIs are generally considered a 'silent' epidemic among the leading public health problems. As observed in DHS surveys, as high as 15 percent of young women suffer from self-reported symptoms of reproductive morbidity but do not seek treatment due to existing taboos and inhibitions regarding sexual and reproductive health in India. An attempt has been made in this section to assess the existence of menstrual problems and self-reported RTI symptoms among adolescent girls and treatment-seeking behaviour for these problems (Hallad et al., 2023).

### 6.1 Menstrual Problems and Treatment Seeking Behaviour

All the adolescent girls were asked about menstrual related problems like pain, discomfort, and feeling distressed, along with the frequency of experiencing these problems, the persons with whom they share their menstrual problems, and whether they sought any treatment for these

problems along with the place of seeking treatment. The girls' responses are presented in **Table 6.1** by place of residence and type of climate vulnerability.

**Table 6. 1: Type and frequency of menstrual problems experienced by the adolescent girls, person with whom shared menstrual problems and seeking treatment for it by place of residence and climate vulnerability**

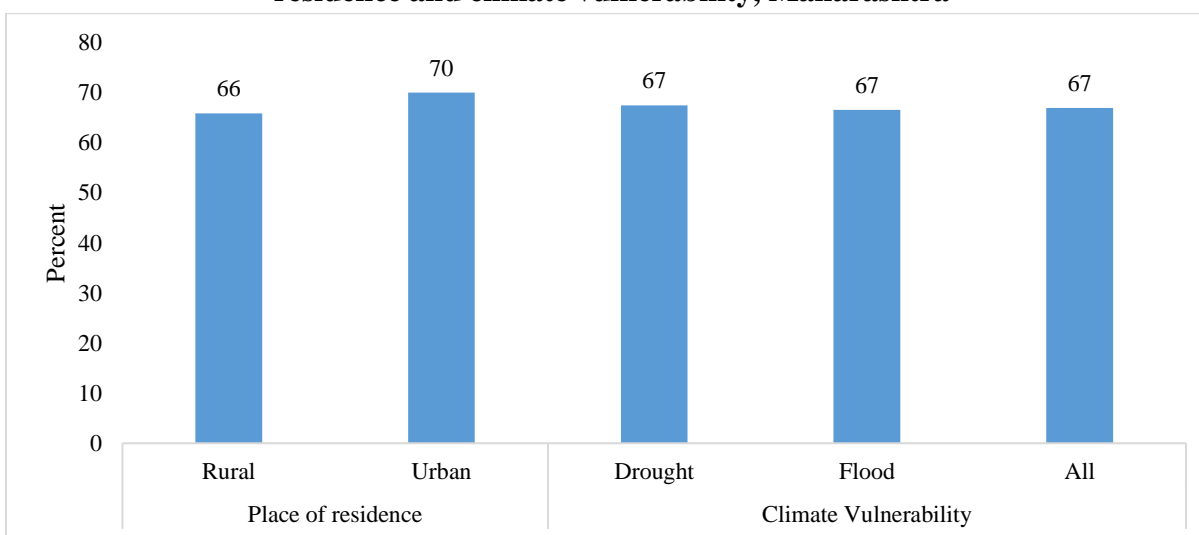
Particulars	Place of residence		Type of climate vulnerability		ALL
	Rural	Urban	Drought	Flood	
<b>Percentage experienced menstrual problems</b>					
<b>Experience any pain /discomfort during periods</b>	65.9	70.0	67.4	66.5	67.0
<b>Headache</b>	32.4	21.4	44.9	15.1	29.4
<b>Limbs Pain</b>	32.4	48.8	44.9	29.6	36.9
<b>Severe Abdominal/Back Pain</b>	77.5	84.5	74.2	84.3	79.4
<b>Heavy Bleeding</b>	14.4	20.2	18.4	13.8	16.0
<b>Severe Distress/Irritation</b>	6.8	45.2	8.8	25.2	17.3
<b>Other</b>	3.6	3.6	0.7	6.3	3.6
<b>Number of adol. girls</b>	<b>222</b>	<b>84</b>	<b>147</b>	<b>159</b>	<b>306</b>
<b>Frequency of experiencing these problems</b>					
<b>Every month</b>	61.7	66.7	72.1	54.7	63.1
<b>Some time</b>	38.3	33.3	27.9	45.3	36.9
<b>Person with whom shared menstrual problems*</b>					
<b>Mother</b>	89.6	81.0	87.1	87.4	87.3
<b>Father</b>	2.7	4.8	4.1	2.5	3.3
<b>Sister</b>	28.4	7.1	35.4	10.7	22.6
<b>Other Female Family Member</b>	9.9	3.6	13.6	3.1	8.2
<b>Teacher</b>	11.3	0.0	12.9	3.8	8.2
<b>Friends</b>	32.0	11.9	30.6	22.6	26.5
<b>ASHA/ANM/AWW</b>	42.3	0.0	55.1	8.2	30.7
<b>Doctor</b>	20.7	3.6	26.5	6.3	16.0
<b>Don't Discuss</b>	2.7	14.3	2.7	8.8	5.9
<b>Percentage sought any treatment for menstrual problems</b>					
<b>Sought treatment</b>	44.6	25.0	49.0	30.2	39.2
<b>Not sought treatment</b>	55.4	75.0	51.0	69.8	60.8
<b>Number of adol. Girls experienced menstrual problems</b>	<b>222</b>	<b>84</b>	<b>147</b>	<b>159</b>	<b>306</b>
<b>Place/type from where sought treatment*</b>					
<b>Home Remedy</b>	28.3	42.9	27.8	35.4	30.8
<b>Pharmacy</b>	32.3	33.3	29.2	37.5	32.5
<b>ANM</b>	25.3	0.0	34.7	0.0	20.8
<b>ASHA</b>	40.4	0.0	54.2	2.1	33.3
<b>PHC</b>	4.0	9.5	5.6	4.2	5.0
<b>CHC</b>	2.0	4.8	2.8	2.1	2.5
<b>Private clinic/Doctor</b>	34.3	52.4	30.6	47.9	37.5

<b>Number of adol. Girls sought treatment for menstrual problems</b>	<b>99</b>	<b>21</b>	<b>72</b>	<b>48</b>	<b>120</b>
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Note: \*Percentage will not add up to 100 as multiple responses are received

Out of 457 adolescent girls covered in Maharashtra, 67 percent of girls mentioned that they experienced some pain or discomfort during their period. **(Figure 6.1)** Among these girls, the percentage of girls who have experienced these problems is comparatively high in urban areas (70 percent) than in rural areas (66 percent), whereas, by climate vulnerability, an equal percentage of girls mentioned experiencing these problems (67 percent).

**Figure 6. 1: Percentage of adolescent girls experienced menstrual problems by place of residence and climate vulnerability, Maharashtra**



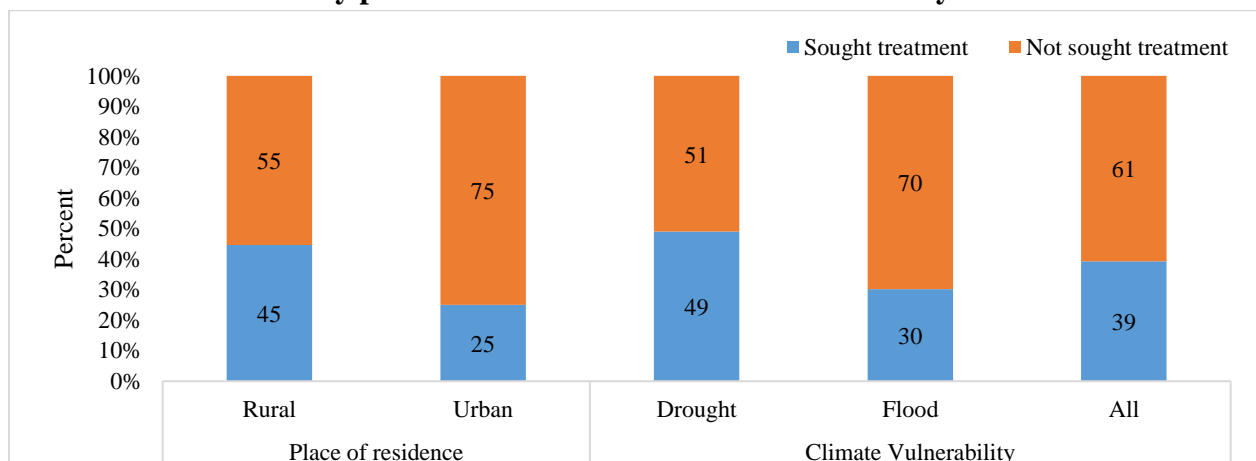
Severe abdominal or back pain is the major discomfort, as reported by 79 percent of the adolescent girls, followed by limb pain (37 percent). Comparatively, a higher percentage of the adolescent girls from urban (85 percent) and flood-prone areas (84 percent) have reported severe abdominal or back pain as the major problem than the adolescent girls from rural (78 percent) and drought-prone areas (74 percent), respectively. In drought prone areas both headache and limb pain was experience by 45 percent each of the women. Nearly 49 percent of the adolescent girls residing in urban areas also experience headache.

Among the 306 girls who experienced menstrual problems, 63 percent of girls experienced these problems every month, and the remaining 37 percent experience these problems sometimes. Experiencing these problems every month is higher in urban (67 percent) and drought-prone (72 percent) areas than in rural (62 percent) and flood-prone (55 percent) areas.

Among these 306 girls who experienced a menstrual problem, 87 percent of them share these problems with their mothers, followed by ASHA/ANM/AWW workers (31 percent), friends (27 percent), sisters (23 percent), and doctors (16 percent). In contrast, about 6 percent of the girls do not share these problems with anyone. In rural areas, the role of mothers (90 percent) and sisters (28 percent) in sharing the problems is higher than urban mothers (81 percent) and sisters (7 percent). Similarly, the percentage of girls sharing these problems with doctors is higher in rural areas (21 percent) compared to urban areas (4 percent). Further, regarding climate vulnerability, not much difference is observed in sharing the problems with mothers, and other than mothers, the percentage of sharing menstrual problems with sisters, friends, and doctors is higher in drought-prone areas than in flood-prone areas.

Regarding treatment seeking for menstrual problems, around 61 percent of the girls mentioned that they had not sought any treatment for their menstrual problems, and the remaining 39 percent of girls expressed that they had sought some treatment for their menstrual problems (**Figure 6.2**). The tendency to seek treatment for menstrual problems is comparatively higher in drought-prone areas than in flood-affected areas (49 percent vs. 30 percent) and more in rural areas than in urban areas (45 percent vs. 25 percent).

**Figure 6. 2: Treatment-seeking behaviour for menstrual problems among adolescent girls by place of residence and climate vulnerability**



Regarding the place and type of treatment, adolescent girls have mainly sought treatment from ASHAs in rural areas (42 percent) and in drought-prone areas (54 percent), whereas adolescent girls in urban areas (52 percent) and in flood-prone areas (48 percent) sought treatment from Doctors/private clinic.

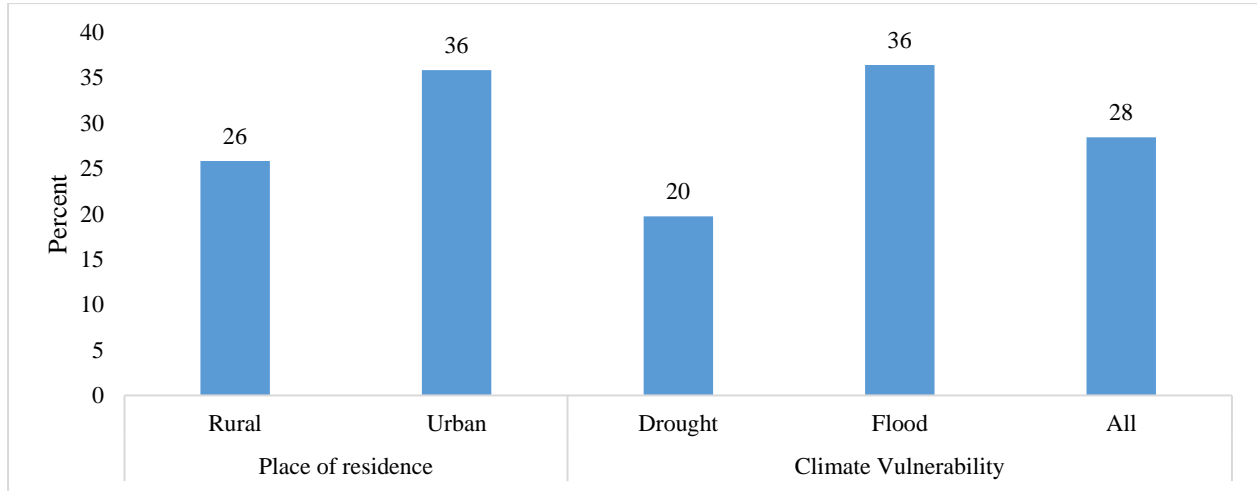
## 6.2 Reproductive Tract Infections and Treatment Seeking Behaviour

All the girls were asked whether they had experienced any symptoms related to Reproductive Tract Infections (RTI) during the last one year. This question was asked by referring the symptoms like any pain or burning sensation while urinating, frequent or difficulty in urination, having rashes or ulcers on genitals, itching or irritation in the vaginal area with discharge, bad odour along with discharge, severe abdominal pain with discharge not during menstruation, fever along with discharge. If the girl has experienced any of these 6 symptoms, it was further asked whether she sought any treatment for them and where she sought it. The girls' responses are presented in **Table 6.2** by place of residence and type of climate vulnerability.

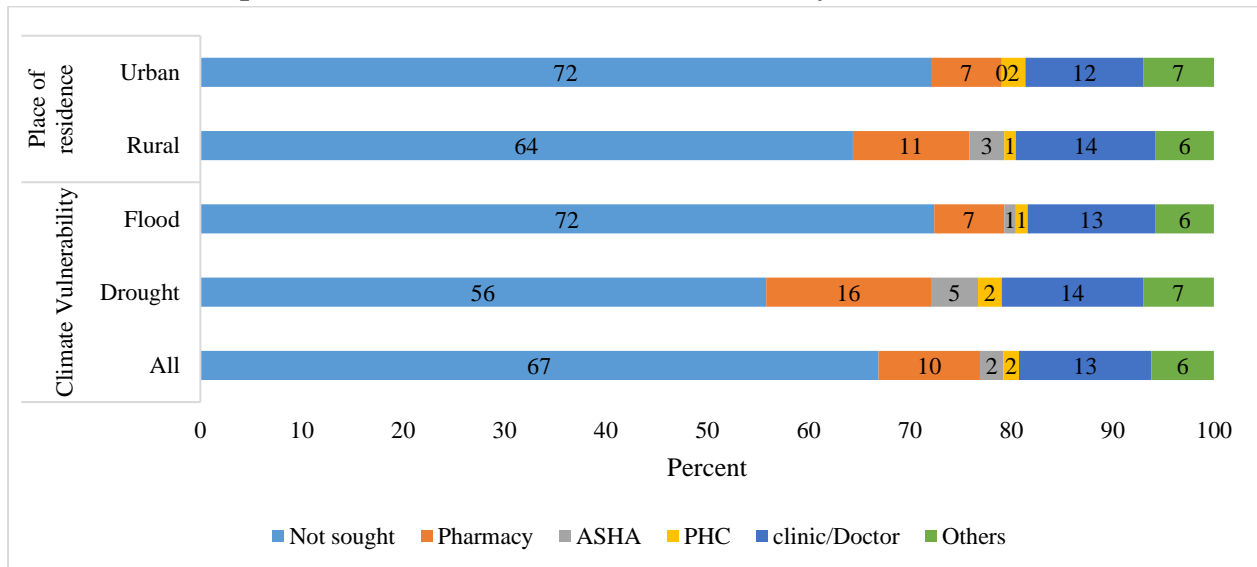
**Table 6.2: Percentage of adolescent girls who experienced symptoms related to Reproductive Tract Infections during the last one year and treatment-seeking behaviour by place of residence and climate vulnerability**

Particulars	Place of residence		Type of climate vulnerability		ALL
	Rural	Urban	Drought	Flood	
<b>Experience of symptoms related to RTI during the last one year</b>					
<b>Not experienced any symptom</b>	74.2	64.2	80.3	63.6	71.6
<b>Experienced any symptom</b>	25.8	35.8	19.7	36.4	28.5
<b>Pain/burning while urinating or frequent/difficult urination</b>	7.7	14.2	5.1	13.4	9.4
<b>Rashes /ulcers on genitals</b>	8.9	13.3	6.9	13.0	10.1
<b>Itching/irritation in the vaginal area with discharge</b>	7.7	20.8	6.0	15.9	11.2
<b>Bad odour along with discharge</b>	3.3	3.3	2.8	3.8	3.3
<b>Severe abdominal pain with discharge not during menstruation</b>	16.9	15.0	11.5	20.9	16.4
<b>Fever along with discharge</b>	1.8	0.0	1.4	1.3	1.3
<b>Number of adol. Girls</b>	<b>337</b>	<b>120</b>	<b>218</b>	<b>239</b>	<b>457</b>
<b>Prop. Sought treatment and place of seeking treatment</b>					
<b>Not sought</b>	64.4	72.1	55.8	72.4	66.9
<b>Pharmacy</b>	11.5	7.0	16.3	6.9	10.0
<b>ASHA</b>	3.5	0.0	4.7	1.2	2.3
<b>PHC</b>	1.2	2.3	2.3	1.2	1.5
<b>Private clinic/Doctor</b>	13.8	11.6	14.0	12.6	13.1
<b>Number of adol. Girls experienced RTI symptoms</b>	<b>87</b>	<b>43</b>	<b>43</b>	<b>87</b>	<b>130</b>

**Figure 6. 3: Percentage of adolescent girls experienced Reproductive Tract Infection symptoms by place of residence and climate vulnerability, Karnataka**



**Figure 6. 4: Treatment seeking behaviour for RTI symptoms among adolescent girls by place of residence and climate vulnerability, Maharashtra**



Among all 457 girls, 72 percent have mentioned that they have not experienced any of the symptoms mentioned above during the last one year. Those who have experienced one of these symptoms have been observed more in urban areas than in rural areas (36 percent vs. 26 percent) and more in flood-prone areas than in drought-prone areas (36 percent vs. 20 percent). Approximately 16 percent of girls have experienced severe abdominal pain with discharge, not during menstruation, and it is higher in rural areas (17 percent) and flood-prone areas (21 percent) than its counterparts. Further, about 11 percent of girls have mentioned that they have experienced

itching in the vaginal area with discharge, which is comparatively higher in 21 percent of urban girls and 16 percent of girls in flood-prone areas. About 10 percent of girls mentioned that they had experienced rashes/ulcers on their genitals, and around 9 percent of girls mentioned that pain/burning sensation while urinating. In both cases, these symptoms have been higher in girls living in urban and drought-prone areas.

