

**KNOWLEDGE AND PRACTICE ON MENSURATION AMONG
HIGH SCHOOL ADOLESCENT GIRLS**

(A Study of Sandhikharka Municipality, Arghakhanchi District)

**A Thesis Submitted to
Faculty of Humanities and Social Sciences, Department of Rural Development,
Saptagandaki Multiple Campus, Tribhuvan University
in Partial Fulfillment of Requirements for the
Master's Degree of Arts in
Rural Development**

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RECOMMENDATION LETTER

This thesis entitled **sAND PRACTICE ON MENSURATIONAMONG HIGH SCHOOL ADOLESCENT GIRLS**"has been prepared by **Bishnu Kumari Dawadi**under my guidance and supervision. I hereby forward this thesis for evaluation committee for final evaluation and approval.

.....
(Mr. Ram Prasad Tiwari)
Lecture

APPROVAL SHEET



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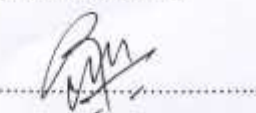
APPROVAL LETTER

This thesis entitled **Knowledge and Practice on Menstruation among High School Adolescent Girls (A Study of Sandhikharka Municipality, Arghakhanchi)** submitted by **Bishnu Kumari Dawadi**, has been accepted in partial fulfillment of the requirements for the Degree of Master of Arts (MA) in Rural Development.

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DECLARATION

I hereby declare that the thesis entitled "**KNOWLEDGE AND PRACTICE ON MENSURATION AMONG HIGH SCHOOL ADOLESCENT GIRLS**" submitted to the Saptagandaki Multiple Campus, Chitwan, Nepal, Department of Rural Development, Faculty of Humanities and Social Science, Tribhuvan University is entirely my original work prepared under the guidance and supervision of my Supervisor. I have made due acknowledgements to all ideas and information borrowed from different sources in the course of preparing this thesis. The result of this thesis have not been presented or submitted anywhere else for the award of my degree or for any other purposes. I assure that no part of the content of this thesis has been published in any form before.

Bishnu Kumaari Dawadi

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ABSTRACT

This research entitled "Knowledge and Practice on Mensuration among High School Adolescent Girls: A study of Sandhikharka Municipality, Arghakhanchi, "District is carried out for the partial fulfillment of the requirement of the course Master in Rural Development. The main objectives of this research is to assess the knowledge and sources of information of adolescent school girls about menstruation, to identify the socio-cultural traditions and restrictions practiced during Mensuration and to identify the reasons of school absenteeism during menstruation. Three research questions are made to address the objective of the study. A quantitative research design is used for the study under which survey method is used as main tools. The students of three schools are selected for the study where 312 sampling of girls students are taken as respondents. After collecting the data, the data are analyzed by using statistical tools and represented in charts and diagrams. After collecting the information from field this research try to address the answers of all research questions. After analysis of the data it can be concluded that family members (mother, sisters, cousin sisters, grandmother) are the major source of information of Mensuration for adolescent girls. The knowledge generally transform from mother to daughter. This knowledge is not enough because still some girls have miss conception about Mensuration periods and cycle. Girls still do not have good hygiene practices. They still use clothes during menstruation. However the number of such girls who are using cloths is lesser, that indicates that girls are now conscious about their health. Still more than half girls do not bath regularly during the Mensuration period and about 75% girls do not use soap for cleaning the vaginal part during the menstruation. Still 40% girls do not stay in their own room during the Mensuration period and some of them are sent to their neighbor's house as well. The superstitions of untouchability during the Mensuration are almost there in every household. They are not allowed to enter and work in the kitchen during the Mensuration period. It means the family members restrict the girls for doing rituals activities and other household's activities during Mensuration periods. Still half of the girls do not go schools on the first day of the menstruation. Among many reasons the common reason for this is health problem. The girls feel physically weak during the time and some even feel severe pain so they could not attend their class.

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ACRONYMS/ABBREVIATIONS

AAP	American Academy of Pediatrics
DDC	District Development Committee
DEO	District Education Office
FAWE	The Forum For African Women Educationalist
FHD	Family Health Division
ICPD	International Conference on Population and Development
MA	Master of Arts
MDG	Millennium Development Goal
MHM	Menstrual Hygiene Management
MoHP	Ministry of Health and Population
NAHDS	National Adolescent Health and Development Strategy
TU	Tribhuvan University
WASH	Water Sanitation and Hygiene
WHO	World Health Organization

CHAPTER I

INTRODUCTION

1.1 General Background

The World Health Organization (WHO) defines adolescents as the age group 10–19 years. The meaning of adolescence as a cultural construct has been understood in many different ways throughout the world. However, in general terms, it is considered a time of transition from childhood to adulthood, during which young people experience changes following puberty, but do not immediately assume the roles, privileges and responsibilities of adulthood (WHO,2003) .

Adolescence in girls has been recognized as a special period which signifies the transition from girlhood to womanhood. Mensurationis generally considered as unclean. Isolation of the menstruating girls and restrictions being imposed on them in the family, have reinforced a negative attitude towards this phenomenon (Water Aid, 2009). Several studies have reported restrictions during the daily activities. Apart from these, they believe in specified taboos at menarche and menstruation. There is a substantial lacuna in the knowledge about Mensurationamong adolescent girls (Zegeye, Megabiaw and Mulu, 2009). Several research studies have revealed this gap and they showed that there was a low level of awareness about Mensurationamong the girls when they first experienced it (Sharma,1999).

Social prohibitions and the negative attitude of parents in discussing the related issues openly have blocked the access of adolescent girls to the right kind of information, especially in the rural and tribal communities. Infections due to lack of hygiene during Mensurationhave been reported in many studies. Many studies have revealed that most of the adolescent girls had incomplete and inaccurate information about the menstrual physiology and hygiene. It also revealed that mothers, television, friends, teachers and relatives were the main sources which provided information on Mensurationto the adolescent girls. Good hygienic practices such as the use of sanitary pads and adequate washing of the genital area are essential during menstruation. Women and girls of the reproductive age need access to clean and soft, absorbent sanitary products which can in the long run, protect their health (Adhikary et al., 2007).

Menstrual hygiene and management will directly contribute to (MDG)-2 on universal education, MDG-3 on gender equality and women empowerment. However, the attention on this issue is far from sufficient and even the literature on gender mainstreaming in the sanitary section is silent on the issue of menstrual management. A key priority for women and girls is to have the necessary knowledge, facilities and the cultural environment to manage Mensurationhygienically and with dignity. Very few studies have included the detailed aspects of the menstrual practices among adolescent girls. It was therefore considered as relevant to investigate the Mensurationrelated knowledge and practices among the school going adolescent girls. The data about their level of knowledge and the practices which are followed by them with respect to Mensurationare beneficial for planning a program for improving the awareness level with respect to their life processes and promoting their quality of life (Thakre et.al n.d.).

1.2 Problem Statement

The issue of menstrual hygiene has the growing attention of women in developing countries. Many researches showed that Mensurationhygiene has been one of the major challenges for developing countries especially in Asia and Africa. A research carried out by Ten (2007) explained that the lack of menstrual hygiene in many countries in Africa and Asia is perceived as an urgent problem and that several grass roots initiatives are trying to find a solution. The Forum for African Women Educationalists (FAWE, As Cited in Ten, 2007) in Uganda observes that Mensurationis the most important factor affecting school drop–out among girls. The report shows that the cause lies in a combination of poverty, local customs, cultural traditions and taboos. Another finding of research carried out by University of Teheran shows that 15% of girls between the age of 15 and 18 years do not attend school 1 to 7 days per month because of Mensurationrelated problems (Thakre et.al. n.d.).

The cases of Nepal are also similar to above cases. The report of Ministry of Health and Population (MoHP, 2011) mentioned that, adolescent in Nepal often face severe poverty, limited access to education and health services and restrictive cultural and sexual norms. In a study conducted in Chitwan among school adolescent girls, it was found that knowledge related to Mensurationwas better than practice. Around 71% girls used to miss school during period of Mensurationoften and no girls were allowed to cook during Mensuration(Adhikari et.al. 2007).

In Dharan, among school girls aged 11-17 years of age, 6.9% cases were of oligomenorrhea, 10% of hypomenorrhea and 6.2% menorrhagia were seen with 6.7% having spasmodic dysmenorrhea. Of all, 20% girls had their daily activities hampered (Sharma & Gupta, 2003). The descriptive analysis of women who attended mobile reproductive health camps in eastern Terai of Nepal organized at different villages of Rautahat, Mahottari and Saptari, menstrual disorders were found in 16.7% with problems like irregular cycles, dysmenorrhea, scanty bleeding and amenorrhea, heavy or prolonged bleeding, etc (Dangal, 2008).

In the context where cultural taboos restrict the activities of menstruating women and girls where the lack of adequate sanitary protection makes movement away from home physically impossible, the onset of menses will inevitably have an impact on girls' access to education. For girls who are able to continue attending and participating in school, the widespread reality of poor sanitary facilities, ignorance about menstruating girls' needs and experiences, can mean that the schooling experience is far from a positive one. Regular absence from school for several days a month can even in the short term have a negative impact on girls learning and therefore on her academic performance in school (Kirk & Sommer, 2005).

As Arghakhachi is a district which lies in the middle hill of the Nepal, the situation of girls are not so good. Still girls are not given first priority and they are lacking proper sanitation. In my regular visit to schools, community and discussion with the girls I found many challenges of girls during the Mensurationperiod. Because of traditional thinking and superstition belief they are not allowed to touch others, not allowed to enter the kitchen and many of them remain absent in school during the menstruation. As a student of Rural Development, I want to raise this issue to the other people and want to know the actual situation of girls regarding the Mensurationhygiene. This research is therefore carried out to explore the hidden truth of Mensurationhygiene of the girls.

1.3 Objective of the Study

General objective

The general objectives of this study is to determine the level of knowledge and practice of Mensuration among secondary level adolescent school girls

Specific objectives

- i. To assess the knowledge and sources of information of adolescent school girls about Mensuration
- ii. To identify the socio-cultural traditions and restrictions practiced during Mensuration
- iii. To identify the reasons of school absenteeism during Mensuration

1.4 Research Question

To meet the above objectives this research is guided by given research question:

- i. What are the sources of information of adolescent school girls about menstruation?
- ii. What are the social cultural traditions and restrictions practiced during menstruation?
- iii. What are the reasons of school absenteeism during menstruation?

1.5 Rationale of the Study

Adolescent reproductive health is one of the vital components of overall reproductive health. With the adoption of plan of action of International Conference on Population and Development (ICPD) in 1994, Cairo, and again in 1995 at the fourth International Conference on women in Beijing, the global community resolved to “protect and promote the rights of adolescent’s access to sexual and reproductive health information and services” (FHD/MoHP, 2000).

In South Asia menstrual hygiene management is absent from programmes for community water and sanitation, school sanitation, and hygiene promotion. Whilst sanitation and hygiene programmes have successfully promoted, affordable production and supply of soap and toilet construction materials, for poor communities, the availability of affordable sanitary pads has not been considered (Mahon & Fernandes, 2010).

Reproductive health of adolescent is the priority program of Government of Nepal. The Family Health Division, Ministry of Health and Population (FHD/MoHP) has

developed a National Adolescent Health and Development Strategy (NAHDS) in 2000 to guide the government and all partner agencies to improve access, coverage and quality of overall adolescent health and development programs. However, very few programs have been implemented by Government of Nepal to fulfill the objectives and goals as outlined in the strategy.

Reproductive and preventive health programs in developing countries as Nepal has been given very little attention on the issue of adolescent reproductive health and focused mainly on the reproductive functions of married women. Menstrual hygiene and management is yet to be integrated effectively in overall hygiene promotion interventions in Nepal. Evidences from the field are imperative to emphasize the issues (Water Aid, 2009).

Very few studies have been conducted in field of adolescent sexual and reproductive health including menstrual health in Nepalese context. As far Arghakhanchi is concerned, very few research studies have been conducted till date. Hence, this study will do to determine the knowledge and practice of menstruation, among high school adolescent girls of Sandhikharka Municipality of Arghakhanchi, Nepal.

1.6. Limitation of the study

Though this research is conducted systematically and applied full effort, the study may have following limitations.

- i. My study is only based on students of government schools of Sandhikharka municipality so the findings may not reflect overall scenario of the nations.
- ii. My respondents are students of grade nine and ten who have already suffered menstruation, the result come from them may not be applicable for all adolescence because of the difference of ages.
- iii. The limited time and resources are other factors due to which I could not cover overall population in the study.

CHAPTER II

LITERATURE REVIEW

2.1 Menarche

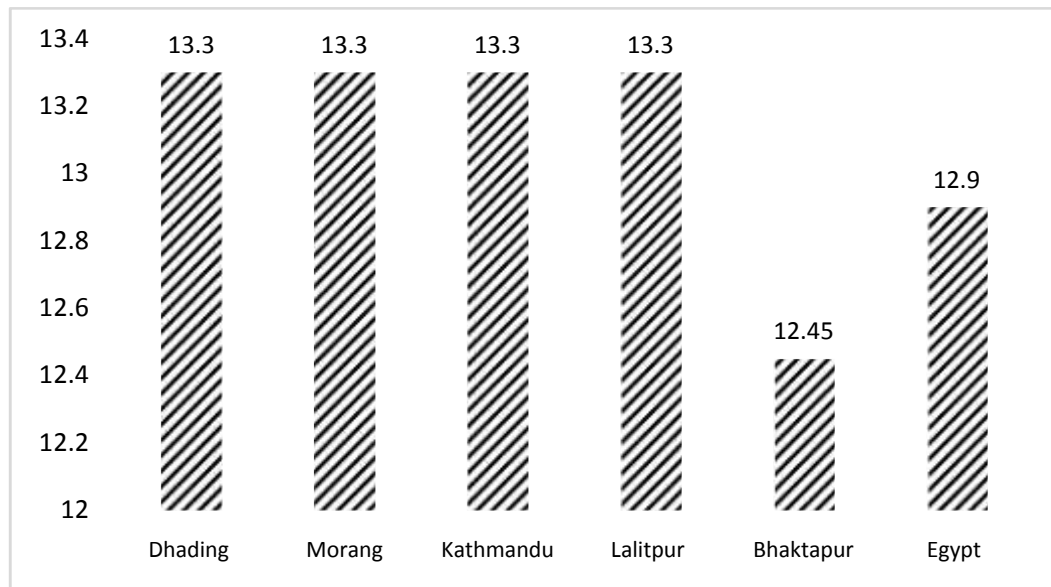
Menarche is the onset of Mensuration and it is one of the most significant milestones in a woman's life. The mean age at menarche varies from population to population and is known to be a sensitive indicator of various characteristics of population including nutritional status, geographical location, environmental conditions and magnitude of socioeconomic inequalities in a society. Studies suggested that menarche tends to appear earlier in life as the sanitary, nutritional and economic conditions of a society improve. For most females, it occurs between the age of 10 and 16 years; however, it shows a remarkable range of variation. The normal range for ovulatory cycles is between 21 and 35 days. While most periods last from three to five days, duration of menstrual flow normally ranges from two to seven days. For the first few years after menarche, irregular and longer cycles are common (Zegeye, Megabiaw and Mulu, 2009).