Of these 130 girls who have experienced these problems, 67 percent have not sought treatment for these problems, which is comparatively higher in urban and flood-prone (72 percent each) areas than in rural areas (64 percent) and drought-prone areas (56 percent). Consequently, the girls seeking treatment from private clinics or doctors are comparatively more, as 13 percent of the girls had gone to a private doctor; 10 percent had taken some medicine from a pharmacy, and 4 percent had approached ASHA workers and PHCs altogether who experienced these problems. The percentage of girls seeking treatment from a private doctor for these symptoms is comparatively higher in rural areas than in urban areas (14 percent vs. 12 percent) and higher in drought-affected areas than in flood-affected areas (14 percent vs. 13 percent). This is a similar trend observed in the case of girls who have taken some medicine from the pharmacy. On the other hand, approaching PHC for these symptoms is comparatively high in urban and drought-affected areas.

### **6.3 Summary of Findings**

Almost 67 percent of girls have experienced pain or discomfort during menstrual periods, mainly severe abdominal or back pain. Of these, 63 percent of girls experienced it almost every month. Most of the girls share their discomfort with their mothers. As such, girls do not seek treatment for their discomfort unless it is too severe. Usually, girls approach private clinics, ASHA workers, pharmacies, and home remedies during such situations.

Around one-third of the adolescent girls reported symptoms of RTI, of which two-thirds had not sought any treatment. Those who sought treatment usually approach private clinics, doctors, and pharmacies.



## CHAPTER 7

### Cultural Practices around Menstruation

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#### 7.0 Introduction

Adolescent women are often inexperienced in MHM. They lack adequate and correct knowledge about their bodies, especially the reproductive system and its working, given the social prohibitions on discussing these issues (Singh et al., 2022; Kyilleh et al., 2018). India hosts about one-fifth of the world's population of adolescent women. Unfortunately, most of them, especially those living in rural areas, typically face many restrictions that limit their agency and autonomy (Rani et al., 2014). During menstruation, these restrictions become much more severe, preventing them from participating in many aspects of social life, worshipping, bathing, cooking, and sexual activity, which impact the girls and women with their emotional state, mentality, lifestyle, and, more importantly, their health (Hallad et al., 2023).

This chapter covers certain practices that adolescent girls follow during their menstruation time.

#### 7.1 Cultural Practices around Menstruation

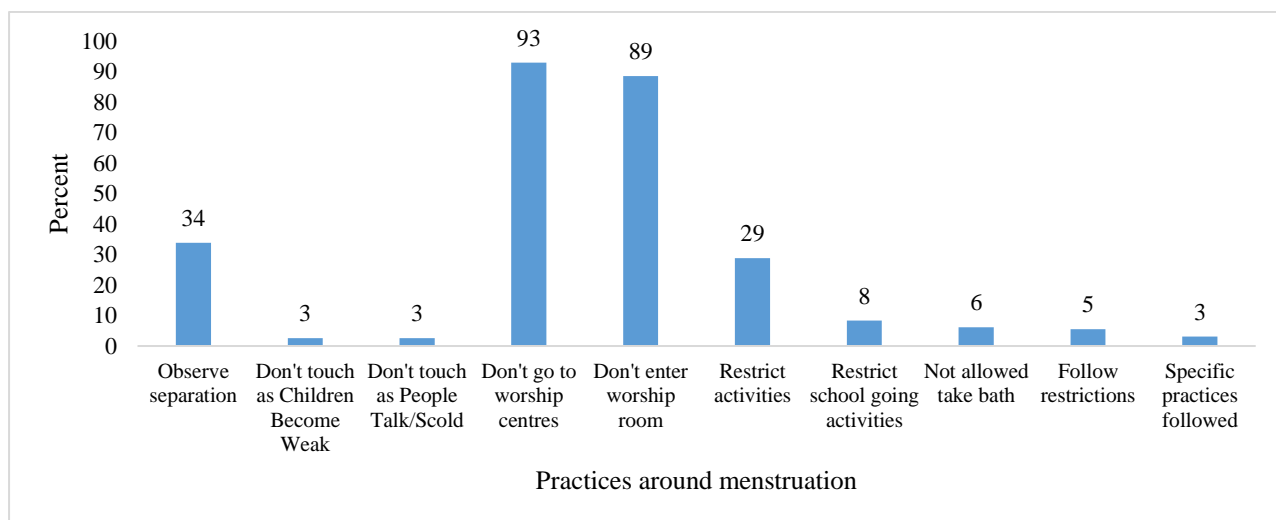
In the current study, adolescent girls were asked about a few common practices related to menstruation, such as observing separation, not touching children, not going to worship centers/places, restricting activities, going to school, bathing, and dietary restrictions during menstruation. The girls' responses are presented in **Table 7.1** by place of residence and type of climate vulnerability.

**Table 7.1: Practices around menstruation like observing separation, not touching children, going to worship centers, restricting activities, bathing, and dietary restrictions followed by adolescent girls by place of residence and climate vulnerability**

Particulars	Place of residence		Type of climate vulnerability		ALL
	Rural	Urban	Drought	Flood	
<b>Observing separation during menstruation</b>					
<b>Observe separation</b>	35.3	30.0	45.0	23.9	33.9
<b>Not observe separation</b>	64.7	70.0	55.1	76.2	66.1
<b>Observing Not touching small children during menstruation and the reason</b>					
<b>Don't touch as Children Become Weak</b>	2.1	4.2	2.8	2.5	2.6
<b>Don't touch as People Talk/Scold</b>	3.0	1.7	3.2	2.1	2.6

<b>Not refrain/Touch small children</b>	95.0	94.2	94.0	95.4	94.8
<b>Observing NOT going to worship centers during menstruation</b>					
<b>Don't go to worship centers</b>	91.7	96.7	90.8	95.0	93.0
<b>Go to Worship Centre</b>	8.3	3.3	9.2	5.0	7.0
<b>Observing NOT entering into the worship room during menstruation</b>					
<b>Don't enter the worship room</b>	86.1	95.8	82.1	94.6	88.6
<b>Go to Worship Room/Place</b>	14.0	4.2	17.9	5.4	11.4
<b>Restricting activities during menstruation</b>					
<b>Restrict activities</b>	30.0	25.8	36.7	21.8	28.9
<b>Don't Restrict activities</b>	70.0	74.2	63.3	78.2	71.1
<b>Restricting school-going activities during menstruation</b>					
<b>Restrict school-going activities</b>	8.9	6.7	9.6	7.1	8.3
<b>Don't Restrict</b>	88.1	81.7	87.6	85.4	86.4
<b>Not applicable/Not studying currently</b>	3.0	11.7	2.8	7.5	5.3
<b>Allowed to take a bath during menstrual period</b>					
<b>Allowed to take a bath</b>	98.2	81.7	99.5	88.7	93.9
<b>Not allowed to take a bath</b>	1.8	18.3	0.5	11.3	6.1
<b>Follow dietary restrictions during menstruation</b>					
<b>Follow restrictions</b>	3.9	10.0	5.1	5.9	5.5
<b>Don't follow restrictions</b>	96.1	90.0	95.0	94.1	94.5
<b>Specific practices followed relating to menstruation</b>					
<b>Yes</b>	0.9	9.2	1.4	4.6	3.1
<b>No</b>	99.1	90.8	98.6	95.4	96.9
<b>Total number of adolescent girls</b>	<b>337</b>	<b>120</b>	<b>218</b>	<b>239</b>	<b>457</b>

**Figure 7.1: Percentage of adolescent girls following practices around menstruation , Maharashtra**



Around two third of the girls mentioned that they do not observe separation during menstruation, and around 34 percent of the girls mentioned they observe separation during menstruation.

Observation of separation during menstruation is comparatively high in rural areas than in urban areas (35 percent vs. 30 percent) and similarly in drought-prone areas than in flood-affected areas (45 percent vs. 24 percent). Around 95 percent of the girls mentioned that they could touch small children during menstruation. In contrast, the remaining 5 percent of the girls mentioned that they do not touch children during menstruation because people talk negatively or scold them, or they felt that children become weak if a menstruating girl touches them.

Regarding observing the practice of not going to worship centers during menstruation, as high as 93 percent of the girls mentioned that they won't go to the worship center. This practice is more or less similar in all four categories. Similarly, 89 percent of the girls further mentioned that they don't enter to worship room or worship place in their house during menstruation. These practices are comparatively high in urban (96 percent) and flood-prone areas (95 percent) than in rural areas (86 percent) and drought-prone areas (82 percent).

Around 7 out of 10 girls agreed that they do not restrict their activities during menstruation. At the same time, one-third of the girls mentioned that they restrict activities like exercise and sports during menstruation. The percentage of girls not restricting their activities during menstruation is comparatively high in urban areas than in rural areas (74 percent vs. 70 percent) and in flood-affected areas than in drought-prone areas (78 percent vs. 63 percent). Interestingly, around 8 percent of the girls had not gone to school during menstruation as they agreed that school-going activity is restricted, which is comparatively higher in rural areas than in urban areas (9 percent vs. 7 percent).

Further, 6 percent of the girls said they could not take baths during menstruation. This practice is comparatively high in urban areas than in rural areas (18 percent vs. 2 percent). Similarly, it is higher in flood-affected areas (11 percent) than in drought-prone areas (less than 1 percent). Regarding dietary restrictions during menstruation, 6 percent of the girls said they follow restrictions. In contrast, 94 percent of the girls do not follow any such dietary restrictions during menstruation. The dietary restriction is comparatively followed more by urban girls than rural girls (10 percent vs. 4 percent). Following dietary restrictions, there is only a 1 percent difference between flood-affected and drought-prone areas.

## **7.2 Summary of Findings**

Although a little over one-third of girls observed separation in Maharashtra, but most of these girls did restrict themselves by not going to the worship center or Pooja room during menses. Further, the study also points out that most girls did not observe any other restrictions, such as touching small children, not going to school, and being allowed to bathe. The restrictions on going to the worship centers or pooja rooms are comparatively higher in urban and flood-affected areas.

## CHAPTER 8

### Impact of National Programmes on Adolescent Girls on Menstrual Hygiene

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#### 8.0 Introduction

To ensure the holistic development of the adolescent population, the Ministry of Health and Family Welfare, Government of India, has launched many National Health Programmes focused on adolescent girls. To list some of them are Rashtriya Kishor Swasthya Karyakram (RKSK), Peer Education Programme, Adolescent Friendly Health Clinics (AFHS), and Anaemia Mukta Bharat Abhiyan. These Programmes provide core services packages, including preventive, promotive, curative, counseling services, routine checkups at primary, secondary, and tertiary levels of care, and distribution of materials, including food ingredients, IFA tablets, and sanitary napkins (Hallad et al., 2023).

In 2018, Government of Maharashtra initiated the *Asmita Yojana* under the Department of Rural Development. Under this scheme, SHGs procure sanitary napkins from suppliers and register on a mobile application, and distribute them to *Asmita* cardholders, mainly school-going adolescent girls, at ₹5 per pack. During the World Menstrual Hygiene Day 2022, the government announced another scheme for the distribution of sanitary napkins, priced at ₹1 per 10 pads, to women in below-poverty line (BPL) households and those engaged in self-help groups (SHGs) in rural areas (Rana, 2022). The present chapter presents how these all initiatives at national and state level have impacted the adolescent girls on their Menstrual Hygiene practices.

#### 8.1 Impact of National Programmes on Menstrual Hygiene

An impact assessment has been made in this section to understand the role of national health programs in imparting knowledge on menstrual hygiene by asking various questions like whether they received knowledge on menstrual hygiene, if yes, the person who has provided the knowledge, place of getting the knowledge and girls' perspective on in what way this information benefited them. The responses of the girls' are presented in Table 9.1 by place of residence and type of climate vulnerability.

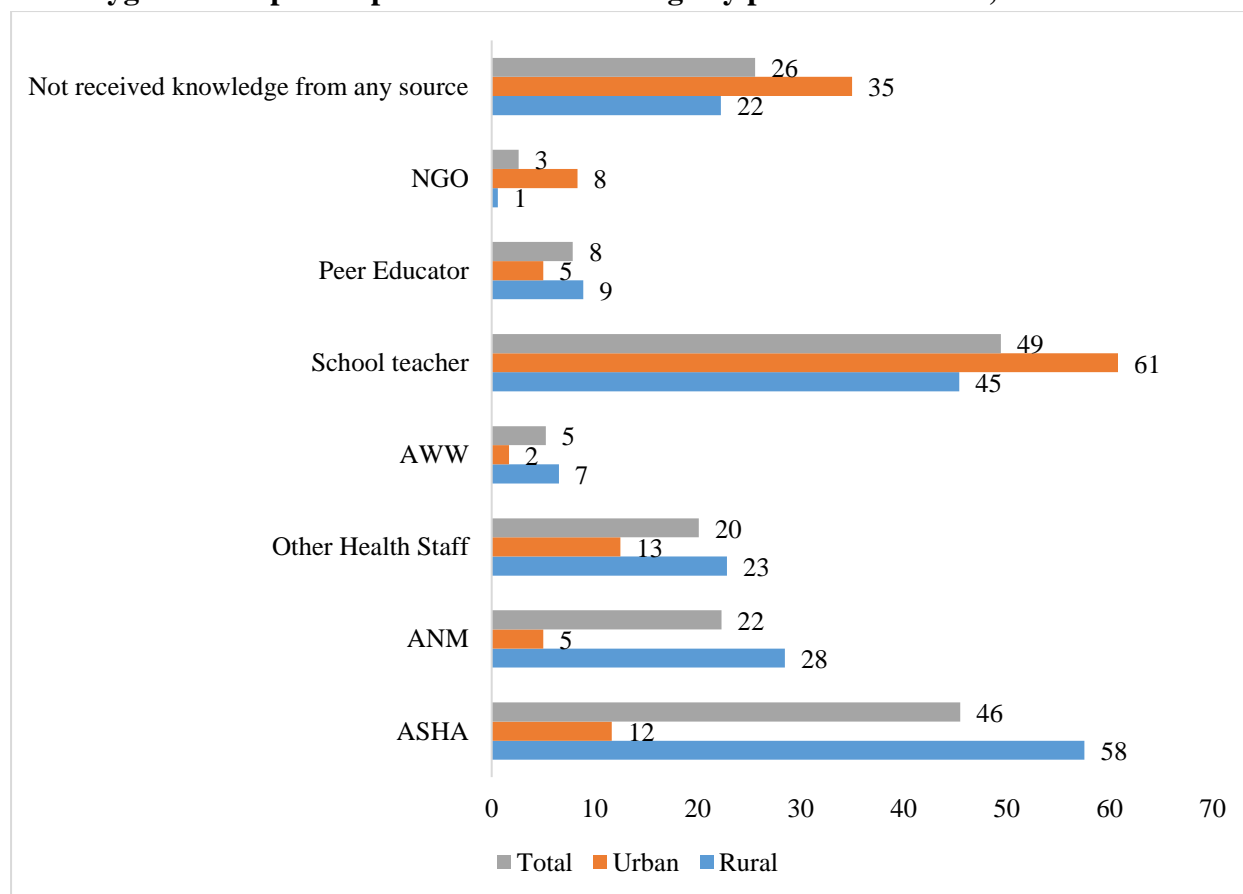
**Table 8. 1: Percentage of adolescent girls who received knowledge on menstrual health and hygiene through National programs, the person who provided the knowledge, place of getting, issues covered, and benefits received through attending these National programs by place of residence and climate vulnerability**