Menstrual cycles are often irregular through adolescence, particularly the interval from the first to the second cycle. According to the WHO's international and multicenter study of 3073 girls, the median length of the first cycle after menarche was 34 days, with 38% of cycle lengths exceeding 40 days. Variability was wide: 10% of females had more than 60 days between their first and second menses, and 7% had a first cycle length of 20 days. Most females bleed for 2 to 7 days during their first menses (AAP, 2006).

2.2 Knowledge Regarding Menstruation

The studies from both rural and urban areas of Bangladesh found that nearly half of the adolescent women in the studies had no information about Mensuration before it began. Another study found that over half of the married adolescents in the study were unaware of the causes of Mensuration (58%). More than half (57%) of the unmarried adolescents and over 40% of the married adolescents had not heard of menstrual regulation (WHO, 2003).

A descriptive cross-sectional study conducted in four districts of Nepal; Dhading, Morang, Lalitpur and Kathmandu by Water Aid Nepal have shown that menarche is attained between 10-16 years, and the mean age of menarche being 13.3 years (Water Aid, 2009). Meanwhile the age at menarche in study conducted in Bhaktapur was 12.43 years (Pathak, 2009). In Egypt, the age at menarche ranged from 10–16 years, with a mean and median of 12.9 and 13 years, respectively (EI-Gilany, Badawi and EI-Fedawyb, 2005).



2.3 Sources of Information/Advice Sought During Menstruation

The main sources of information about Menstruation in Nepal before menarche were mother (51%), sisters (41%) and friends (36%). The result is fairly consistent with the source of information about menstrual hygiene and management. Only about one-fifth respondents mentioned that they learnt about these issues from teachers (Water Aid, 2009). Similarly, in another study in Nepal, 35% of the girls had been informed about the oncoming menstruation. 70% of the girls felt that they should be informed about Menstruation when they reach the age. 65% of the students were using their friends, 15% sisters and 10% mothers and teachers as their source of information. No one said father or brother as a source of information (Sharma, 1999).

A study among Hong Kong Chinese girls reported that the majority of the girls preferred seeking advice from their family members (70.0%) and friends (40.7%), while only 12.7% and 6.5% preferred advice from doctors and teachers respectively. They would also seek information from other sources, which included; newspapers or books (24.3%), the internet (12.3%), television or radio programmes (11.9%) and health talks (8.5%). (20) In a survey in Nepal, 81% recognized Menstruation as normal

physiological process, 55% recognized the cause of Menstruation to be hormones. Very few respondents (2%) mentioned disease or curse/sin as the cause of menstruation. Majority of the respondents (73%) identified vagina, and only 13% identified uterus, as where the menstrual blood comes from (Water Aid, 2009). In a study in Chitwan district of Nepal, it was found that adolescent girls of age group 13-15 years were not properly maintaining the menstrual hygiene. Only 6.0% of girls knew that Menstruation is a physiological process, 36.7% knew that it is caused by hormones (Adhikari et al. 2007).

The survey in Chitwan of Nepal among one hundred and fifty adolescent girls of age 13-15 years showed that the normal menstrual flow (3-5 days) was among 124 girls (82.7%) and 26 girls (17.3%) had flow for 5-7 days. The normal cycle (26-30 days) was among 83.3% respondents and while remaining had 30-35 days cycle. (5) A survey of 1116 girls aged 15-19 years in six Shanghai senior high schools showed that 78.4% had a regular menstrual cycle (21-40 days) and 85.2% had a menstrual period lasting 3-7 days (WHO, 2005).

2.4 Cultural Practices During Menstruation

Known variously as "Chhue" in Dadeldhura, "Chhaupadi" in Achham and "Chueekula" in Humla districts are serious discriminatory practices against women wherein women must remain in a small shed, often where animals are kept in other times, during Menstruation and post-partum periods in Nepal. During these periods, women are considered "impure" or "unclean" and are prohibited from taking part in many normal aspects of their lives. These women believe that any breach in such practice will bring bad omens upon their family, community or society. These practices are a violation of human rights and are a form of gender discrimination against women and children, in turn leading to negative effects on health, education and the country's socioeconomic development (Kandel, Bhandari and Lamichhane, 2006). Around 92.7% women do not sleep in their house in first period (Adhikari et al. 2007). Culturally girls of Brahmin, Chhetri and Newar caste groups are put in seclusion in special place in one's own or relatives' house (usually kept dark) where they are confined for seven to 11 days. During this seclusion they are not allowed to see sun and male relatives (brothers and father). The commonest restriction practiced by the survey respondents is abstaining from religious activities (68%), which are followed by abstaining from cooking (46%) as well as not touching the male family members (24%). The sociocultural beliefs behind are based on concepts of "pollution"

surrounding the conditions of Mensuration and usually mothers imparted these beliefs to the girls as important know how related to the practices during Mensuration (Water Aid, 2009).

In a survey in Nepal, almost all participants observed the rituals during the period that they were kept isolated in a dark room. The number of days for seclusion, however, varied from 4-12 days. Other characteristics during the period of seclusion mentioned were: they were kept away from their parents preferably in neighbor's home, no bath until the day of purification, no sunlight, no male visitors which included their own father and/or brothers, were not allowed to get out of the room even for bowel/bladder evacuation. The taboo regarding the discussion on Mensuration in the family caused embarrassment, and some even felt that having Mensuration was the result of committing sin. The rituals of keeping them in a dark room had made them feel suffocated (Rana, 2006).

2.5 Problems Faced During Menstruation

A research conducted in Nepal presented the fact that girls missed school in the previous academic year during their period mainly related to either physical reasons (cramps or fatigue) or logistical reasons (managing menstrual blood). About 43.8% listed cramps as the main reason why they did not want to go to school during their period. The majority (68 %) of the girls indicate only limited difficulty with dealing with menstrual rags at school to change their clothes during school days. The remaining reported that they go home to change their rags. This might suggest only limited scope for an impact of providing modern Mensuration products to girls on their school attendance (Oster & Thornton, 2009).

2.6 Sanitation and Hygiene Maintained During Menstruation

In Nepal, India, Bhutan and Bangladesh studies concluded that girls, particularly adolescent girls, were disadvantaged in terms of toilet facilities. There was an almost total absence of sensitivity to the requirements of menstruating girls. Girls who were menstruating tended to have nowhere to wash their sanitary cloths or dispose of their sanitary pads. They were also embarrassed by the way in which the design of facilities did not allow them necessary privacy and dignity. The result, in all above four countries, was that girls who were menstruating either carried on with their studies in a state of continual anxiety or they appeared simply to take days off (Bhattacharya, 1999).

CHAPTER III

RESEARCH METHODOLOGY

3.1 Research Design

A descriptive cross sectional study is designed to assess the level of knowledge and practice on Mensuration among adolescent school girls of Sandhikharka Municipality. Research is quantitative in nature. The data was collected from field survey.

3.2 Study Area and Rationale

The study is conducted in three government schools of Sandhikharka Municipality. The reason for selecting these schools is that I am very much familiar with the area and mostly the students of these schools are from rural background

3.3 Universe and Sampling

In total, the numbers of government high school in Sandhikharka municipality are 12. Out of 12 schools; three government high schools had been selected for my study which covers 25% of population of my study area. As my study only focuses on adolescences girls, I only took the students of grade nine and ten as a sample. For my research total of 325 girls of three schools including Yubarbarsha Ravichitra Janata High School (110 girls) Bhagwati High School (100 girls) and Janajyoti High School (115 girls) are included. The purposive sampling method was used for selecting students. The reason for purposive sampling was that, my study covered only the girls of grade nine and ten who already have started menstruation; I believe that they are in the middle of their adolescence period and can give accurate data without hesitation.

3.4 Data Collection Procedure

The data is collected by using quantitative methods. Under quantitative methods survey methods is used for collecting information. Both primary and secondary data are collected for study. For primary data, field survey method is used and a set of structured questionnaire are designed and distributed among the students for self - administration in order to collect data regarding the research topic. Data from various sources like DDC, DEO, Municipality, schools, journals, books, and internet are also taken as a source of secondary data.

3.5 Data Processing and Analysis

The collected data are coded on the same day of data collection. Data coding is done manually and then entered in to the computer through the help of Microsoft word excel. After collection of data, descriptive statistics like bar diagram, pie chart, percentage, mean, median, standard deviation etc. are used to analyze data in more systematic way.

3.6.Ethical Considerations

The study is conducted after the approval of research committee of Department of Rural Development at Saptagandaki Multiple Campus. The rights, anonymity and confidentiality of the respondents are respected during the study. Informed verbal consent with the respective school's principal and the respondents are taken before data collection. Through verbal consent process, the type and purpose of the study, issues of anonymity and confidentiality; voluntary participation and absence of any known risk or benefit for participating in the study is explained beforehand.

CHAPTER IV

ANALYSIS AND INTERPRETATION OF DATA

Mensuration is one of the very important psychological processes of female that starts at the time of puberty. Such significant transition from childhood to womanhood for adolescence girls is further manifested in Nepal through traditional and socio-cultural aspects of menstruation, which is perceived as an impure, bound by silence, shame and social taboos. It is unfortunate that even today, this natural phenomenon is still considered as a taboo in our Nepalese society. Along with social and religious restrictions during menstruation, women and girls face the lack of clean and safe toilet to change their sanitary napkins or cloth pads. Due to fear of humiliation and discomfort, girls prefer staying at home rather than going to school. They even don't feel comfortable sharing their queries regarding Mensuration with other people.

As stated in the sustainable development goal the widespread lack of menstrual hygiene management facilities limits the participation of women in education and the workplace. It is estimated that a girl is absent from school due to Mensuration for four days in 28 days (a month) loses 13 learning days, equivalent to two weeks of learning, in every school term. Likewise, this is also said that we are unknowingly excluding more than 50% population in wash interventions, if we are not considering menstrual hygiene management (MHM) in our programs. In order to overcome these issues regarding the Mensuration every person should be aware on basic concept of Menstrual Hygiene management issues in the context of our country.

In this regard, with the aim to build the knowledge and practice level of High Schools girls of Sandhikharka on Menstrual Hygiene Management in coordination with District Education Office (DEO) and concern schools, I visited three government High schools that located in Sandhikharka Municipality to facilitate/conduct session to girls students of class 9 and 10 of Yubabarsha Ravichitra Janata High School, Bhagwati High School and Janajyoti High School.

4.1 No of Participants

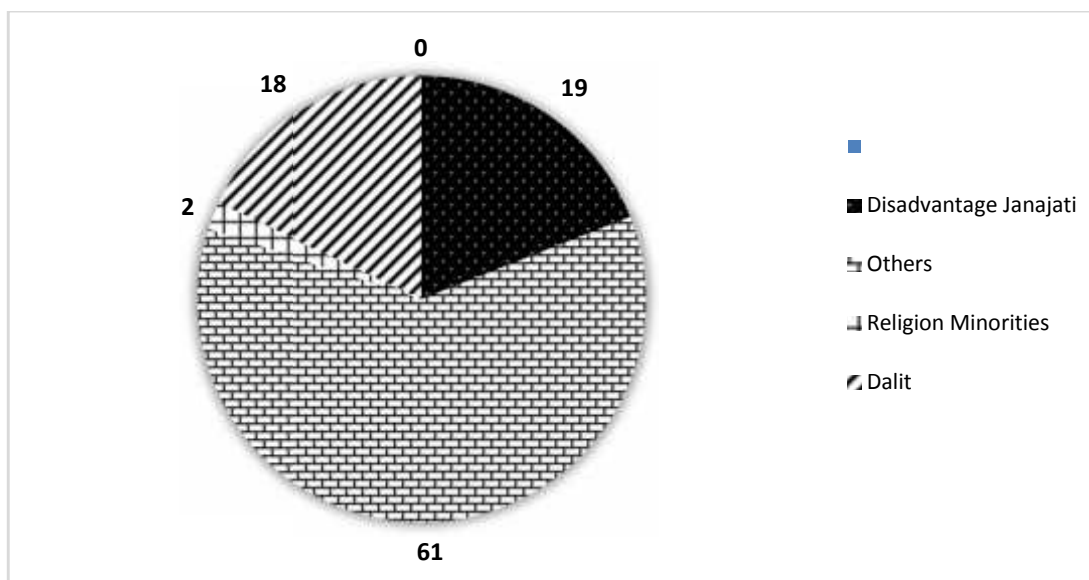
Table 1: No of Participants

SN	School	Class 9	Class 10	Total
1	Bhagwati	50	50	100
2	Janajyoti	61	54	115
3	Yubabarsha	54	56	110
Total	3 schools	165	160	325

Out of 325 girls, Mensuration cycle was not started yet of 12 girls. Among them, 9 are from class 9 and 3 are from class 10.

4.2 Caste Based Population

Fig 1: Caste Based Population

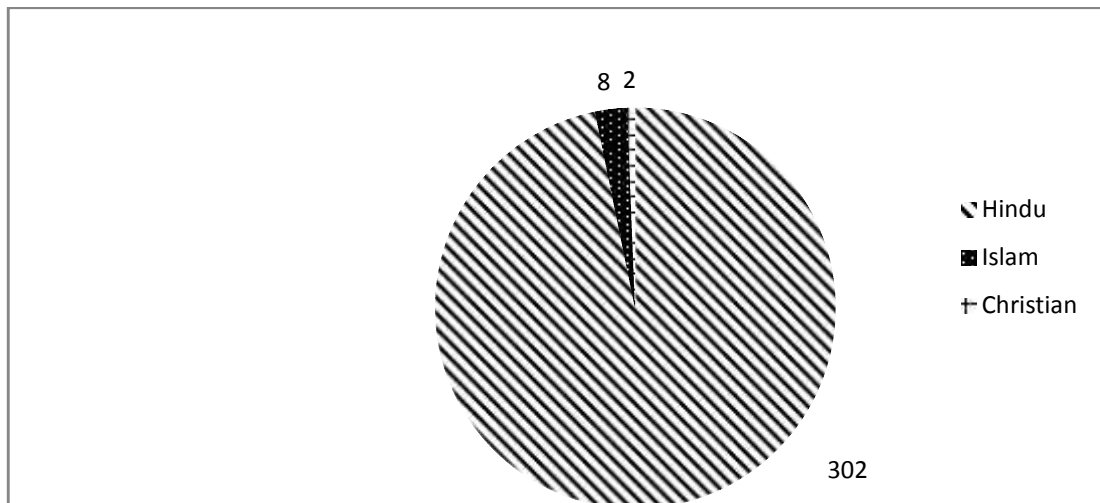


(Source: Field Survey, 2017)

Among the respondents, the population of Brahmin and Cheetri was higher. The population consist other caste as well.