Particulars	Place of residence		Type of climate vulnerability		ALL
	Rural	Urban	Drought	Flood	
<b>Percentage received knowledge from*</b>					
<b>ASHA</b>	57.6	11.7	61.5	31.0	45.5
<b>ANM</b>	28.5	5.0	39.9	6.3	22.3
<b>Other Health Staff</b>	22.9	12.5	18.8	21.3	20.1
<b>AWW</b>	6.5	1.7	9.2	1.7	5.3
<b>School teacher</b>	45.4	60.8	42.2	56.1	49.5
<b>Peer Educator</b>	8.9	5.0	0.9	14.2	7.9
<b>NGO</b>	0.6	8.3	0.9	4.2	2.6
<b>Not received knowledge from any source</b>	22.3	35.0	20.6	30.1	25.6
<b>Number of adol. Girls</b>	<b>337</b>	<b>120</b>	<b>218</b>	<b>239</b>	<b>457</b>
<b>Place of getting the knowledge*</b>					
<b>AWC</b>	24.8	3.9	31.8	7.8	20.0
<b>Public Health Facility</b>	52.7	42.3	46.8	53.9	50.3
<b>School/College</b>	59.2	89.7	55.5	77.3	66.2
<b>Home</b>	48.1	33.3	55.5	33.5	44.7
<b>Received knowledge on</b>					
<b>Menstrual Hygiene/Cleanliness</b>	98.5	70.5	98.3	85.6	92.1
<b>Menstrual Problems</b>	86.6	69.2	85.6	79.6	82.7
<b>Reproductive Health System</b>	40.1	26.9	43.9	29.9	37.1
<b>RTI/STI/HIV</b>	30.5	33.3	45.7	16.2	31.2
<b>Nutritious Food</b>	80.5	52.6	77.5	70.7	74.1
<b>Family Planning Methods</b>	19.9	3.9	23.7	8.4	16.2
<b>Importance Of IFA / WIFS Tablets</b>	35.9	14.1	39.3	22.2	30.9
<b>Proper Use of Medication</b>	25.2	18.0	35.3	11.4	23.5
<b>In what way this information benefitted</b>					
<b>Got knowledge on</b>					
<b>Menstrual Health and Hygiene</b>	99.2	97.4	99.4	98.2	98.8
<b>Nutrition</b>	83.6	41.0	80.9	66.5	73.8
<b>Sexual &amp; Reproductive Health</b>	42.4	20.5	39.3	35.3	37.4
<b>Ident. Of Symptoms Related to Gynec Problems</b>	29.8	19.2	38.2	16.2	27.4
<b>Received material/service</b>					
<b>Got Take Home Ration</b>	10.7	20.5	11.6	14.4	12.9
<b>Got Sanitary Napkins</b>	63.4	48.7	46.8	73.7	60.0
<b>Got IFA/WIFS/Deworming Tablets</b>	25.2	16.7	36.4	9.6	23.2
<b>Got Health Check Up</b>	50.8	33.3	53.8	39.5	46.8
<b>Got Immunization</b>	35.1	12.8	22.0	38.3	30.0
<b>Changed behavior</b>					

<b>Following Hygienic Practices</b>	46.2	48.7	42.8	50.9	46.8
<b>Taking Bath During Menstruation</b>	61.1	60.3	58.4	63.5	60.9
<b>Changing sanitary Pads/Cloth Frequently</b>	58.8	71.8	56.7	67.1	61.8
<b>Proper Disposal of Sanitary Pads</b>	68.7	64.1	63.6	71.9	67.7
<b>Washing &amp; Drying the Clothes Under Sunshine</b>	49.2	32.1	35.3	55.7	45.3
<b>Taking Nutritious Food</b>	67.6	34.6	59.0	61.1	60.0
<b>Number of girls received knowledge</b>	<b>262</b>	<b>78</b>	<b>173</b>	<b>167</b>	<b>340</b>

Note: \*Percentage will not add up to 100 as multiple responses are received

**Figure 8. 1: Percentage of adolescent girls received knowledge on menstrual health and hygiene and person provided the knowledge by place of residence, Maharashtra**



Among the surveyed girls, around 26 percent pointed out that they had not received any knowledge on menstrual health and hygiene through any of the programs from any source. The percentage of girls not receiving this kind of knowledge is comparatively high in urban areas than in rural areas (22 percent vs. 35 percent). Similarly, the situation in extreme climate areas for girls not receiving this kind of knowledge is comparatively higher in flood-prone areas than in drought-prone areas (21 percent vs. 30 percent).

Around 50 percent of girls mentioned that they had received knowledge about menstrual health and hygiene from their school teachers, followed by ASHA (46 percent), ANM (22 percent), and other health staff (20 percent). Peer educators (8 percent), AWW (5 percent), and NGOs (3 percent) also provided knowledge on menstrual health and hygiene to them.

When compared to different climatic zones, it is observed that more percentage of girls in drought-prone areas than in flood-prone areas received knowledge from ASHA (62 percent), ANM (40 percent), AWW (9 percent), and on the other hand, girls from flood areas received more knowledge than drought-prone areas school teacher (56 percent), peer educators (14 percent) and NGO's (4 percent) has to provide knowledge about menstrual health and hygiene.

Further, as high as 66 percent of the girls mentioned that they received this knowledge in the school and college in which they are studying; More than 50 percent of girls mentioned that they had received knowledge on menstrual health and hygiene from a public health facility; around 45 percent girls mentioned that had received knowledge at their home; and 20 percent of girls mentioned that they had received knowledge from AWC. The percentage of girls getting knowledge on menstrual health and hygiene at school and college is comparatively more in urban areas than in their counterparts (59 percent vs. 90 percent). On the other hand, the percentage of girls getting knowledge through national programs at Anganwadi centers (25 percent vs. 4 percent), public health facilities (53 percent vs. 42 percent), and home (48 percent vs. 33 percent) is comparatively is more in rural areas. Further, attending these programs at the public facility is observed to be more in flooded areas (47 percent vs. 54 percent). In contrast, household visits (56 percent vs. 34 percent) and AWC (32 percent vs. 8 percent) of the knowledge provider are observed to be less in flood-prone areas.

Further, on issues covered during these programs, around 92 percent of girls mentioned that they received knowledge on menstrual hygiene or cleanliness; 83 percent of the girls mentioned that the trainer explained to them about menstrual problems, and around 74 percent of the girls mentioned that they received knowledge on nutritious food. Around 37 percent of the girls mentioned they received the knowledge of the reproductive health system. Around 31 percent of the girls mentioned the issues on RTI/STI and family planning methods are covered during such programs. When comparing different areas, menstrual problems and hygiene/cleanliness are discussed comparatively more in rural areas than in urban areas (87 percent vs. 69 percent) and (99 percent



vs. 71 percent). In rural areas, reproductive health is discussed more than in urban areas (40 percent vs. 27 percent). Important health issues like RTI/STI/HIV are discussed more in urban than rural areas. (31 percent vs. 33 percent). Issues on nutritious food (81 percent vs. 53 percent) and the importance of IFA tablets (36 percent vs. 14 percent) are also covered more in rural than urban areas. Similarly, this pattern is followed in climatic extremes, i.e., drought-prone areas than flood-prone areas (78 percent vs. 71 percent and 39 percent vs. 22 percent).

Further, when the girls were asked how this information benefited them, the responses were categorized into three ways getting knowledge, receiving materials or services, and changing behavior. As observed in the table, around 99 percent of the girls mentioned knowledge of menstrual health and hygiene, and 74 percent mentioned that they received nutrition knowledge. Around 37 and 27 percent of girls mentioned they had received knowledge on sexual & reproductive health and identified symptoms related to gynec problems, respectively. When observing different areas, the percentage of girls receiving knowledge on sexual and reproductive health and identifying symptoms related to gynec problems are comparatively high in rural areas than in urban areas (42 percent vs. 21 percent) and (30 percent vs. 19 percent).

Regarding receiving materials or services, 60 percent of the girls mentioned that they had received sanitary napkins through these programs; 23 percent received IFA or deworming tablets, and 47 percent mentioned that they had done health checkups during these programs. Thirty percent of girls mentioned that they received Immunization through this program. When comparing different areas, the difference has been observed in the percentage of girls receiving sanitary napkins and IFA/deworming tablets is also comparatively high in rural areas than in urban areas (25 percent vs. 17 percent), Immunization (35 percent vs. 13 percent), health checkup (51 percent vs. 33 percent), sanitary napkins (63 percent vs. 49 percent), home ration (11 percent vs. 21 percent). Similarly, it is observed in extreme climatic situation home ration (12 percent vs. 14 percent), sanitary napkins (47 percent vs. 74 percent), health checkups (54 percent vs. 40 percent), and Immunization (22 vs. 38 percent).

Further, 62 percent of the girls agreed that involving in such programs changed their behavior as they started changing sanitary pads or clothes frequently, making them dispose of the used sanitary pads properly. Sixty-one percent of the girls agreed that they started taking baths during menstruation regularly, and 47 percent mentioned that they were following hygienic practices after

attending these programs. However, around 45 percent of girls mentioned that they started drying their clothes under the sunshine, and 60 percent mentioned that they eat nutritious food after attending such programs. However, little variation is observed between the two areas regarding the impact of national programs on changing behavior; a comparatively higher percentage of girls in rural areas reported changes in following hygienic practices and proper disposal of sanitary pads than in urban areas. Between two climate-vulnerable areas, taking a bath regularly, frequently changing absorbents, drying clothes under sunshine, properly disposing of sanitary pads, following hygienic practices, and taking nutritious food are observed to be more in flood-affected areas than in drought-prone areas.

## **8.2 Summary of Findings**

Overall, the current study highlights that the primary sources of information on menstrual health schemes and other national programs for adolescent girls were ASHA and school teachers at public health facilities and schools/colleges, respectively. They mainly focus on the importance of national programs in providing knowledge on menstrual health and hygiene to adolescent girls' nutritional aspects, whereas they do focuses less on family planning methods or proper use of medications.

Most national programs focusing on adolescent girls concentrate on imparting knowledge rather than providing services or distributing materials. More focus is needed on hygienic practices, FP, and medicines.

## CHAPTER 9

### Climate Vulnerability and Menstrual Hygiene

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#### 9.0 Introduction

Climate change has a huge impact on public health as air pollution, severe weather, extreme heat, environmental degradation, water and food quality and supply impacts, increasing allergens, and changes in vector ecology occur more frequently (CDC, 2023). Research has found that women and girls unevenly feel the impacts of climate change (U.N. Women, 2016). The unequal effects of climate change on women and girls have been increasingly studied since they were first reported. Still, there is a gap in the knowledge of climate change's effects on women's menstrual health in rural populations in low-income countries.

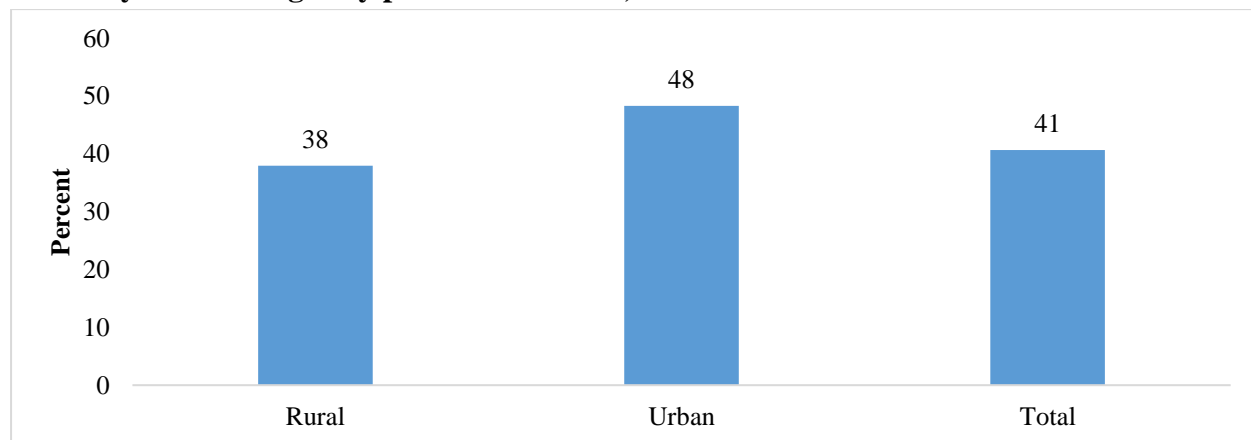
Menstrual hygiene management in disaster-prone and fragile contexts is challenging for adolescent girls and women. Availability of natural resources like water and sunshine, along with privacy and space, affect many menstrual hygiene-related activities like taking baths, frequent change of absorbents, washing/drying, and proper disposal of absorbents used during menstruation. Such a situation affects the physical activities of girls as well as their physical and mental health. As mentioned earlier, the study's main objective is to understand menstrual health and hygiene among adolescent girls in climate-vulnerable areas; therefore, the girls were selected purposely from different climate-vulnerable areas, including drought-prone and flood-prone areas (Hallad et al., 2023).

#### 9.1 Experience of Adolescent girls relating to menstrual hygiene during vulnerable climate situation

An assessment has been made in this section to understand girls' experience during such climate crises, especially concerning menstrual hygiene like water, washing menstrual clothes, taking baths and shifting from the house, and staying in camps and tents.

**Figure 9.1** and **Table 9.1** depicts that around 41 percent of adolescent girls have mentioned that they faced crises due to climate extremes, with a higher percentage in urban areas, 48 percent, compared to rural areas, 38 percent.

**Figure 9. 1: Percentage of adolescent girls experienced/faced crisis situations due to Flood/Cyclone/Drought by place of residence, Maharashtra**



**Table 9. 1: Percentage of adolescent girls experienced crisis situation due to climate extremes problems faced relating to getting water, washing menstrual cloth, taking bath and staying in camps/tents by place of residence and climate vulnerability**

Particulars	Place of residence		Type of climate vulnerability		ALL
	Rural	Urban	Drought	Flood	
<b>Experience/face crisis situation due to Flood/Cyclone/Drought</b>					
<b>Yes</b>	38.0	48.3	47.3	34.7	40.7
<b>No</b>	62.0	51.7	52.8	65.3	59.3
<b>Number of adolescent girls</b>	<b>337</b>	<b>120</b>	<b>218</b>	<b>239</b>	<b>457</b>
<b>Duration of crisis situation in a year</b>					
<b>Less than a month</b>	7.0	25.9	2.9	25.3	12.9
<b>1-3 months</b>	53.1	46.6	48.5	54.2	51.1
<b>4-6 months</b>	39.8	27.6	48.5	20.5	36.0
<b>Problems related to getting water*</b>					
<b>No problem</b>	45.3	36.2	34.0	53.0	42.5
<b>Non-Availability of Water at All</b>	67.1	54.1	66.2	56.4	62.6
<b>No Clean Water for Drinking</b>	87.1	86.5	88.2	84.6	86.9
<b>Non-Availability of Water for Bath</b>	81.4	70.3	80.9	71.8	77.6
<b>No Water for Washing Cloth</b>	67.1	46.0	66.2	48.7	59.8
<b>How to manage? *</b>					
<b>Boiled Water for Drinking</b>	54.3	64.9	52.9	66.7	57.9
<b>Supplied by Tank Water</b>	95.7	13.5	97.1	15.4	67.3
<b>Purchased Bottle Water</b>	68.6	16.2	70.6	15.4	50.5
<b>Brought It from Unaffected Area</b>	45.7	10.8	47.1	10.3	33.6
<b>Cloths Not Washed</b>	8.6	64.9	5.9	66.7	28.0
<b>Did Not Take Bath</b>	7.1	37.8	7.4	35.9	17.8
<b>Other</b>	4.3	2.7	4.4	2.6	3.7

<b>Problems related to washing/drying menstrual cloth or disposal of sanitary pads*</b>					
<b>No Problem</b>	93.8	39.7	94.2	55.4	76.9
<b>No Water to Wash Men. Clothes</b>	25.0	25.7	33.3	24.3	25.6
<b>No Place to Wash</b>	0.0	60.0	0.0	56.8	48.8
<b>No Place to Dry</b>	25.0	62.9	0.0	64.9	55.8
<b>No Sunshine to Dry</b>	0.0	28.6	0.0	27.0	23.3
<b>No Options for the Safe Disposal</b>	12.5	40.0	16.7	37.8	34.9
<b>How to manage? *</b>					
<b>New Clothes Supplied</b>	0.0	8.6	0.0	8.1	7.0
<b>Burnt/Burly the Napkins</b>	87.5	0.0	83.3	5.4	16.3
<b>Throw in Open Area</b>	50.0	68.6	16.7	13.5	14.0
<b>Use Neither Clothes nor Napkins</b>	0.0	2.9	0.0	2.7	2.3
<b>Problems related to bathing during such situation</b>					
<b>No problem</b>	71.9	56.9	66.0	68.7	67.2
<b>Not Bathed During Men. Period</b>	8.3	24.0	5.7	26.9	14.8
<b>No Water Available to Bath</b>	97.2	48.0	97.1	50.0	77.1
<b>Privacy Is Not Available for Bathing</b>	2.8	36.0	0.0	38.5	16.4
<b>Bathed By Using Contaminated Water</b>	2.8	24.0	0.0	26.9	11.5
<b>Bathed In Open Place</b>	0.0	8.0	0.0	7.7	3.3
<b>Had to move away from home like in tents/camps during such situation anytime</b>					
<b>Yes</b>	0.0	17.2	0.0	12.1	5.4
<b>No</b>	100.0	82.8	100.0	88.0	94.6
<b>Number of girls experienced crisis situation due to climate extremes</b>	<b>128</b>	<b>58</b>	<b>103</b>	<b>83</b>	<b>186</b>