4.3 Religion Based Population

Fig 2: Religion Based Population



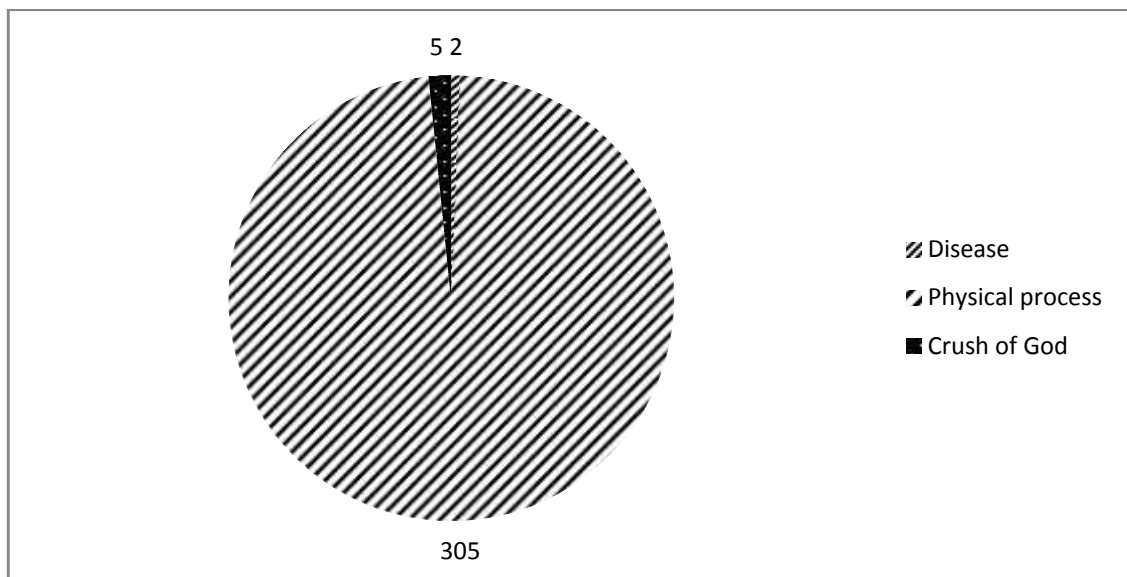
(Source: Field Survey, 2017)

In total 97% respondents were Hindu whereas remaining 3% were Islam and Christian.

4.4. Knowledge on Mensuration Health Management (MHM)

4.4.1. What is Mensuration Process?

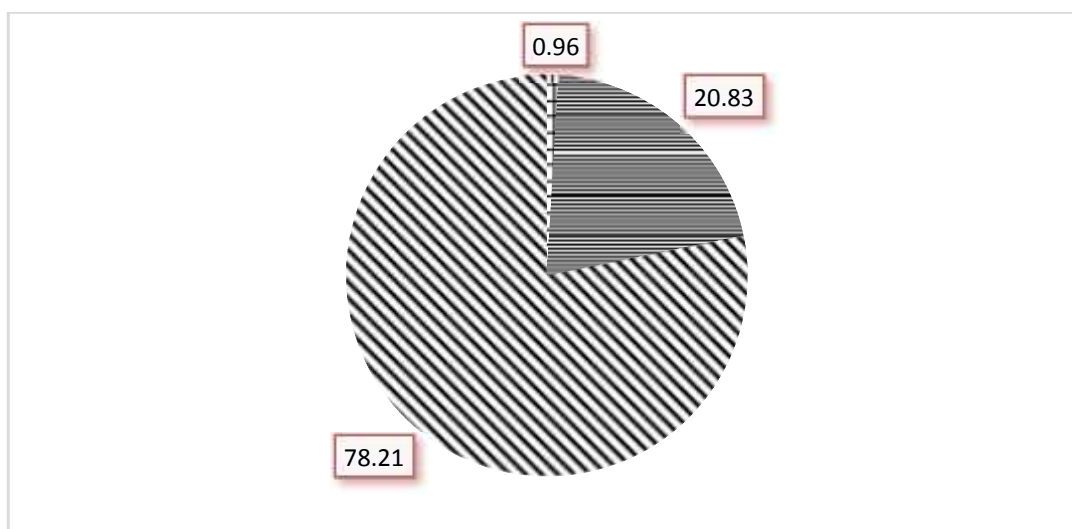
Fig 3: Understanding of Mensuration Process



(Source: Field Survey, 2017)

Above chart shows that only 1 % girls are unknown about the Mensuration process. Most of the respondent said that it is a physical process. Some of them are blaming of god and very few said that it is a disease.

4.4.2. Knowledge About Blood Coming Place

Fig 4: Knowledge About Blood Coming Place

(Source: Field Survey, 2017)

Above chart shows that only 65 girls have right knowledge that blood comes from uterus through the vagina during the menstruation. About two third respondents do not know actual knowledge about how blood comes from during the menstruation.

4.4.2 Knowledge of MensurationPeriod

Table 2: Knowledge of MensurationPeriod

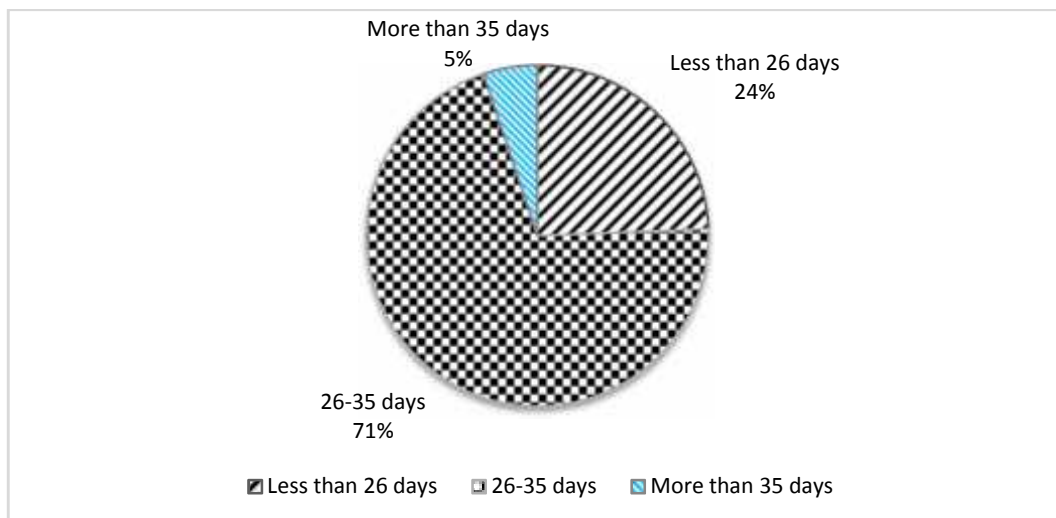
Days	No of Respondent	Percentage
1-3 Days	76	24.35%
4-6 Days	198	63.5%
More than 6 Days	38	12.15%

(Source: Field Survey, 2017)

Above table shows that only 63.5% respondents know the concept of Mensurationperiod. They said that it happens for 4 to 6 days.

4.4.3 Knowledge on Mensuration Cycle

Fig 5: Knowledge on Mensuration Cycle



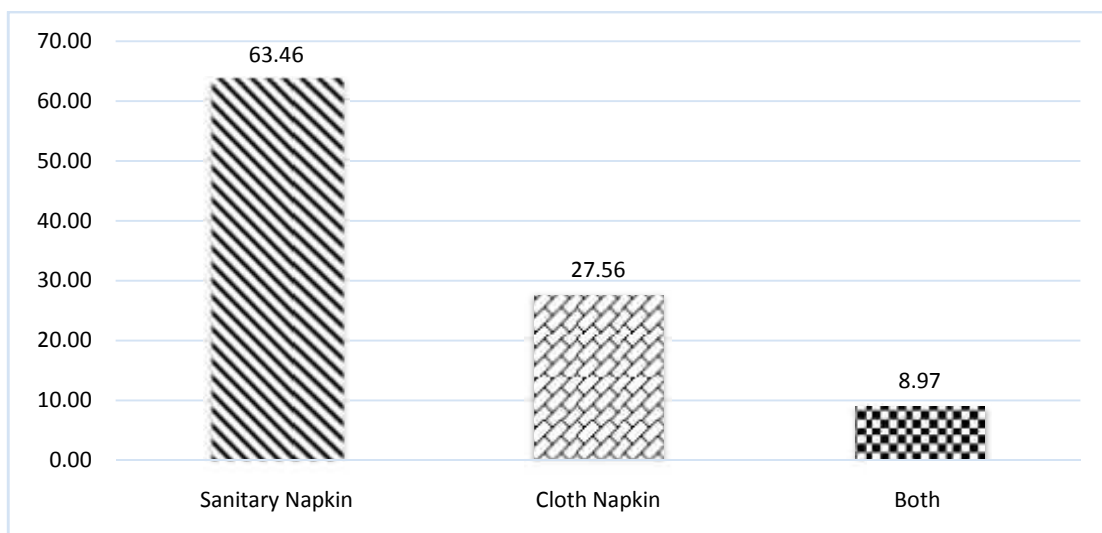
(Source: Field Survey, 2017)

This table shows that 29 % (92 students) out of 312 were unknown about the Mensuration cycle.

4.5 Practices on Mensuration Hygiene Management

4.5.1 Material use During Period

Fig 6: Material Use During Menstruation

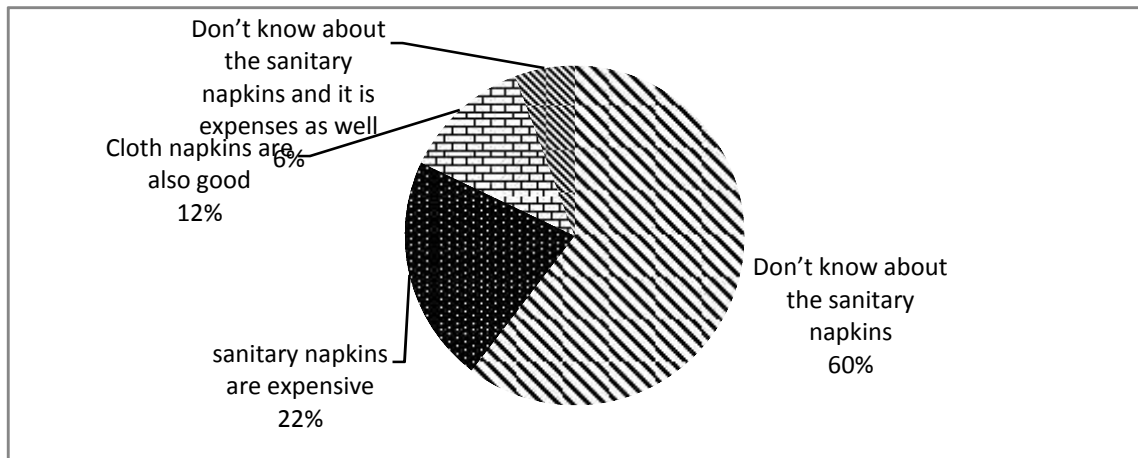


(Source: Field Survey, 2017)

The above chart shows that about two-thirds of the girls use sanitary napkins during the Mensuration period. There are still one third girls who do not use sanitary napkins.

4.5.2 Cause of Not Using Sanitary Napkins

Fig 7: Cause of Not Using Sanitary Napkins

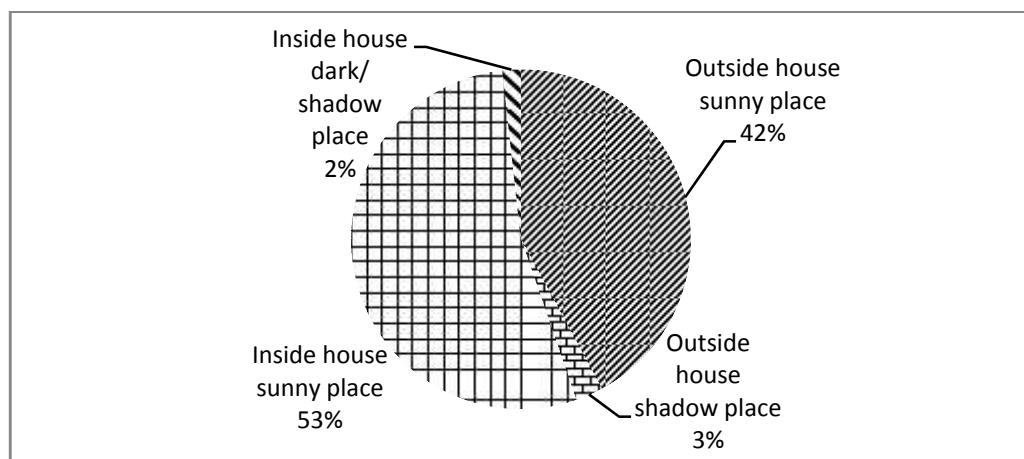


(Source: Field Survey, 2017)

The above chart shows that from the population who doesn't use the sanitary napkin, 60% of the population does not know about the sanitary napkins. Most of the girls who use cloth napkin get the concept from her menarche. This practice was handed over from her mother or other elder female family member.

4.5.3 Cloth Napkins Drying Place

Fig 8: Cloth Napkins Drying Place

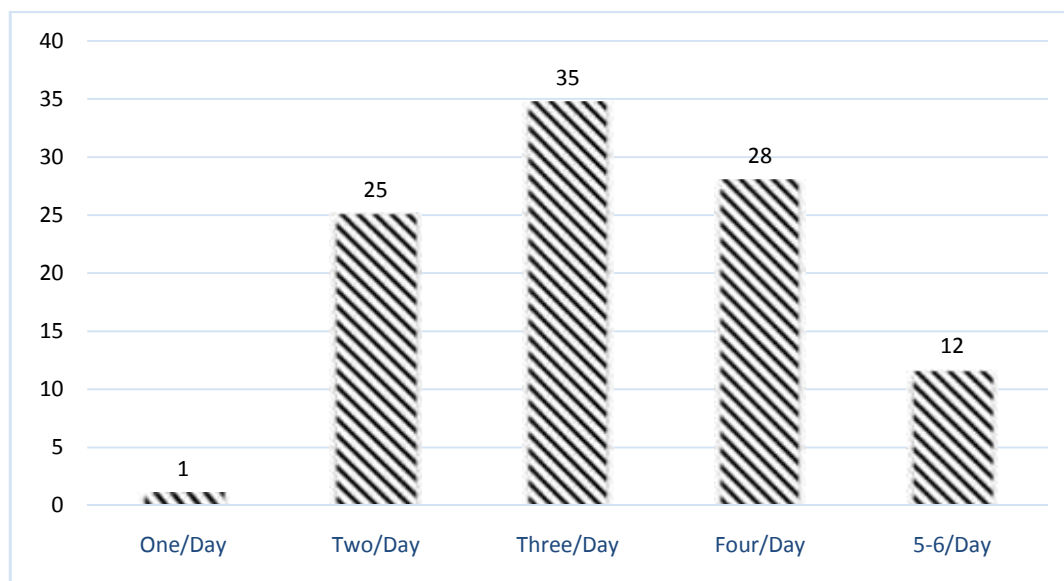


(Source: Field Survey, 2017)

Above pie chart shows that only 5% girls has bad practices of drying cloth napkins in shadow/dark place.

4.5.4 Sanitary/ Cloth Napkins Using Practice Per Day

Fig 9: Sanitary or Cloth Napkins Using Practicing Per Day



(Source: Field Survey, 2017)

Sanitary napkins should change 3 times per day and cloth pad should change 6 times per day. Above chart bar shows that napkins changing practice is poor in 81 girls (1/4th girls).