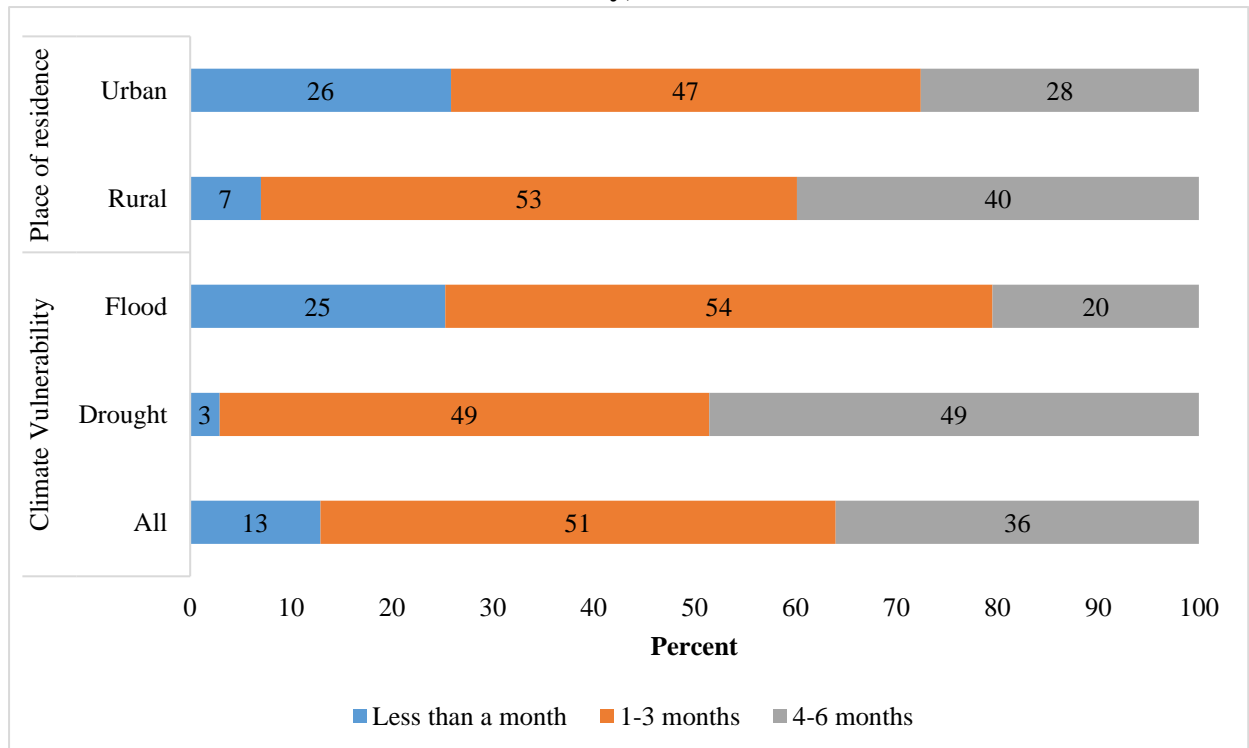
Note: \*Percentage will not add up to 100 as multiple responses are received

Around 13 percent variation was observed between drought and flood-prone areas in this regard. More than 51 percent of the girls who experienced crises situation mentioned that such a situation exists for 1-3 months in a year; 36 percent had to face this climate extremity problem for 4-6 months every year, and the remaining around 13 percent of the girls had to face their problem less than a month (**Figure 9.2**). Further, a higher percentage of girls from rural areas (53 percent and 40 percent) faced the crises situation for 1- 3 months and 4-6 months than in urban areas (47 percent and 28 percent), respectively.

Availability of drinking and clean water is essential for all; however, 87 percent of the girls mentioned that they do not get clean water for drinking, followed by 78 percent mentioned the non-availability of water for bathing, and 63 percent mentioned that they don't get water at all during such a situation. Sixty percent of the girls mentioned the non-availability of water for washing cloth

at all; further, 66 percent and 49 percent of girls from drought-prone and flood-prone areas mentioned that they do not get water for washing clothes. It is observed that there was 21 percent difference between rural and urban in water-to-wash clothes problems (67 percent vs. 46 percent). Forty-three percent of the girls mentioned that, as such, they do not have any problem getting water. Non-availability of water at all is observed to be 66 percent in drought-prone areas, and as much as high, 88 percent of the girls mentioned that they do not get clean water for drinking, whereas 81 percent of girls from drought-prone areas mentioned that they do not get water for bathing and 72 percent of girls from flood-prone areas mentioned that they do not get water for bathing. In terms of scarcity of water is observed more in rural areas than in urban areas for drinking, bathing, and washing clothes.

**Figure 9. 2: Duration of the crisis situation in a year by place of residence and climate vulnerability, Maharashtra**



Regarding managing such problems, 67 percent of the girls mentioned that the water was supplied by tanks, around 58 percent of the girls mentioned that they boil water for drinking, and more than 51 percent of the girls mentioned that they had to purchase bottled water. Around 34 percent of the girls had to bring it from unaffected areas; it is to be mentioned here that 28 percent of the girls mentioned that they do not wash clothes, and 18 percent mentioned that they do not take baths

during such scarcity days. Supplying the water by tank is comparatively more in rural areas than in urban areas (96 percent vs. 15 percent). The tendency to drink water from unaffected areas and purchase water bottles is comparatively high in rural areas than in urban areas. In contrast, boiled water for drinking is high in urban areas. The practice of not washing clothes or not taking a bath during such days is also comparatively high in rural areas than their counterparts, and all these problems are observed in drought-prone areas.

As far as problems relating to washing and drying menstrual clothes or disposal of sanitary pads, 77 percent of the girls mentioned that, as such, they don't have any problem with this. The percentage of girls not facing problems in washing, drying, and disposal is comparatively high in urban areas than in rural areas and more in flood-prone areas than in drought-prone areas (94 percent vs. 55 percent). Around 56 percent of girls mentioned that they do not get a place to dry menstrual clothes and 65 percent of the girls from flood-prone areas mentioned that they do not get a place to dry menstrual clothes. Additionally, there is a huge gap between rural and urban areas concerning no place to dry menstrual clothes (25 percent vs. 63 percent). Forty-nine percent of the girls mentioned that they do not get a place to wash clothes, whereas 57 percent of the girls in flood-affected areas and 60 percent from urban areas mentioned the same issue. Around 26 percent of girls in drought-prone areas face the problem of water-washing clothes that absorb menstrual bleeding. Twenty-three percent of the girls mentioned they do not get sunshine to dry their clothes; in addition, 35 percent of girls mentioned that they do not have options for the safe disposal of menstrual clothes. During such a situation, they usually burn or bury the napkins, just throw them in an open area or use new clothes.

Regarding problems related to bathing during such situations, 77 percent of girls mentioned that no water is available for bathing during climatic situations. Moreover, this problem occurs more in rural than urban areas (97 percent vs. 48 percent and in climatic extremes 97 percent vs. 50 percent). Sixty-seven percent of the girls mentioned that, as such, they do not have any problem; Not having any problems related to bathing during climate extremes is observed to be comparatively more in rural areas than in urban areas (72 percent vs. 57 percent) and more in flood-prone areas than in drought-prone areas (66 percent vs. 69 percent). Around 16 percent of the girls did not get privacy for bathing, and 12 percent bathed using contaminated water. Around 3 percent of girls mentioned that they bathed in the open place. In this regard, only 8 percent of girls from urban areas faced the

problem. Fifteen percent of the girls said they do not take baths during menstruation when there is water scarcity. It is observed that 8 percent of girls from rural areas and 24 percent of girls from urban areas mentioned that they do not take a bath during menstruation when there is water scarcity.

Moreover, around 6 percent of girls from drought areas and 27 percent from flood areas expressed the same issues in climate extremes. Around 5 percent of the girls have to move away from home, like in tents or camps, during such situations. All of them are from urban areas and flood-prone areas.

## **9.2 Summary of Findings**

This chapter highlights that around 41 percent of adolescent girls face crisis during climate extreme, which is majorly observed in rural areas due to extreme drought. These crises include not getting clean drinking water, washing clothes, bathing, etc. To manage such problems, tanks supply water, and boiled or bottled water is used for drinking. Not washing clothes or bathing during such days is observed more in urban areas than rural areas, particularly in drought-prone areas. Supply of clean water for drinking and sufficient water for bathing and washing clothes must be made in drought-prone and flood-prone areas.

Maintaining hygiene, such as bathing during challenging times such as scarcity of water, was reported by 77 percent of girls and is prominently observed in rural than urban areas (97 percent vs. 48 percent and in climatic extremes 97 percent vs. 50 percent). Further, 16 percent of the girls did not get privacy for bathing, and 12 percent bathed using contaminated water.



## Chapter 11

### Field Observations

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**Behaviour of Adolescent Girls:** The behaviour of girls was different in the different villages. Adolescent girls in the Sangli district of Maharashtra were shy to express their experience of menstrual health and were discomfited with the questions asked about menstruation, whereas girls from Jalgaon Ahmednagar and Mumbai districts of Maharashtra were ready to share information and their view.

**Toilet facility:** Many of the households in rural Maharashtra use toilets, whereas, in the Nashik division, i.e., Pathardi block, many girls mentioned that either they use the toilet or don't use the toilet or open defecation is comparatively more common. Even though toilet facilities are there, they do not use them during the summer due to lack of water, and two villages from Pathardi block found that toilets were unused. Toilet facilities are available in schools, and toilet cleaning happens regularly. Some schools have a Wellbore facility, and some schools purchase water tankers during the summer. Many girls expressed problems related to privacy, shyness, and hesitation about open defecation during menstruation.

**Effect of Menstruation on Education:** Some of the girls from the Jath block of Sangli district dropped out of school as they had no proper bus facilities from their village. A high rate of school absenteeism is observed among rural girls and among those who have attained menarche recently. It was also observed that most of the girls had severe stomach aches; other than that, no other menstrual cramps were found.

**Awareness about the Menstrual Health Scheme:** Although the ASHA workers are also providing knowledge on menstrual health and hygiene along with the Aanganwadi Workers in the respective villages; however, their reach to adolescent girls are rare. Due to this, many girls are unaware of the Menstrual Health Scheme under NHM.

**Government Supplied Sanitary Napkins:** In Maharashtra, the government is providing sanitary napkins through schools and ASHA. Significant numbers of girls have uttered their dissatisfaction about the current lack of free distribution of sanitary napkins, inadequate quantity, and poor

quality of the napkins they receive. Girls mentioned that they get sanitary napkins from ASHA at Rs.6, and a few of them at Rs. 20 to 25. However, some of the girls mentioned that they did not get sanitary napkins from school or ASHA. According to several ASHA's, the government does not provide sanitary napkins on time, resulting in the shortage or uneven distribution of sanitary napkins. Hence, leaving them (girls) to purchase sanitary napkins from the shop or pharmacy or sometimes use the clothes due to financial problems. Rural adolescent girls are demanding the free distribution of sanitary napkins.

**Disposal of Sanitary Napkins:** It is observed in rural Maharashtra that lack of access to proper disposal systems and awareness forces them to burn or bury their pads. For girls who live close to water bodies or water canals, the easy solution is to throw the pads into the water, causing massive health and environment hazards.

**Cultural Practices:** In the rural part of Maharashtra, girls follow cultural practices like not going to the temple, not touching other people, etc., and restricting themselves from participating in sports. In villages, they celebrate small ceremonies when girls start their first menstruation.

**Effects of Climate Extreme during Menstruation:** In Western Maharashtra, it was observed that the flood situation was usually not a common phenomenon, and it occurred when it rained incessantly for 2-3 days or more. So, although the respondents had difficulties in the few days of the rainy season, it was not a big issue in flood-prone areas in Maharashtra.

## Chapter 12

### Conclusion and Recommendations

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India is the home to the largest number of adolescents in the world, representing one-fourth of the country's 1.38 billion population (Government of India, 2011). Menarche, a critical marker of adolescent girls, signifies an abrupt change for girls when they transition from childhood to adulthood (UNICEF, 2020). Lack of guidance on how to navigate the pressures of puberty can leave girls vulnerable to negative outcomes in their health, education, and overall development.

The State of Maharashtra, home to 21.3 million adolescents in India (UNFPA, 2011), emerged as the leader in giving policy attention to MHM and, since 2009, has been at the forefront of innovation in policy and practice to ensure that WASH services, including those in schools, address the needs of menstruating girls and women.

The current study's findings on knowledge regarding menstrual health and hygiene in climate-vulnerable areas highlighted the initiative in promoting adolescent health, as most of the surveyed adolescent girls (97 percent) are using sanitary napkins. Similar findings were reported in NFHS-5, where 85 percent of the adolescent and married women used the hygiene method during menstruation.

- In the current study, most of the surveyed girls were from the Hindu religion, OBC category, and stayed in nuclear families. Further, around half of the girls belong to lower socio-economic categories.
- The education of the parents of the surveyed girls is poor as only one in every ten mothers and two in every ten fathers have attained their schooling up to 11-12 standard, and most of them are engaged in the cultivation, however in the urban areas most of the parents are engaged in either on business or are salaried employed.
- Only a handful of adolescent girls had discontinued their education due to financial or family issues.
- Among the currently studying girls, most of them are enrolled in government schools and want to aspire to continue UG/PG/Medical or other professional courses, which is comparatively higher among the urban girls and girls from the flood-affected areas. The parents'

encouragement is also good for them as most of the girls had mentioned either very positive or positive encouragement, which is again higher in urban areas.

- Significant changes occurred in the adolescent girls' movement, dress, and playing activities once they attained the menarche.
- Further, a significant percentage of girls are not provided with prior knowledge of menarche, but usually, they get knowledge of menstrual health and hygiene after attaining menarche.
- Although most of the surveyed girls were using sanitary napkins to absorb the bleeding in the study area, more than half of them didn't have access to government-supplied sanitary napkins, which is comparatively higher in urban and flood-affected areas. Also, most of them buy sanitary napkins from shops and pharmacies.
- Adolescent girls in all the study areas practice frequent changing of sanitary napkins during heavy bleeding. However, it is to be focused here that girls should be made aware that the frequent changing of menstrual absorbent is necessary even during scanty bleeding.
- A significant percentage of girls are disposing of sanitary napkins through garbage-collecting vehicles; however, most of the rural girls are burning the sanitary napkins.
- Only a handful percentage of adolescent girls used clothes to absorb the bleeding in the study areas. Among them, around one-third were washing these clothes with hot water and drying them under the Sun. Hence awareness has to be given to all the girls who are using the clothes for the absorption of bleeding.
- A little higher to one-fourth of the adolescent girls had experienced Reproductive Tract Infections (RTI) in the study areas, but two-thirds of them didn't seek treatment for it. Therefore, intervention to create awareness among all these adolescent girls on treatment-seeking behaviour is needed, and the girls need to be sensitized to the risk of RTI problems.
- Although a little over one-third of girls observed separation in Maharashtra, the remaining did not. Further, most of these girls did restrict themselves by going to the worship center or pooja room during menses. However, the study also points out that most girls did not observe any other restrictions, such as touching small children, not going to school, and being allowed to

bathe. The restrictions on going to the worship centers or pooja rooms are comparatively higher in urban and flood-affected areas.

- ASHA and school teachers are the main pillars for the source of information on menstrual health and hygiene in the study areas, as most of the girls have received knowledge from them. However, the findings suggest that one-fourth of the adolescent girls had not received any knowledge from them. Therefore, stakeholders related to the Menstruation Health Scheme/Programme have to regularly visit all the girls to sensitize them about the health hygiene practice during menstruation and the benefits of the MHS Programme.
- Most of the national programs focusing on adolescent girls concentrate on imparting knowledge rather than providing services or distributing materials. More focus is needed on hygienic practices, FP, and medicines.
- Although, only 41 percent of girls have mentioned that they experienced crises due to drought or flood, usually for less than three months. Girls mentioned that not getting clean water for drinking, washing clothes, bathing, etc., are the main problems, especially in rural and drought areas.
- To manage such problems, tanks are used to supply water, and boiled water or bottled water is used for drinking. Not washing clothes or bathing during such days is observed more in rural areas than urban areas, particularly drought-prone areas. Supply of clean water for drinking and sufficient water for bathing and washing clothes must be made in drought-prone and flood-prone areas.
- The study highlights the vital role of mothers in providing information related to menstruation to their daughters, especially in rural areas. Hence, the awareness programme should focus on mothers with the correct and appropriate information on menstrual health and hygiene to pass on to their children. However, mere dissemination of knowledge won't suffice unless the mother, siblings, or family are encouraged to discuss and share the information without fear of social taboos and shame.
- The number of sanitary napkins supplied by the government was found to be insufficient simultaneously; it was found that during the heavy flow of blood, the girls changed the sanitary

napkin on average less than three times a day. However, we cannot ascertain if it is due to a shortage of sanitary napkins or personal hygiene choices or its management. We recommend increasing the supply of government-supplied napkins and a marker in these packs denoting the maximum permissible time in a day a napkin should be used.