4.5.5 Used Napkins Disposal Practice

Table 3: Used Napkins Disposal Practice

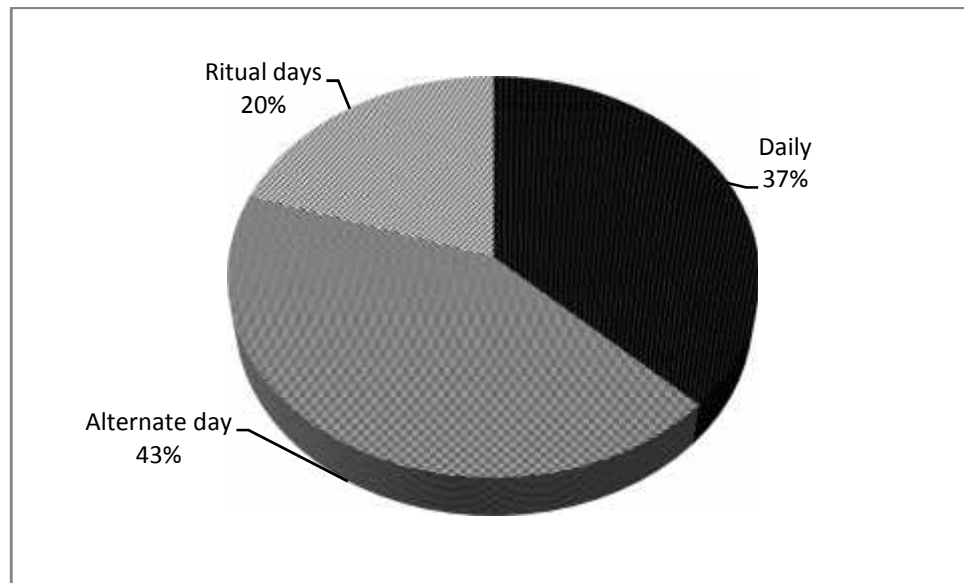
Method	Nos	Multiple method	Nos
A. Throw with other waste	70	A & B	24
B. Bury	100	A & E	5
C. Burning	60	B & C	10
D. Throw in Cannel/river	2	B, C & E	2
E. Throw in Toilet Pan	33	B & E	6
Total	312		

(Source: Field Survey, 2017)

Above chart shows that about one third girls bury napkins after its use. Still many girls throw the napkins with other waste.

4.5.6 Bathing Practice During Period

Fig 10: Bathing Practice During Period

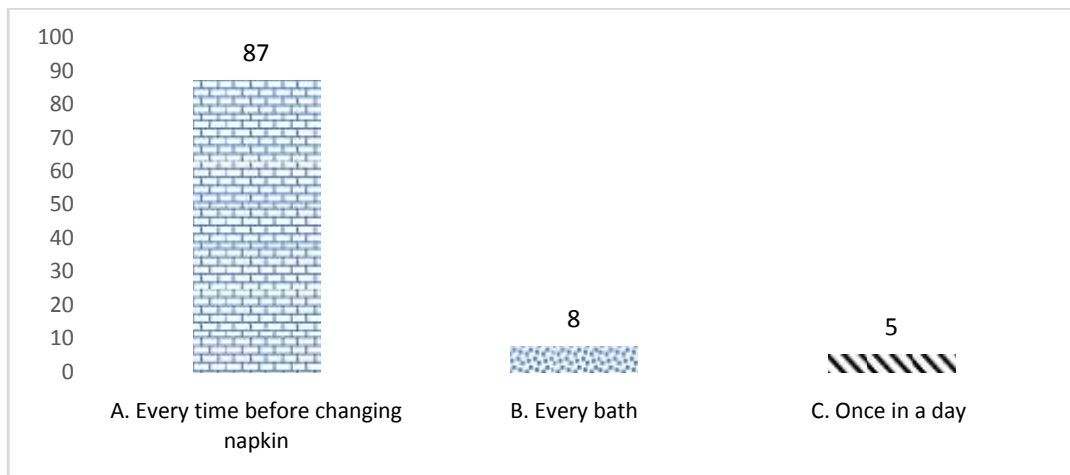


(Source: Field Survey, 2017)

Above pie chart shows that only 20% girls are following rituals days for bathing. 37% girls bath daily and 43% girls bath alternate days during Mensurationperiod.

4.5.7 Cleanliness of Vaginal Part During MensurationPeriod

Fig 11: Cleanliness of Vaginal Part During MensurationPeriod

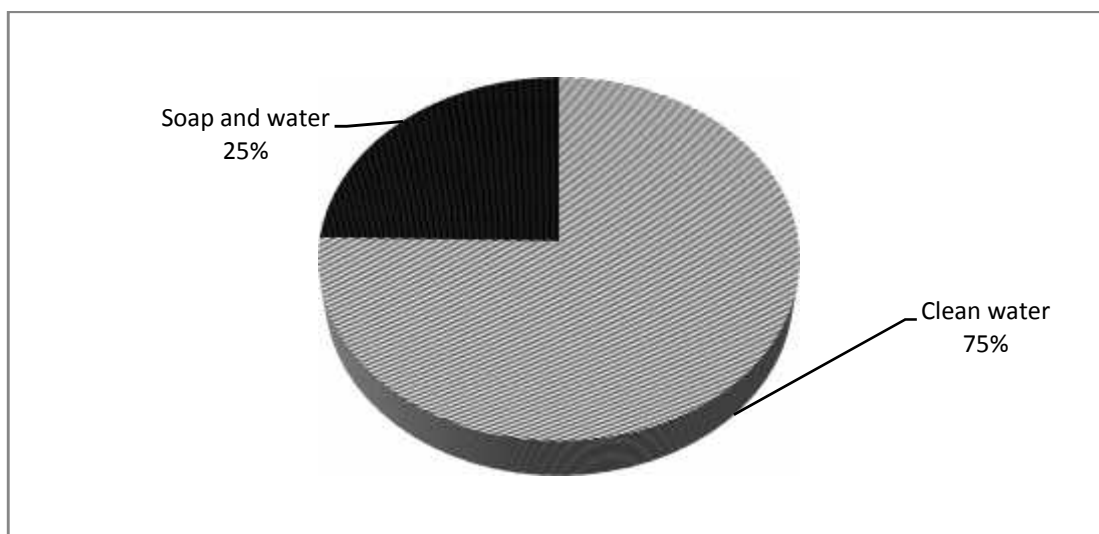


(Source: Field Survey, 2017)

Above chat indicates that most of the girls (87%) have good practice on vaginal cleanliness.

4.5.8 Material Use For Vaginal Part Cleanliness

Fig 12: Material Use for Vaginal Part Cleanliness

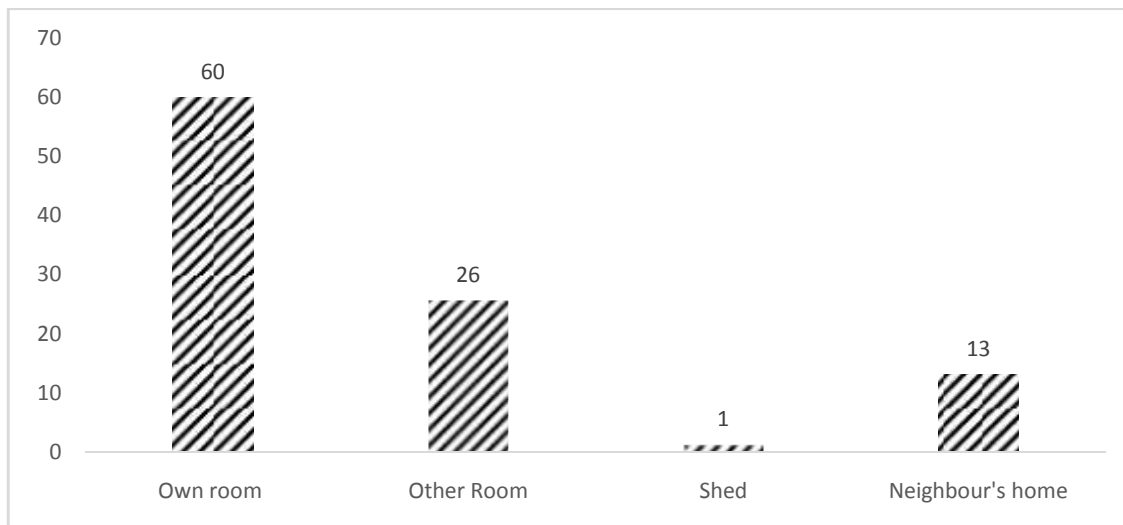


(Source: Field Survey, 2017)

Above chart shows that 75% girls use clean water for cleanliness while only 25% girls use soap water.