- Involving local SHG and community in manufacturing reusable sanitary napkins or using natural materials sourced locally can address the sufficiency and disposal of sanitary napkins.
- The usage of sanitary pads has increased so also the challenges at its disposal. Education related to the proper method of disposal and awareness is important. Implementation of modern techniques like incineration can reduce waste. Health programme managers can emphasize that using reusable sanitary products or made from natural products is essential.
- The awareness programme should also focus on boys and other male family members to emphasize their role in providing supportive environments to women.
- Social exclusion and isolation during menstruation by girls might also have an impending effect on women and men who might think women are inherently submissive. Hence, mass knowledge dissemination through the involvement of popular media is suggested to improve IEC.
- The study finding suggests sanitary napkins are changed at the most 2 to 3 times a day during heavy flow and 1 to 2 during scanty flow. Ideally, it is risky and unhygienic if sanitary napkins are kept the same after an interval of 5 to 6 hours. Hence, inculcating the habit of menstrual hygiene during adolescence is essential.
- In climate-vulnerable areas, scarcity of water is the prime reason for not maintaining hygiene practices such as taking baths during menstruation. In addition, there is a lack of privacy. Hence, the program managers should focus on VHSNC, SHG, and other rainwater harvesting involvement to address these problems.
- The present study tried to access knowledge based on perceived knowledge that may or may not be true. Hence adolescent girls should be encouraged to maintain a menstrual chart based

on dates, flow, type, and length of menstrual cramps. The menstrual chart is useful to evaluate whether the menstruation was normal.

- It is high time health programme managers and policymakers introduce a supportive environment in learning institutions and workplaces, such as paid holidays, a separate room to rest, access to warm water, and sanitary napkins in case of severe pain or emergency issues arising due to menstruation and its management.

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# Appendix

## Research Tool



POPULATION RESEARCH CENTRE, PUNE

**CONFIDENTIAL**

(for research  
purpose only)

### Menstrual Health and Hygiene among Adolescent Girls in Climate Vulnerable areas in India

#### Schedule to interview Adolescent Girls (13-19 years)

IDENTIFICATION	
<p>NAME OF STATE (राज्याचे नाव) (01-17) <u>12 - MAHARASHTRA</u></p> <p><i>(1-Andhra Pradesh, 2-Assam, 3-Bihar, 4-Delhi, 5-Gujarat, 6-Haryana, 7-Himachal Pradesh, 8- Jammu Kashmir, 9-Karnataka, 10-Kerala, 11-Madhya Pradesh, 12- Maharashtra, 13- Odisha, 14-Rajasthan, 15- Punjab, 16-Tamil Nadu, 17-Uttar Pradesh)</i></p> <p>NAME OF DISTRICT (जिल्ह्याचे नाव) (1-4) _____</p> <p style="text-align: center;">( 1 – Ahmednagar, 2 – Jalgaon, 3 – Mumbai, 4 – Sangli)</p> <p>TYPE OF CLIMATE VULNERABILITY (हवामानाचा प्रकार): ..... 1- DROUGHT, 2-FLOOD/CYCLONE</p> <p>SERIAL NUMBER OF ADOL. (अनुक्रमांक) (001-400) .....</p> <p>TYPE OF RESIDENCE (राहण्याचे ठिकाण) ... ..... RURAL- 1, URBAN- 2</p> <p>NAME OF RESPONDENT (मुलाखतदेणाऱ्याचे नाव) _____</p>	<div style="border: 1px solid black; width: 40px; height: 20px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; width: 40px; height: 20px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; width: 40px; height: 20px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; width: 40px; height: 20px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; width: 40px; height: 20px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; width: 40px; height: 20px; margin-bottom: 5px;"></div>
<p>DATE OF INTERVIEW (मुलाखतीची तारीख) (DD MM YYYY)</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; width: 30px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 30px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 30px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 30px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 30px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 30px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 30px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 30px; height: 20px;"></div> </div>	
<p>NAME OF THE INVESTIGATOR</p> <p>(मुलाखत घेणार्याचे नाव)</p> <div style="border: 1px solid black; width: 60px; height: 25px; margin-left: 100px;"></div>	<p>KEYED BY</p> <div style="border: 1px solid black; width: 60px; height: 25px; margin-left: 100px;"></div>

## INTRODUCTION AND INFORMED CONSENT

Namaste, My name is \_\_\_\_\_ and I am working with Population Research Centre,

\_\_\_\_\_. We are conducting a Survey to understand the **Menstrual Health and Hygiene among Adolescent Girls**. We would very much appreciate the participation of your daughter in this survey. I would like to ask your daughter some questions and it takes about 45 minutes to complete.

Whatever information your daughter provides will be kept strictly confidential. Participation in this survey is voluntary and your daughter can choose not to answer any question or all of the questions. However, we hope that your daughter will participate in this survey since your daughter's participation is important.

At this time, do you want to ask me anything about the survey? ANSWER ANY QUESTIONS

AND ADDRESS PARENT'S CONCERNS.

May I begin the interview with your daughter now?

माझे नाव -----आहे. मी Population Research Centre \_\_\_\_\_ मध्ये काम करते. मी तुम्हाला भारतातील पौगंडावस्थेतील मुलींचे मासिक पाळीदरम्यानचे आरोग्य व स्वच्छता या संबंधीच्या संशोधन अभ्यासामध्ये सहभागी होण्यासाठी आमंत्रित करते. आम्ही भारतातील पौगंडावस्थेतील मुलींचे मासिक पाळीदरम्यानचे आरोग्य व स्वच्छता या संबंधीचा संशोधन अभ्यास करत आहोत. आपली मुलगी जर या सर्वेक्षणात सहभागी झाली तर आम्हाला फार आनंद होईल. तुमच्या मुलीला यासंबंधी काही प्रश्न विचारीन आणि त्यासाठी साधारण ४५ मिनिटे लागतील.

तुमची मुलगी जी काही माहिती देईल ती अत्यंत गोपनीय ठेवण्यात येईल. तुमच्या मुलीचा सहभाग पूर्णपणे ऐच्छिक असेल आणि तुमची मुलगी प्रश्नावलीतील कोणत्याही किंवा सगळ्या प्रश्नांना उत्तर द्यायला नकार देऊ शकते. आम्हाला अशा आहे कि तुमची मुलगी या सर्वेक्षणात भाग घेईल कारण तिचा सहभाग महत्वाचा आहे.

आता तुम्हाला या सर्वेक्षणाबद्दल मला काही विचारायचे आहे का?

त्यांचे काही प्रश्न असतील तर उत्तरे द्या आणि पालकांच्या शंकांचे निरसन करा.

## INTRODUCTION AND INFORMED ASSENT/CONSENT FORM (FOR ALL ADOLESCENT GIRLS)

My name is \_\_\_\_\_. I am working with Population Research Centre, Pune. I am inviting you to participate in a research study onto Menstrual Health and Hygiene among Adolescent Girls in India. I have taken your Father's/Mother's consent about your participation in this study.

माझं नावं आहे \_\_\_\_\_. मी लोकसंख्या संशोधन केंद्र,पुणे येथे काम करत आहे. मी तुम्हाला भारतातील किशोरवयीन मुलींमधील मासिक पाळी आरोग्य आणि स्वच्छता या विषयावरील संशोधन अभ्यासात सहभागी होण्यासाठी आमंत्रित करत आहे. या अभ्यासात तुमच्या सहभागाबद्दल मी तुमच्या वडिलांची/आईची संमती घेतली आहे.

We will be collecting information on your demographics, health, family, menstrual health and hygiene and your access to health care services. The information will be valuable for the Government to formulate health and economic policies and in improving menstrual health care services for the Adolescent Girls in the country. The interview will take approximately 45 minutes.

आम्ही तुमची लोकसंख्या, आरोग्य, कौटुंबिक, मासिक पाळीतील आरोग्य आणि स्वच्छता आणि आरोग्य सेवा सेवांवरील तुमचा प्रवेश याविषयी माहिती गोळा करणार आहोत. सरकारसाठी आरोग्य आणि आर्थिक धोरणे तयार करण्यासाठी आणि देशातील किशोरवयीन मुलींसाठी मासिक पाळी आरोग्य सेवा सुधारण्यासाठी ही माहिती मौल्यवान असेल. मुलाखतीला अंदाजे ४५ मिनिटे लागतील.

Taking part in this study may not have direct benefits to you, but it will be valuable for the Government to formulate health and economic policies and in improving menstrual health care services for the Adolescent Girls in the country.

या अभ्यासात भाग घेतल्याने तुम्हाला थेट फायदा होणार नाही, परंतु सरकारसाठी आरोग्य आणि आर्थिक धोरणे तयार करणे आणि देशातील किशोरवयीन मुलींसाठी मासिक पाळी आरोग्य सेवा सुधारणे हे मोलाचे ठरेल.

The information provided by you will be kept confidential strictly. The data will only be used for research and planning purposes without any personal identification. Your participation is entirely voluntary and you can withdraw from the survey at any point of time even after having agreed to participate. You are free to refuse to answer any question that is asked in the questionnaire.

तुम्ही दिलेली माहिती काटेकोरपणे गोपनीय ठेवली जाईल. कोणत्याही वैयक्तिक ओळखीशिवाय डेटा केवळ संशोधन आणि नियोजन हेतूसाठी वापरला जाईल. तुमचा सहभाग पूर्णपणे ऐच्छिक आहे आणि तुम्ही सहभागी होण्यास सहमती दिल्यानंतरही तुम्ही कोणत्याही वेळी सर्वेक्षणातून माघार घेऊ शकता. प्रश्नावलीमध्ये विचारलेल्या कोणत्याही प्रश्नाचे उत्तर देण्यास तुम्ही मोकळे आहात.

If you have questions about the study, you can ask me now or anytime during the study. You can also call at [insert office phone number] or e-mail us at [insert office e-mail address].

तुम्हाला अभ्यासाबद्दल प्रश्न असल्यास, तुम्ही मला आता किंवा अभ्यासादरम्यान कधीही विचारू शकता. तुम्ही [ऑफिस फोन नंबर घाला] किंवा आम्हाला [ऑफिसचा ई-मेल पत्ता घाला] वर ई-मेल देखील करू शकता.

Signing below means you are willing to be in this study: **AGREE.....1, DO NOT AGREE.....2 END**

Signature of the Interviewer: \_\_\_\_\_

मुलाखतकाराची स्वाक्षरी: \_\_\_\_\_



## 1. Household Background Characteristics

No.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP		
100	Have you attained menarche? (तुम्हाला मासिक पाळी आली आहे का?)	YES ..... 1 NO ..... 2	→ END		
101	What is your religion? (तुमचा धर्म कोणता?)	HINDU..... 1 MUSLIM..... 2 CHRISTIAN ..... 3 SIKH ..... 4 BUDDHIST ..... 5 JAIN..... 6 NO RELIGION ..... 7 OTHER (SPECIFY) ..... 8			
102	What is your caste? (तुमची जात कोणती?)	SCHEDULED CASTE..... 1 SCHEDULED <b>TRIBE</b> ..... 2 OTHER BACKWARD CLASS..... 3 GENERAL/FORWARD..... 4 NO CASTE..... 5			
103	Type of family. (कुटुंबाचा प्रकार)	NUCLEAR..... 1 EXTENDED..... 2 JOINT..... 3			
104	Total how many persons stay with you at present (including respondents)?  सध्या तुमच्या सोबत किती लोक राहतात?(प्रतिसादकर्त्यांसह)?	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="width: 50px; height: 20px;"></td> <td style="width: 50px; height: 20px;"></td> </tr> </table>			
105	Is your family currently living in a kuchha, semi-pucca or a pucca house? (OBSERVE & RECORD) (तुमचे कुटुंब सध्या कच्चा, अर्धपक्क्या किंवा पक्क्या घरात राहत आहे का?) (निरीक्षण करा आणि रेकॉर्ड करा)	KUCHHA..... 1 SEMI-PUCCA..... 2 PUCCA..... 3			
106	Is the house owned by your family or rented? (हे घर तुमच्या स्वतः चे आहे की भाड्याने दिलेले आहे?)	OWN..... 1 RENTED..... 2 OTHER (SPECIFY) ..... 3			

107	Do your family own a house elsewhere? (तुमच्या कुटुंबाचे दुसरीकडे घर आहे का?)	YES, FULLY OWNED.....1 YES, SHARED HOUSE.....2 NO.....3	
108	What is the main source of drinking water for members of your household? (तुमच्या घरातील सदस्यांसाठी पिण्याच्या पाण्याचा मुख्य स्रोत कोणता आहे?)	PIPED WATER.....1 TUBE WELL OR BOREHOLE.....2 DUG WELL.....3 WATER FROM SPRING.....4 RAINWATER.....5 TANKER TRUCK.....6 CART WITH SMALL TANK.....7 SURFACE WATER(RIVER/DAM/LAKE/POND /STREAM/CANAL/ IRRIGATION CHANNEL)...8 BOTTLED WATER.....9 COMMUNITY RO PLANT.....10 OTHER (SPECIFY).....11	
108(a)	Where is the water source located? पिण्याच्या पाण्याचा मुख्य स्रोत कुठे आहे?	IN OWN DWELLING.....1 IN OWN YARD/PLOT.....2 ELSEWHERE.....3	} Q 109
108(b)	How long does it take to go there, get water, and come back in one trip? तिथे जायला, पाणी आणायला आणि एकाच प्रवासात परत यायला किती वेळ लागेल?	MINUTES..... DON'T KNOW.....98	
109	What type of fuel does your household mainly use for cooking? (तुमचे कुटुंब मुख्यतः स्वयंपाकासाठी कोणत्या प्रकारचे इंधन वापरते?)	ELECTRICITY ..... 1 LPG/NATURAL GAS ..... 2 BIOGAS..... 3 KEROSENE..... 4 COAL/LIGNITE..... 5 CHARCOAL..... 6 WOOD..... 7	

		STRAW/SHRUBS/GRASS ..... 8 AGRICULTURAL CROP WASTE..... 9 DUNG CAKES ..... 10 NO FOOD COOKED IN HOUSEHOLD .... 11 OTHER (SPECIFY).....12																																								
110	What is the main source of lighting for this household? (या घरातील प्रकाशाचा मुख्य स्रोत कोणता आहे?)	ELECTRICITY ..... 1 KEROSENE..... 2 BIO GAS..... 3 SOLAR ..... 4 OTHER( SPECIFY ).....5																																								
111	What kind of toilet facility do members of your household usually use? (तुमच्या घरातील सदस्य सहसा कोणत्या प्रकारची स्वच्छतागृहे वापरतात?)	FLUSH OR POUR FLUSH TOILET ..... 1 PIT LATRINE..... 2 TWIN PIT/COMPOSTING TOILET..... 3 DRY TOILET ..... 4 NO FACILITY/USES OPEN SPACE/ FIELD.....5 OTHER (SPECIFY).....6	→ Q 112																																							
111 (a)	Where does this toilet located? हे शौचालय कुठे आहे?	IN OWN DWELLING..... 1 IN OWN YARD/PLOT.....2																																								
112	Does your household have any of the following? (तुमच्या कुटुंबात खालीलपैकी काही आहे का?)	<table border="0"> <thead> <tr> <th></th> <th>YES</th> <th>NO</th> </tr> </thead> <tbody> <tr> <td>Bicycle.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>Two-Wheeler?.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>Four-Wheeler?.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>Television?.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>Refrigerator?.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>Land Phone?.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>Tablet.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>Mobile phone/smart phone?.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>Bullock Cart?.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>Tractor?.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>Sewing Machine?.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>Computer/laptop?.....</td> <td>1</td> <td>2</td> </tr> </tbody> </table>		YES	NO	Bicycle.....	1	2	Two-Wheeler?.....	1	2	Four-Wheeler?.....	1	2	Television?.....	1	2	Refrigerator?.....	1	2	Land Phone?.....	1	2	Tablet.....	1	2	Mobile phone/smart phone?.....	1	2	Bullock Cart?.....	1	2	Tractor?.....	1	2	Sewing Machine?.....	1	2	Computer/laptop?.....	1	2	
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Computer/laptop?.....	1	2																																								
113	Does your household own any agriculture land? (तुम्हाला शेती आहे का?)	YES ..... 1 NO.....2																																								

114	Does your household have Below Poverty Line card? Can I see it? (तुमच्या कुटुंबाकडे दारिद्र्यरेषेखालील कार्ड आहे का? मी बघू शकतो का?)	YES, SEEN BPL CARD.....1 YES, NOT SEEN BPL CARD .....2 NO BPL CARD/APL HH.....3 DON'T KNOW .....8	
115	What is the primary/major source of income of your family? (तुमच्या कुटुंबाच्या उत्पन्नाचा प्राथमिक/मुख्य स्रोत कोणता आहे?)	CULTIVATION.....1 AGRI/NON AGRI COOLIE .....2 BUSINESS RELATED .....3 SALARIED EMPLOYMENT .....4 OTHER(SPECIFY).....5	

## 2. Background characteristics, Education and Occupation status of adolescent girls

No.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
201	How old are you? ( तुमचे वय किती आहे?) What is your date of birth? (तुमची जन्मतारीख काय आहे?)	AGE in completed years..... <input type="text"/> <input type="text"/> DATE OF BIRTH <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> DATE DON'T KNOW 99	
202	Are you staying with your Parents? (तुम्ही तुमच्या पालकांसोबत राहता का?)	YES, WITH BOTH.....1 WITH MOTHER, FATHER AWAY.....2 WITH MOTHER, FATHER DIED.....3 WITH FATHER, MOTHER AWAY.....4 WITH FATHER, MOTHER DIED .....5 BOTH FATHER & MOTHER AWAY ..6 BOTH MOTHER & FATHER DIED.....7	
203	How old are your parents? (तुमचे पालका चे वय किती आहेत?)	FATHER: MOTHER YEARS.... .. <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> DON'T KNOW..... 97..... 97 DIED.....98 ..... 98	
204	Can your parents read and write? (तुमचे पालक लिहू आणि वाचू शकतात?) What is the highest grade your parents have completed? (तुमच्या पालकांनी पूर्ण केलेली शिक्षणाची सर्वोच्च श्रेणी कोणती आहे?)	FATHER: MOTHER GRADE..... <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> LIT, NO SCHOOLING..... 96 ..... 96 ILLITERATE.....97..... 97 DIED.....98 ..... 98	

205	What kind of work your parents mainly do? (तुमचे पालक प्रामुख्याने कोणत्या प्रकारचे काम करतात?)	FATHER : MOTHER CULTIVATION.....1 1 AGRICULTURAL COOLIE...2 2 NON-AGRI. COOLIE .....3 3 BUSINESS RELATED.....4 4 SALARIED EMPLOYMENT..5 5 HOUSEHOLD/NO WORK.....6 6 SELF EMPLOYED (ARTISAN)...7 7 OTHER _____8 8 NA/DIED.....9 9	
206	How many brothers and sisters do you have? तुम्हाला किती भाऊ आणि बहिणी आहेत? ) If None - 0	YOUNGER: ELDER BROTHERS..... SISTERS.....	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
207	Are you studying now? (तुम्ही सध्या शिक्षण घेत आहात का ?)	YES.....1 NO.....2	<input type="checkbox"/> Q218
208	In which standard are you studying? (तुम्ही कोणत्या इयत्तेत शिकत आहात)	STANDARD.....	<input type="checkbox"/> <input type="checkbox"/>
209	Is it a private or government school/ college? (खाजगी की सरकारी शाळा/कॉलेज ?)	PRIVATE .....1 GOVERNMENT .....2	
210	What is the medium of instruction? (शिक्षणाचे माध्यम काय आहे?)	LOCAL LANGUAGE .....1 ENGLISH.....2 URDU.....3	
211	Is it Co-educated? (Both boys and girls together in a class) (सहशिक्षण आहे का?) (मुले आणि मुली दोघेही वर्गात एकत्र.)	YES.....1 NO.....2	
212	How far is your school/college from your residence? (तुमची शाळा/कॉलेज तुमच्या निवासस्थानापासून किती अंतरावर आहे?)	NUMBER OF KMS..... <1KM .....00	<input type="checkbox"/> <input type="checkbox"/>
213	By what means of transportation do you go to school/college? (तुम्ही शाळा/कॉलेजमध्ये कोणत्या वाहना ने जाता?)	BY WALK .....1 BICYCLE.....2 MOTOR CYCLE (ANY TYPE).....3 PUBLIC TRANSPORT .....4 PRIVATE TRANSPORT.....5	
214	How long it takes to reach the school/ college? (शाळा/महाविद्यालयात पोहोचण्यासाठी किती वेळ लागतो?)	MINUTES.....	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

215	Up to what level do you like to continue your studies? (तुम्हाला तुमचे शिक्षण कोणत्या स्तरापर्यंत चालू ठेवायला आवडेल?)	UP TO STANDARD..... <input type="text"/> PUC.....11 TEACHER TRAINING/ITI.....12 GRADUATION.....13 POST GRADUATION.....14 ENGINEERING .....15 MEDICAL.....16 OTHER PROFESSIONAL COURSE. ....17 OTHER(SPECIFY).....18 UNTIL NOT FAILED.....21 AS LONG AS POSSIBLE .....22 AS LONG AS PARENTS DESIRE .....23 CAN NOT SAY .....24	
216	How is the encouragement from your parents for your education? (तुमच्या शिक्षणासाठी तुमच्या पालकांकडून प्रोत्साहन कसे आहे?)	VERY HIGH.....1 POSITIVE .....2 NEUTRAL .....3 NEGATIVE.....4 CAN'T SAY .....5	
217	Up to what level your parents like you to continue your studies? (तुमच्या पालकांना तुम्ही कोणत्या इयत्ते पर्यंत शिकावे असे वाटते?)	UP TO STANDARD..... <input type="text"/> PUC.....11 TEACHER TRAINING/ITI.....12 GRADUATION.....13 POST GRADUATION.....14 ENGINEERING .....15 MEDICAL.....16 OTHER PROFESSIONAL COURSE. ....17 UNTIL NOT FAILED.....18 AS LONG AS I DESIRE .....19 CAN NOT SAY .....20 OTHER.....21	All skip to Q222
218	Did you ever have formal schooling? (तुम्ही कधी औपचारिक शालेय शिक्षण घेतले आहे का?)	YES.....1 NO.....2	→ Q221
219	After what standard did you discontinue studies? (कोणत्या इयत्तेनंतर तुम्ही अभ्यास बंद केला?)	STANDARD..... <input type="text"/>	
220	During your schooling, did you attend school regularly? (तुमच्या शालेय शिक्षणादरम्यान, तुम्ही नियमितपणे शाळेत जात होता का?)	REGULAR .....1 IRREGULAR .....2 CAN'T SAY .....3	

221	Why did you discontinue your studies/did you not go to school at all? (तुम्ही तुमचा अभ्यास का बंद केला/ तुम्ही शाळेत अजिबात गेला नाही का?)	FAMILY PROBLEMS ..... 1 FINANCIAL PROBLEMS ..... 2 PARENTS NOT PERMITTED ..... 3 NO FACILITY/FAR AWAY ..... 4 NOT INTERESTED/FAILED ..... 5 DUE TO MENSTRUATION/MENARCHE ..... 6 NO BASIC SANITATION FACILITIES AT SCHOOL/COLLEGE ..... 7 NO WATER AT SCHOOL/COLLEGE ..... 8 LACK OF PRIVACY FOR WASHING OR CLEANING ..... 9 OTHER(SPECIFY) _____ 10	
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222	CHECK IF RESPONDENT IS STUDYING IN Q207. (उत्तरदाता शिकत आहे का ते तपासा Q 207)	YES ..... 1 NO ..... 2	→ 223A → 223B
223	A: Apart from your studies, do you work for cash or work in your own family farm? (तुमच्या अभ्यासाव्यतिरिक्त तुम्ही पैसे मिळविण्यासाठी काम करता की तुमच्या स्वतःच्या कुटुंबाच्या शेतात काम करता?) B: Do you work for cash or work in your own family farm? (तुम्ही पैसे मिळविण्यासाठी काम करता की स्वतःच्या कुटुंबाच्या शेतात काम करता?)	YES ..... 1 NO ..... 2	→ Q230
224	What is the nature of work? (कामाचे स्वरूप काय आहे?)	FAMILY FARM ..... 1 FAMILY BUSINESS ..... 2 AGRI COOILE WORK ..... 3 NON-AGRI COOLIE WORK ..... 4 WORK IN FACTORY/INST ..... 5 WORK IN BUSINESS HOUSE ..... 6 SELF EMPLOYED ..... 7 OTHER(SPECIFY) ..... 8	
225	How often do you work? (कामाचे स्वरूप कसे आहे?)	FULLTIME ..... 1 PART-TIME ..... 2 SEASONAL/OCCASIONAL ..... 3	→ Q 227
226	How many hours do you work in a day? (तुम्ही एका दिवसात किती तास काम करता?)	WORK HOURS PER DAY..... <input type="text"/> <input type="text"/>	
227	How much do you get in a day, week or month? (तुम्हाला एका दिवसात, आठवड्यात किंवा महिन्यात किती पैसे मिळते?)	DAY ..... 1 Rs WEEK ..... 2 <input type="text"/> <input type="text"/> <input type="text"/> MONTH ..... 3 FAMILY FARM/BUSI/NO CASH ..... 8	→ Q230

228	Do you get the amount/salary in your hand or somebodyelse receives it? Who? (कामाचे पैसे तुम्हाला मिळतात कि दुसरे कोणी घेते)	SELF.....1 FATHER .....2 MOTHER .....3 OTHER FAMILY MEMBER .....4 SPOUSE .....5 OTHER(SPECIFY ) .....6	Q230																																				
229	How much of your salary is given to your parents/family? (तुम्ही तुमच्या पगारातील किती रक्कम तुमच्या पालकांना/कुटुंबाला देता?)	ALL .....1 MAJOR PART .....2 AROUND HALF .....3 LESS THAN HALF .....4 VERY LITTLE/NONE .....5																																					
230	What household activities you do at home (apart from studies/outside work if any)? (तुम्ही घरी कोणती घरगुती कामे करता (अभ्यासा व्यतिरिक्त /बाहेरचे काम असल्यास)?)	<table border="1"> <thead> <tr> <th></th> <th>YES</th> <th>NO</th> </tr> </thead> <tbody> <tr> <td>COOKING.....1</td> <td>1</td> <td>2</td> </tr> <tr> <td>CLEANING HOUSE.....1</td> <td>1</td> <td>2</td> </tr> <tr> <td>CLEANING CATTLES/ENV.....1</td> <td>1</td> <td>2</td> </tr> <tr> <td>WASHING CLOTHES/VESSELS.....1</td> <td>1</td> <td>2</td> </tr> <tr> <td>BRINGING WATER.....1</td> <td>1</td> <td>2</td> </tr> <tr> <td>ASSIST IN FIELD ACTIVITIES.....1</td> <td>1</td> <td>2</td> </tr> <tr> <td>OUTSIDE DEALINGS/SHOPPING.....1</td> <td>1</td> <td>2</td> </tr> <tr> <td>CAREING FOR SMALL CHILDREN... 1</td> <td>1</td> <td>2</td> </tr> <tr> <td>GRAZING/CARING ANIMALS..... 1</td> <td>1</td> <td>2</td> </tr> <tr> <td>COLLECT FIRE WOOD/COW DUNG... 1</td> <td>1</td> <td>2</td> </tr> <tr> <td>OTHER(SPECIFY ).....1</td> <td>1</td> <td>2</td> </tr> </tbody> </table>		YES	NO	COOKING.....1	1	2	CLEANING HOUSE.....1	1	2	CLEANING CATTLES/ENV.....1	1	2	WASHING CLOTHES/VESSELS.....1	1	2	BRINGING WATER.....1	1	2	ASSIST IN FIELD ACTIVITIES.....1	1	2	OUTSIDE DEALINGS/SHOPPING.....1	1	2	CAREING FOR SMALL CHILDREN... 1	1	2	GRAZING/CARING ANIMALS..... 1	1	2	COLLECT FIRE WOOD/COW DUNG... 1	1	2	OTHER(SPECIFY ).....1	1	2	
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### 3. Menarche & Menstruation

No.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
301	Usually at what age girls start to menstruate? (साधारणपणे कोणत्या वयात मुलींना मासिक पाळी सुरु होते?)	AGE MENARCHE <input type="text"/> <input type="text"/> DON'T KNOW ..... 98	
302	What was your age at the time of your menarche?(Completed years) (मासिक पाळीच्या वेळी तुमचे वय काय होते? (पूर्ण वर्षे))	AGE AT MENARCHE..... <input type="text"/> <input type="text"/>	
303	Was there any ceremony for your menarche? Is it a grand ceremony? (तुमच्या मासिक पाळीसाठी काही समारंभ होता का? तो एक भव्य समारंभ होता का ?)	GRAND CEREMONY ..... 1 JUST FORMAL CEREMONY ..... 2 NO CEREMONY .....3	
304	How did you feel or react on having your first menstruation? (तुमची पहिली मासिक पाळी आल्यावर तुम्हाला कसे वाटले किंवा तुमची प्रतिक्रिया कशी होती ?)	NORMAL ..... 1 EXCITED .....2 FRIGHTENED ..... 3 OTHER .....4	



305	<b>IF Q207=2 (CURRENTLY NOT STUDYING) THEN</b> जर Q207=2 (सध्या अभ्यास करत नाही) तर  Did you discontinue your studies due to your attaining menarche? (मासिक पाळी मुले तुझा अभ्यास कधी बंद पडला का?)	YES ..... 1 NO ..... 2 NOT APPLICABLE ..... 3																																											
306	Was there any immediate change in these items after menarche? (मासिक पाळीच्या नंतर पुढील गोष्टी मध्ये काही तात्काळ बदल झाले होते का?)	<table border="0"> <thead> <tr> <th></th> <th>YES</th> <th>NO</th> </tr> </thead> <tbody> <tr> <td>DRESS.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>MOVEMENT.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>PLAYING.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>HH WORK.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>OUT WORK.....</td> <td>1</td> <td>2</td> </tr> </tbody> </table>		YES	NO	DRESS.....	1	2	MOVEMENT.....	1	2	PLAYING.....	1	2	HH WORK.....	1	2	OUT WORK.....	1	2																									
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307	Did you know about menarche and menstruation before you attained menarche? (तुम्हाला मासिक पाळी येण्याआधी मासिक पाळी विषयी माहिती होती का?)	YES ..... 1 NO ..... 2	→ Q309																																										
308	By what source? (कोणाकडून कळले)	<table border="0"> <thead> <tr> <th></th> <th>YES</th> <th>NO</th> </tr> </thead> <tbody> <tr> <td>MOTHER.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>FATHER.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>SISTER.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>OTHER FEMALE FAMILY MEMBER.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>TEACHER.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>FRIENDS.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>DOCTOR/HEALTH STAFF.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>SOCIAL WORKERS.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>MAGAZINE/LITERATURE.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>TV/CINEMA.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>SOCIAL MEDIA.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>INTERNET.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>OTHER.....</td> <td>1</td> <td>2</td> </tr> </tbody> </table>		YES	NO	MOTHER.....	1	2	FATHER.....	1	2	SISTER.....	1	2	OTHER FEMALE FAMILY MEMBER.....	1	2	TEACHER.....	1	2	FRIENDS.....	1	2	DOCTOR/HEALTH STAFF.....	1	2	SOCIAL WORKERS.....	1	2	MAGAZINE/LITERATURE.....	1	2	TV/CINEMA.....	1	2	SOCIAL MEDIA.....	1	2	INTERNET.....	1	2	OTHER.....	1	2	
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309	Did anybody tell you about menstrual hygiene before or soon after menarche? (मासिक पाळीच्या स्वच्छतेबद्दल तुम्हाला कोणी सांगितले आहे का? मासिक पाळी नंतर लगेच किंवा अगोदर ?)	YES..... 1 NO..... 2	→ Q311																																										
310	Who all had told you about menstrual hygiene? (तुम्हाला मासिक पाळीच्या स्वच्छतेबद्दल कोणी सांगितले होते?)	<table border="0"> <thead> <tr> <th></th> <th>YES</th> <th>NO</th> </tr> </thead> <tbody> <tr> <td>MOTHER.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>FATHER.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>SISTER.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>OTHER FEMALE FAMILY MEMBER.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>TEACHER.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>FRIENDS.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>DOCTOR/HEALTH STAFF.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>SOCIAL WORKERS.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>OTHER(SPECIFY ).....</td> <td>1</td> <td>2</td> </tr> </tbody> </table>		YES	NO	MOTHER.....	1	2	FATHER.....	1	2	SISTER.....	1	2	OTHER FEMALE FAMILY MEMBER.....	1	2	TEACHER.....	1	2	FRIENDS.....	1	2	DOCTOR/HEALTH STAFF.....	1	2	SOCIAL WORKERS.....	1	2	OTHER(SPECIFY ).....	1	2													
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311	Is your menstruation regular? (तुमची मासिक पाळी नियमित आहे का?)	REGULAR ..... 1 IRREGULAR ..... 2 DISCONTINUED ..... 3	Q313																																										

312	How long are you not having the period? (तुम्हाला किती काळ मासिक पाळी येत नाही?)	MONTHS ..... 1 <input type="text"/> <input type="text"/> YEARS ..... 2 DON'T KNOW ..... 8	
313	What was the interval between your last two cycles? (तुमच्या शेवटच्या दोन मासिक पाळी मधील अंतर किती होते?)	DAYS..... 1 <input type="text"/> <input type="text"/> MONTHS..... 2	
314	How long the bleeding continued? (रक्तस्राव किती काळ चालू राहतो?)	DAYS..... <input type="text"/>	
315	How was the flow of bleeding? (रक्तस्राव किती असतो?)	NORMAL..... 1 HEAVY ..... 2 SCANTY ..... 3	
316	What do you use to absorb the bleeding? (रक्तस्राव शोषण्यासाठी तुम्ही काय वापरता?)	YES NOSANITARY NAPKIN..... 1 2 CLOTH..... 1 2 MENSTRUAL CUPS..... 1 2	IF No Q331
317	Do you have access to Govt. supplied sanitary napkins? (तुम्हाला सरकार कडून सॅनिटरी नॅपकिन मिळते का ?)	YES ..... 1 NO ..... 2	Q325
318	Where do you get the Govt. supplied sanitary napkins? (तुम्हाला सरकार कडून मिळणारे सॅनिटरी नॅपकिन कोठून मिळते ?)	YES NO AT SCHOOL/COLLEGE..... 1 2 FROM ANM/ASHA/AW..... 1 2 AT PHC/CHC/SDH/DH..... 1 2 OTHERS(SPECIFY )..... 1 2	
319	How much they charge for the Govt. supplied napkin, perpack? (तुम्हाला सरकार कडून मिळणारे सॅनिटरी नॅपकिन साठी किती पैसे आकारले जाते ?)	RS <input type="text"/> <input type="text"/> FOR A PACK OF <input type="text"/> <input type="text"/> IF FREE ENTER "00" and skip to Q322	
320	How frequently do you receive sanitary napkins usually and how many sanitary napkins do you receive at one time? (तुम्हाला सहसा सॅनिटरी नॅपकिन्स किती वेळा मिळतात आणि तुम्हाला एका वेळी किती सॅनिटरी नॅपकिन्स मिळतात?)	FREQUENCY (MONTHS) <input type="text"/> <input type="text"/> Number AT ONE TOME <input type="text"/> <input type="text"/>	
321	What do you think about the quality (shape and size) of sanitary napkins supplied by the Govt.? (सरकारने पुरवलेल्या सॅनिटरी नॅपकिन्सच्या दर्जाबद्दल (आकार आणि आकार) तुम्हाला काय वाटते?)	SATISFIED ..... 1 NOT SATISFIED ..... 2 CAN'T SAY ..... 3	
322	Did they supply enough quantity? (त्यांनी पुरेसा पुरवठा केला का?)	SUFFICIENT..... 1 INSUFFICIENT..... 2	

323	<p>What is the quality of Govt. supplied sanitary napkins?  <b>(READ ALL OPTIONS)</b> (सरकारने पुरविलेल्या सॅनिटरी नॅपकिन ची दर्जा (quality) कसा आहे?)</p>	<table border="0"> <thead> <tr> <th></th> <th>YES</th> <th>NO</th> </tr> </thead> <tbody> <tr> <td>BETTER ABSORPTION.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>SENSE OF DRYNESS.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>LEAKAGE PREVENTION.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>THICKNESS.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>SOFT SURFACE/ NOT CAUSING SKIN IRRITATION.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>FLEXIBILITY/ NOT LIMITING MOBILITY.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>HAVING WINGS.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>ADHESION TO THE UNDERWEAR.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>LONG TIME USABILITY.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>ODOUR PREVENTION.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>BEING LONG.....</td> <td>1</td> <td>2</td> </tr> </tbody> </table>		YES	NO	BETTER ABSORPTION.....	1	2	SENSE OF DRYNESS.....	1	2	LEAKAGE PREVENTION.....	1	2	THICKNESS.....	1	2	SOFT SURFACE/ NOT CAUSING SKIN IRRITATION.....	1	2	FLEXIBILITY/ NOT LIMITING MOBILITY.....	1	2	HAVING WINGS.....	1	2	ADHESION TO THE UNDERWEAR.....	1	2	LONG TIME USABILITY.....	1	2	ODOUR PREVENTION.....	1	2	BEING LONG.....	1	2				
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324	<p>What are the problems in existing sanitary napkins supplied by the Govt.? (सरकारने पुरविलेल्या सॅनिटरी नॅपकिन मध्ये कोणकोणत्या त्रुटी आहे ?)  <b>(READ ALL OPTIONS)</b></p>	<table border="0"> <thead> <tr> <th></th> <th>YES</th> <th>NO</th> </tr> </thead> <tbody> <tr> <td>LEAKAGE.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>NOT TO TAKE SHAPE.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>DEFORMATION OF THE SURFACE....</td> <td>1</td> <td>2</td> </tr> <tr> <td>SENSE OF WETNESS.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>NEED OF FREQUENT CHANGES.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>CAUSING ALLERGY.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>CAUSING SKIN RASH.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>CAUSE BACTERIA/FUNGAL INFECTION..</td> <td>1</td> <td>2</td> </tr> <tr> <td>STIFFNESS.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>EXCESS ADHESION TO UNDERWEAR..</td> <td>1</td> <td>2</td> </tr> <tr> <td>INSUFFICIENT ADHESION TO UNDERWEAR.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>OTHERS(SPECIFY )_____</td> <td>1</td> <td>2</td> </tr> </tbody> </table>		YES	NO	LEAKAGE.....	1	2	NOT TO TAKE SHAPE.....	1	2	DEFORMATION OF THE SURFACE....	1	2	SENSE OF WETNESS.....	1	2	NEED OF FREQUENT CHANGES.....	1	2	CAUSING ALLERGY.....	1	2	CAUSING SKIN RASH.....	1	2	CAUSE BACTERIA/FUNGAL INFECTION..	1	2	STIFFNESS.....	1	2	EXCESS ADHESION TO UNDERWEAR..	1	2	INSUFFICIENT ADHESION TO UNDERWEAR.....	1	2	OTHERS(SPECIFY )_____	1	2	
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325	<p>Where do you buy your sanitary napkins? (तुम्ही सॅनिटरी नॅपकिन कोठून विकत घेता?)</p>	<table border="0"> <thead> <tr> <th></th> <th>YES</th> <th>NO</th> </tr> </thead> <tbody> <tr> <td>SHOPS.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>PHARMACY.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>ONLINE.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>OTHERS (SPECIFY )_____</td> <td>1</td> <td>2</td> </tr> <tr> <td>DONOT BUY.....</td> <td>1</td> <td>2</td> </tr> </tbody> </table>		YES	NO	SHOPS.....	1	2	PHARMACY.....	1	2	ONLINE.....	1	2	OTHERS (SPECIFY )_____	1	2	DONOT BUY.....	1	2	<p style="text-align: right;">→ Q 327</p>																					
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326	What all options do you look while selecting sanitary napkins? (तुम्ही सॅनिटरी नॅपकिन खरेदी करताना त्यामध्ये काय बघता?)	<p style="text-align: right;">YES NO</p> PERFORMANCE PROPERTIES.....1 2 PRICE.....1 2 BRAND.....1 2 HAVING PERFUME.....1 2 MADE OF NATURAL RAW MATERIAL.....1 2 BIODEGRADABILITY.....1 2 OTHERS(SPECIFY ).....1 2	
327	How do you dispose your used sanitary napkins off? (तुम्ही तुमच्या वापरलेल्या सॅनिटरी नॅपकिन्सची विल्हेवाट कशी लावता?)	<p style="text-align: right;">YES NO</p> THROW IN OPEN AREA..... 1 2 THROW IN TOILET..... 1 2 GIVE TO GARBAGE COLLECTING VEHICLE.....1 2 PUT IN SPECIALLY DESIGNED CONTAINER.....1 2 BURN.....1 2 BURY THE NAPKINS.....1 2 OTHERS (SPECIFY)..... 1 2	
328	Do you make any preparation before disposing your sanitary napkins? (तुमच्या सॅनिटरी नॅपकिन्सची विल्हेवाट लावण्यापूर्वी तुम्ही काही तयारी करता का?)	THROW AS IT IS..... 1 WRAP WITH NEWSPAPER .....2 WRAP SANITARY NAPKIN'S COVER..... 3 PUT IT IN BIODEGRADABLE BAG ..... 4 PUT IT IN PLASTIC BAG .....5 OTHERS(SPECIFY).....6	
329	How often do you change the pad/cloth in a day usually? (तुम्ही साधारणपणे दिवसातून किती वेळा पॅड/ कापड बदलता)	NO OF TIMES DURING HEAVY BLEEDING <input type="checkbox"/> NO OF TIMES DURING SACNTY BLEEDING <input type="checkbox"/>	
330	How do you decide to change your sanitary napkin/cloth? (तुमचा सॅनिटरी नॅपकिन/कपडा बदलण्याचा निर्णय तुम्ही कसा घेता ?)	<p style="text-align: right;">YES NO</p> SENSE OF WETNESS..... 1 2 LEAKAGE..... 1 2 BAD SMELL.....1 2 SHAPE DEFORMATION.....1 2 OTHERS(SPECIFY )..... 1 2	
331	CHECK Q316: IF USES CLOTH (Q316 तपासा: कापड वापरत असल्यास)	USE CLOTH.....1 DON'T USE CLOTH .....2	→ Q333

332	How do you clean and dry the cloth? (तुम्ही कापड कसे स्वच्छ आणि कोरडे करता ?)	HOT WATER & SUN SHINE ..... 1 HOT WATER & SHADE PLACE..... 2 ORDINARY WATER & SUN SHINE.....3 ORDINARY WATER & SHADE PLACE .....4 DON'T USE MORE THAN ONCE ..... 5 OTHER (SPECIFY)..... 6	
333	CHECK Q316: IF USES MENSTRUAL CUPS? (Q316 तपासा: जर मासिक पाळीचा कप वापरत असेल)	USE MENSTRUAL CUPS..... 1 DON'T USE MENSTRUAL CUPS..... 2	→ Q337
334	From where do you get the menstrual cups? (मासिक पाळीचे कप कुठून मिळतात?)	SCHOOL/COLLEGE..... 1 HEALTH WORKERS ..... 2 SHOPS ..... 3 OTHER (SPECIFY)..... 4	
335	Tell me about your experience of using menstrual cups, Its use, quality, washing etc. (मासिक पाळीचा कप वापरण्याचा तुमचा अनुभव, त्याचा वापर, दर्जा, धुणे इत्यादीबद्दल मला सांगा.)	_____ _____ _____	
336	Are you satisfied with the use of menstrual cups? (मासिक पाळीच्या कपच्या वापराबद्दल तुम्ही समाधानी आहात का?)	YES ..... 1 NO..... 2	
337	Do you experience any pain, discomfort, and feeling distress during your periods? (तुमच्या मासिक पाळीत तुम्हाला वेदना, अस्वस्थता आणि त्रास जाणवतो का?)	YES ..... 1 NO..... 2	→ Q343
338	What are the problems? (समस्या काय आहेत?)	YES NO HEADACHE.....1 2 LIMBS PAIN.....1 2 SEVERE ABDOMINAL/BACK PAIN..... 1 2 HEAVY BLEEDING..... 1 2 SEVERE DISTRESS/IRRITATION..... 1 2 OTHER(SPECIFY )..... 1 2	
339	How long are you experiencing these problems? (या समस्या तुम्हाला कधी पासून आहे ?)	Monthly ..... 1 Sometimes ..... 2	<input type="checkbox"/>

340	With whom do you discuss your menstrual problems? (तुमच्या मासिक पाळीच्या समस्यांवर तुम्ही कोणाशी चर्चा करता?)	YES NO MOTHER.....1 2 FATHER .....1 2 SISTER.....1 2 OTHER FEMALE FAMILY MEMBER.....1 2 TEACHER.....1 2 FRIENDS.....1 2 ASHA.....1 2 ANM.....1 2 DOCTOR.....1 2 DON'T DISCUSS.....1 2 OTHER(SPECIFY ).....1 2	
341	Have you sought any treatment or home remedy for the problems? (तुम्ही या समस्यांसाठी काही उपचार किंवा घरगुती उपाय शोधले आहेत का?)	YES .....1 NO .....2	343
342	Where did you seek treatment/remedy? (तुम्ही उपचार कोठे केले?)	YES NO HOME REMEDY.....1 2 PHARMACY.....1 2 ANM.....1 2 ASHA.....1 2 PHC.....1 2 CHC.....1 2 SDH/DH.....1 2 PRIVATE CLINIC/DOCTOR.....1 2 RMP.....1 2 OTHER(SPECIFY ).....1 2	
343	During last one year, have you had any problem of pain or burning sensation while urinating, or more frequent or difficult urination? (गेल्या एका वर्षात, तुम्हाला लघवी करताना वेदना किंवा जळजळ होण्याची किंवा जास्त वेळा किंवा लघवी करताना काही त्रास त्रास आहे का?)	YES .....1 NO .....2	
344	During last one year, have you had rashes or ulcers on your genitals? (गेल्या एका वर्षात, तुम्हाला तुमच्या गुप्तांगांवर पुरळ किंवा ब्रण आले आहेत का?)	YES .....1 NO .....2	
345	Have you had any of the following with your vaginal discharge During last one year? (मागील एका वर्षात तुम्हाला तुमच्या योनीतून स्राव झाला आहे का?)  a. Any itching or irritation in Vaginal area with the discharge? (डिस्चार्जसह योनीच्या भागात कोणतीही खाज होते का? किंवा जळजळ होते का ?)  b. Any bad odor along with the discharge? (डिस्चार्जसह सोबत कोणतीही दुर्गंधी येते का?)	YES NO ITCHING.....1 2 BAD ODOR.....1 2	

	<p>c. Severe abdominal pain with the discharge not during menstruation? (मासिक पाळी व्यतिरिक्त होणाऱ्या स्त्राव मुळे पोटात तीव्र वेदना होतात का?)</p> <p>d. Fever along with the discharge? (डिस्चार्ज सोबत ताप येतो का ?)</p>	<p>ABDOMINAL PAIN.....1 2</p> <p>FEVER..... 1 2</p>	
346	CHECK: WHETHER 'YES' TO ANY OF THE PROBLEMS (For Q345 to Q347) (तपासा: कोणत्याही समस्येसाठी 'होय' आहे की नाही (Q345 ते Q347))	<p>HAD PROBLEMS ..... 1</p> <p>NO PROBLEM ..... 2</p>	→ Q401
347	Have you sought any treatment? If yes Where? (तुम्ही काही उपचार घेतले आहेत का? जर होय तर कुठे?)	<p>NOT SOUGHT..... 1</p> <p>PHARMACY..... 2</p> <p>ANM ..... 3</p> <p>ASHA ..... 4</p> <p>PHC ..... 5</p> <p>CHC..... 6</p> <p>SDH/DH..... 7</p> <p>PRIVATE CLINIC/DOCTOR ..... 8</p> <p>RMP ..... 9</p> <p>OTHER(SPECIFY )..... 10</p>	

#### 4. Marriage and Fertility

No.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
401	Are you married? (तुमचे लग्न झाले आहे का?)	<p>YES..... 1</p> <p>NO..... 2</p>	→ Q501
402	At what age have you got married? (लगनाच्या वेळी तुमचे वय किती होते ?)	AGE AT MARRIAGE..... <input type="text"/>	
403	Has consummation of marriage taken place? (विवाह संपन्न झाला आहे का?)	<p>YES..... 1</p> <p>NO..... 2</p>	→ Q501
404	Did you ever become pregnant? (तुम्ही कधी गरोदर झालात का?)	<p>YES..... 1</p> <p>NO..... 2</p>	→ Q407
405	How many times you became pregnant? (तुम्ही किती वेळा गरोदर झालात?)	TIMES.....	
406	What were the outcomes of the pregnancy terminations? (गर्भधारणा संपुष्टात आणण्याचे परिणाम काय होते?)	<p>LIVE BIRTHS..... <input type="checkbox"/></p> <p>STILL BIRTHS..... <input type="checkbox"/></p> <p>SPONTANEOUS ABORTIONS... <input type="checkbox"/></p> <p>INDUCED ABORTIONS..... <input type="checkbox"/></p>	
407	Are you or your spouse using any family planning method to avoid or postpone pregnancy? (गर्भधारणा टाळण्यासाठी किंवा पुढे ढकलण्यासाठी तुम्ही किंवा तुमचा जोडीदार कुटुंब नियोजनाची कोणतीही पद्धत वापरत आहात का?)	<p>YES..... 1</p> <p>NO..... 2</p>	→ Q501
408	Which method you or your spouse using currently? (तुम्ही किंवा तुमचा जोडीदार सध्या कोणती पद्धत वापरत आहात?)	<p>FEMALE STERILISATION ..... 1</p> <p>MALE STERILISATION ..... 2</p> <p>IUCD..... 3</p>	

	ORAL PILLS .....4	
	MALE CONDOM.....5	
	FEMALE CONDOM .....6	
	INJECTABLES.....7	
	NATURAL METHOD.....8	
	OTHER.....9	

## 5. Practices around menstruation

No.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
501	Do you observe separation during menstruation? (मासिक पाळीच्या दरम्यान तुम्ही वेगळेपणाचे निरीक्षण करता का?)	YES.....1 NO .....2	
502	Do you observe NOT Touching or coming into contact with small children during menstruation? If yes, why? (मासिक पाळीच्या वेळी लहान मुलांच्या संपर्कात येत नाही किंवा स्पर्श करत नाही हे तुम्ही पाहिलं का? जर होय असेल तर कारण काय ?)	YES, CHILDREN BECOME WEAK..... 1YES, PEOPLE TALK/SCOLD..... 2 NO (NOT REFRAIN) ..... 3	
503	Do you observe NOT going to temples/worship centers during menstruation? (मासिक पाळीच्या काळात मंदिर/पूजा केंद्रात जात नाही असे तुम्ही पाहता का?)	DON'T GO .....1 GO TO TEMPLES..... 2	
504	Do you observe NOT entering into Pooja room during menstruation? (मासिक पाळीच्या वेळी पूजा घरात प्रवेश करत नाही असे तुम्ही पाळता का?)	DON'T GO .....1 GO TO POOJA ROOM..... 2	
505	Do you restrict your activities like exercise and sports during menstruation? (मासिक पाळीच्या दरम्यान तुम्ही व्यायाम आणि खेळ यासारख्या क्रिया वर मर्यादा घालता का?)	YES, RESTRICT .....1 DON'T RESTRICT..... 2	
506	Do you restrict your school-going activities during menstruation? (मासिक पाळीच्या दरम्यान तुम्ही तुमच्या शाळेला जायला मर्यादा घालता का?)	YES, RESTRICT ..... 1 DON'T RESTRICT..... 2 NOT APPLICABLE..... 3	
507	Are you allowed to take bath during your menstrual period? (तुम्हाला तुमच्या मासिक पाळीत आंघोळ करण्याची परवानगी आहे का?)	YES.....1 NO .....2	
508	Do you follow any dietary restrictions during menstruation? If yes, what all you avoid or eat more? (मासिक पाळीच्या दरम्यान तुम्ही आहारातील काही निर्बंध पाळता का? जर होय, तर तुम्ही काय टाळता किंवा जास्त खाता?)	YES.....1 NO .....2	Q 509
509	Are there any specific practices and difficulties experienced relating to menstruation like going to open defecation, fetching water, outside work, separation, etc.?  उघड्यावर शौचास जाणे, पाणी आणणे, बाहेरचे काम करणे, वेगळे करणे इ. मासिक पाळीच्या संदर्भात काही विशिष्ट पद्धती आणि अडचणी येतात का?	YES..... 1 NO.....2	Q 601



## 6. National Adolescent Programmes and its impact on Menstrual hygiene

601	Have you received any knowledge on menstrual health and hygiene from RKSK, Peer Education Programmes, Aanganwadi Centre or other programmes?  (तुम्हाला RKSK, पीअर एज्युकेशन प्रोग्राम्स, अंगणवाडी केंद्र किंवा इतर कार्यक्रमांकडून मासिक पाळी आरोग्य आणि स्वच्छतेबद्दल काही माहिती/ज्ञान मिळाले आहे का?)	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;"></th> <th style="width: 10%; text-align: center;">YES</th> <th style="width: 10%; text-align: center;">NO</th> </tr> </thead> <tbody> <tr> <td>ASHA.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>ANM.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>OTHER HEALTH STAFF.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>AWW.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>SCHOOL TEACHER.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>PEER EDUCATOR.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>NGO.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> </tbody> </table>		YES	NO	ASHA.....	1	2	ANM.....	1	2	OTHER HEALTH STAFF.....	1	2	AWW.....	1	2	SCHOOL TEACHER.....	1	2	PEER EDUCATOR.....	1	2	NGO.....	1	2	<b>NO FOR ALL SKIP</b>																					
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602	Where did you get this knowledge?  हे ज्ञान तुम्हाला कुठून मिळाले?	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;"></th> <th style="width: 10%; text-align: center;">YES</th> <th style="width: 10%; text-align: center;">NO</th> </tr> </thead> <tbody> <tr> <td>AT AWC.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>AT PUBLIC HEALTH FACILITY.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>AT SCHOOL/COLLEGE.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>HOME.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>OTHER (SPECIFY).....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> </tbody> </table>		YES	NO	AT AWC.....	1	2	AT PUBLIC HEALTH FACILITY.....	1	2	AT SCHOOL/COLLEGE.....	1	2	HOME.....	1	2	OTHER (SPECIFY).....	1	2																												
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603	What all knowledge have you received through these programmes regarding menstrual health and hygiene? Explain  (मासिक पाळी आरोग्य आणि स्वच्छतेबाबत या कार्यक्रमांतून तुम्हाला काय ज्ञान/माहिती मिळाले आहे? कृपया स्पष्ट करा का ?)	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;"></th> <th style="width: 10%; text-align: center;">YES</th> <th style="width: 10%; text-align: center;">NO</th> </tr> </thead> <tbody> <tr> <td>MENSTRUAL HYGIENE/CLEANLINESS.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>MENSTRUAL PROBLEMS.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>REPRODUCTIVE HEALTH SYSTEM.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>RTI/STI/HIV.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>NUTRITIOUS FOOD.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>FAMILY PLANNING METHODS.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>IMPORTANCE OF IFA/WIFS TABLETS.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>PROPER USE OF MEDICATION.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>OTHER (SPECIFY).....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> </tbody> </table>		YES	NO	MENSTRUAL HYGIENE/CLEANLINESS.....	1	2	MENSTRUAL PROBLEMS.....	1	2	REPRODUCTIVE HEALTH SYSTEM.....	1	2	RTI/STI/HIV.....	1	2	NUTRITIOUS FOOD.....	1	2	FAMILY PLANNING METHODS.....	1	2	IMPORTANCE OF IFA/WIFS TABLETS.....	1	2	PROPER USE OF MEDICATION.....	1	2	OTHER (SPECIFY).....	1	2																
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604	In what way these programmes have benefitted you regarding menstrual health and hygiene?  (मासिक पाळीतील आरोग्य आणि स्वच्छतेबाबत या कार्यक्रमांचा तुम्हाला कोणत्या प्रकारे फायदा झाला आहे?)	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;"></th> <th style="width: 10%; text-align: center;">YES</th> <th style="width: 10%; text-align: center;">NO</th> </tr> </thead> <tbody> <tr> <td>GOT THE KNOWLEDGE ON</td> <td></td> <td></td> </tr> <tr> <td>MENSTRUAL HEALTH AND HYGIENE...</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>NUTRITION.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>SEXUAL &amp; REPRODUCTIVE HEALTH...</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>IDENT. OF SYMPTOMS RELATED</td> <td></td> <td></td> </tr> <tr> <td>TO GYNEC PROBLEMS.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>GOT TAKE HOME RATION.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>GOT SANITARY NAPKINS.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>GOT IFA/WIFS/DEWORMING TABLETS....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>GOT HEALTH CHECK UP.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>GOT IMMUNIZATION.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>FOLLOWING HYGIENIC PRACTICES.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>TAKING BATH DURING</td> <td></td> <td></td> </tr> <tr> <td>MENSTRUATION.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> </tbody> </table>		YES	NO	GOT THE KNOWLEDGE ON			MENSTRUAL HEALTH AND HYGIENE...	1	2	NUTRITION.....	1	2	SEXUAL & REPRODUCTIVE HEALTH...	1	2	IDENT. OF SYMPTOMS RELATED			TO GYNEC PROBLEMS.....	1	2	GOT TAKE HOME RATION.....	1	2	GOT SANITARY NAPKINS.....	1	2	GOT IFA/WIFS/DEWORMING TABLETS....	1	2	GOT HEALTH CHECK UP.....	1	2	GOT IMMUNIZATION.....	1	2	FOLLOWING HYGIENIC PRACTICES.....	1	2	TAKING BATH DURING			MENSTRUATION.....	1	2	
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		CHANGING SANITARY PADS/CLOTH FREQUENTLY.....1 2 PROPER DISPOSAL OF SANITARY PADS.....1 2 WASHING & DRYING THE CLOTHES UNDER SUNSHINE.....1 2 TAKING NUTRITIOUS FOOD.....1 2 OTHER (SPECIFY).....1 2	
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### 7. Impact of climate vulnerability on menstrual hygiene

701	Do you experience/face crisis situation (Flood/Cyclone/Drought/Snowfall) in your area. तुम्ही तुमच्या क्षेत्रात संकटाची परिस्थिती (पूर/चक्रीवादळ/तुष्काळ/हिमवर्षाव) अनुभवली आहे का? (TICK THE OPTION) (पर्यायावर टिक करा)	YES.....1 NO.....2	<b>If NO , End</b>
702	<b>Usually</b> How long this crisis situation continues in a year? सहसा ही संकट परिस्थिती एका वर्षात किती काळ चालू राहते?	MONTHS <input type="text"/> <input type="text"/>	
703	What specific problems/challenges do you/your neighbors face during this situation relating to <b>getting water</b> for drinking/bathing/washing clothes etc.? या परिस्थितीत तुम्हाला/तुमच्या शेजाऱ्यांना पिण्यासाठी/आंघोळीसाठी/कपडे धुण्यासाठी पाणी मिळण्यासंबंधी कोणत्या विशिष्ट समस्या/आव्हानांचा सामना करावा लागतो?	YES NO NO PROBLEM.....1 2 NON AVAILABILITY OF WATER AT ALL...1 2 NO CLEAN WATER FOR DRINKING.....1 2 NON AVAILABILITY OF WATER FOR BATH.....1 2 NO WATER FOR WASHING CLOTH.....1 2 OTHER (SPECIFY).....1 2 OTHER (SPECIFY).....1 2	<b>IF YES SKIP TO Q705</b>
704	How do you or your neighbors usually manage it? तुम्ही किंवा तुमचे शेजारी सहसा ते कसे व्यवस्थापित करता?	YES NO BOILED WATER FOR DRINKING.....1 2 SUPPLIED BY TANK WATER.....1 2 PURCHASED BOTTLE WATER.....1 2 BROUGHT IT FROM UNAFFECTED AREA...1 2 CLOTHS NOT WASHED.....1 2 DID NOT TAKE BATH.....1 2 OTHER (SPECIFY).....1 2 OTHER (SPECIFY).....1 2	
705	What specific problems/challenges do you face (relating to Flood/Cyclone/Drought situation in your area) relating to <b>drying of cloth used during periods/disposal of sanitary pads</b> ? How do you manage? (सॅनिटरी पॅड्सची विल्हेवाट लावताना वापरल्या जाणाऱ्या कापड सुकवण्याशी संबंधित (तुमच्या क्षेत्रातील पूर/चक्रीवादळ/तुष्काळ परिस्थितीशी मध्ये संबंधित) तुम्हाला कोणत्या विशिष्ट समस्या/ आव्हानांचा सामना करावा लागतो? तुम्ही त्याचे कसे व्यवस्थापन करता?)	YES NO NO PROBLEM.....1 2 NO WATER TO WASH MEN. CLOTHES....1 2 NO PLACE TO WASH.....1 2 NO PLACE TO DRY.....1 2 NO SUNSHINE TO DRY.....1 2 NO OPTIONS FOR THE SAFE DISPOSAL...1 2 OTHER (SPECIFY).....1 2 OTHER (SPECIFY).....1 2	<b>IF YES SKIP TO Q707</b>

706	<p>How do you /your friends usually manage in such situation? अशा परिस्थितीत तुम्ही/तुमचे मित्र सहसा कसे व्यवस्थापित करता?</p>	<p style="text-align: right;">YES NO</p> <p>NEW CLOTHES SUPPLIED .....1 2</p> <p>BURNT/BURRY THE NAPKINS.....1 2</p> <p>USE NEWSPAPERS .....1 2</p> <p>HAND OVER TO THE GARBAGE COLLECTOR.....1 2</p> <p>THROW IN OPEN AREA.....1 2</p> <p>USE NEITHER CLOTHES NOR NAPKINS.....1 2</p> <p>OTHER (SPECIFY).....1 2</p> <p>OTHER (SPECIFY).....1 2</p>	
707	<p>What are the problems/challenges do you/your friends face relating to <b>bathing during such situation</b>? अशा परिस्थितीत आंधोळीसाठी तुम्हाला/तुमच्या मैत्रिणींना कोणत्या समस्या/आव्हानांचा सामना करावा लागतो?</p>	<p style="text-align: right;">YES NO</p> <p>NO PROBLEMS.....1 2</p> <p>NOT BATHED DURING MEN. PERIOD.....1 2</p> <p>NO WATER AVAILABLE TO BATH.....1 2</p> <p>PRIVACY IS NOT AVAILABLE FOR BATHING.....1 2</p> <p>BATHED BY USING CONTAMINATED WATER.....1 2</p> <p>BATHED IN OPEN PLACE.....1 2</p> <p>OTHER (SPECIFY).....1 2</p>	<b>IF YES SKIP TO Q708</b>
708	<p>Have you moved away from your home like in tents/camps during such a situation anytime? अशा परिस्थितीत तुम्ही तंबू/छावणीमध्ये राहण्यास तुमच्या घरापासून दूर गेला आहात का?</p>	<p>YES..... 1</p> <p>NO..... 2</p>	▶ <b>END</b>
709	<p>If Yes, What all problems /challenges you faced relating to menstruation in camps/tents? How did you manage? (पूर/चक्रीवादळ/दुष्काळामुळे तुम्हाला तुमच्या घरापासून दूर जावे लागले आहे का? जर होय, तर तुम्हाला शिबिरे/तंबूत मासिक पाळीशी संबंधित कोणत्या समस्या/आव्हानांचा सामना करावा लागला? आपण त्याचे कसे व्यवस्थापन केले?)</p>	<p style="text-align: right;">YES NO</p> <p>NO PRIVACY AND SECURITY .....1 2</p> <p>SPENT IN OPEN PLACE.....1 2</p> <p>NOT GOT ENOUGH SLEEP.....1 2</p> <p>NO FREE MOVEMENT.....1 2</p> <p>NO PLACE TO CHANGE DRESS/PADS..1 2</p> <p>NO WATER AVAILABLE.....1 2</p> <p>NO PROPER FOOD.....1 2</p> <p>NO MEDICINES.....1 2</p> <p>AFFECT EDUCATION.....1 2</p> <p>AFFECT WORK/JOB.....1 2</p> <p>OTHER (SPECIFY).....1 2</p> <p>OTHER (SPECIFY).....1 2</p>	

## **OBSERVATION SHEET**

I am thankful to you for your time and answering all queries. The information shared by you will help us meet our research objective. I would be happy to answer if you have any question.

### **INTERVIEWER'S OBSERVATIONS**

**TO BE FILLED IN AFTER COMPLETING INTERVIEW**

#### **COMMENTS ABOUT RESPONDENT:**

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#### **COMMENTS ON SPECIFIC QUESTIONS:**

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#### **ANY OTHER COMMENTS:**

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SUPERVISOR'S SIGNATURE \_\_\_\_\_

पर्यवेक्षकाची स्वाक्षरी \_\_\_\_\_

## Procedure for Selection of District in Maharashtra

Sr. No.	District Name	Use of hygienic methods (15 - 24)	Vulnerability Index	Event	Vulnerability	Selected Districts
1	Nandurbar	47.5	0.557	Drought	High	
2	Dhule	60.7	0.734	Drought	Very High	
3	Jalgaon	70.1	0.612	Flood & Drought	Very High	Selected
4	Bid	70.7	0.496	Drought	High	
5	Jalna	71.8	0.318	Drought	Moderate	
6	Washim	72.5	0.244	Drought	Moderate	
7	Buldhana	74.8	0.694	Drought	Very High	
8	Parbhani	75.3	0.561	Drought	High	
9	Nanded	76.8	0.501	Drought	High	
10	Hingoli	77.2	0.612	Drought	Very High	
11	Aurangabad	77.3	0.485	Flood & Drought	High	
12	Nashik	79.3	0.324	Flood & Drought	Moderate	
13	Akola	79.7	0.525	Drought	High	
14	Gadchiroli	80.9	0.317	Drought	Moderate	
15	Latur	81.0	0.395	Drought	Moderate	
16	Amravati	83.00	0.351	Flood & Drought	Moderate	
17	Palghar	83.8				
18	Chandrapur	84.1	0.226	Drought	Moderate	
19	Ahmednagar	84.2	0.813	Drought	Very High	Selected
20	Solapur	84.5	0.75	Drought	Very High	
21	Ratnagiri	84.6	0.26	Flood & Cyclone	Moderate	
	<b>Maharashtra</b>	<b>84.8</b>				
22	Osmanabad	86.5	86.5	Drought	High	
23	Satara	87.2	87.2	Drought	High	
24	Sangli	87.4	87.4	Drought	Very High	Selected
25	Nagpur	88.5	88.5	Drought	High	
26	Gondiya	88.6	88.6	Drought	Moderate	
27	Yavatmal	89.3	89.3	Drought	Low	
28	Sindhudurg	89.4	89.4			
29	Raigarh	89.6	89.6	Drought	Moderate	
30	Thane	91.5	91.5	Flood & Cyclone	Low	
31	Kolhapur	91.9	91.9	Drought	Very Low	
32	Bhandara	93.1	93.1	Drought	Low	
33	Wardha	94.0	94.0	Flood & Drought	Low	
34	Pune	94.6	94.6	Flood & Drought	Moderate	
35	Mumbai Suburban	96.2	96.2			
36	Mumbai	99.1	99.1	Flood & Cyclone	Very High	Selected