4.5.9 Sleeping Place During Menarche

Fig 13: Sleeping Place During Menarche

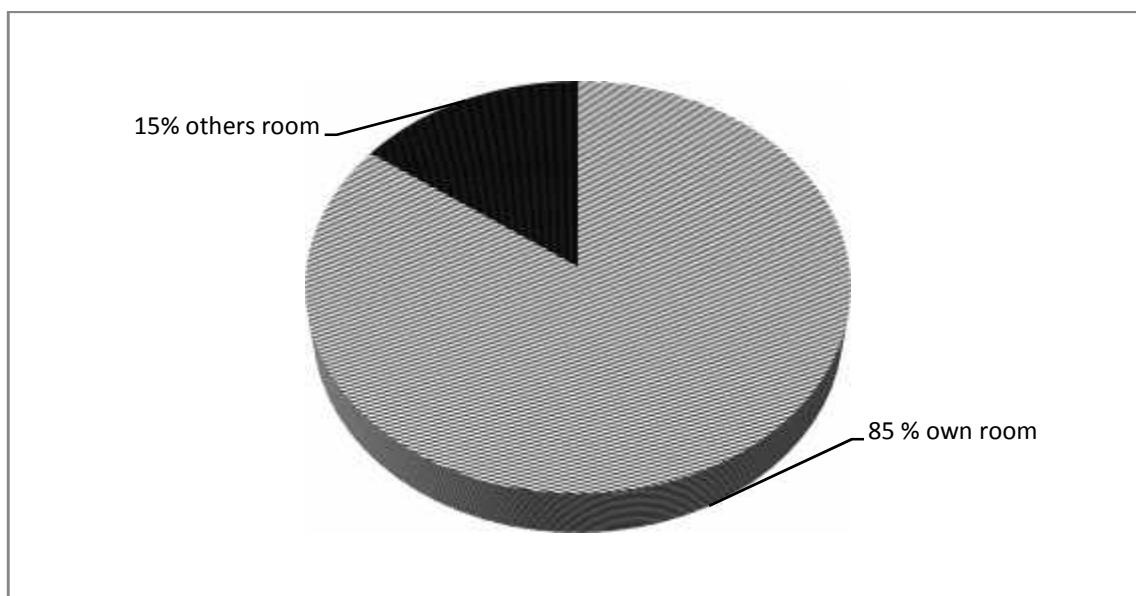


(Source: Field Survey, 2017)

Above chart indicates that however the Mensuration taboo is still alive in urban area, 60 % householders kept their girl at her own room during the menarche, 26 % householders kept in another room, 1 % (4 House) kept their girls in shed and 13% householder sent their girl in Neighbour's home.

4.5.10 Sleeping Place During Period Now

Fig 14: Sleeping Place During Period

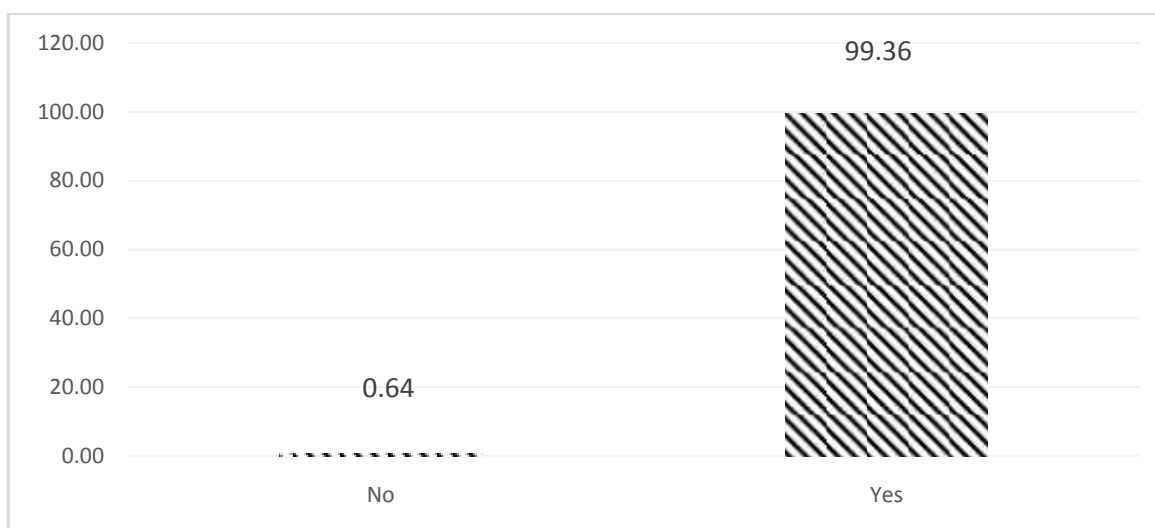


(Source: Field Survey, 2017)

Above pie chart shows that 85% access to use own room during the Mensuration period has been increased in comparison of menarche. Only 60% has access to use own room during menarche. Still 15% girls are out of access to stay at her own room during the period.

4.5.11 Restriction During the Menstruation

Fig 15: Restriction During the Menstruation

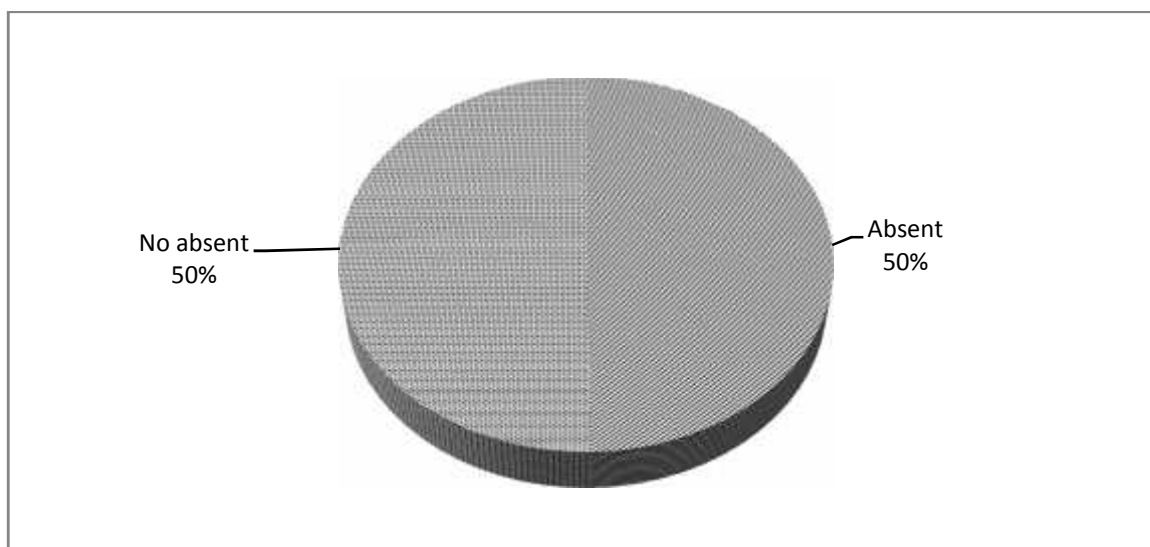


(Source: Field Survey, 2017)

According to the survey, there is restriction in almost all houses (99.36%) during menstruation. Only 0.64% i.e. 2 households have not any type of restriction practices during menstruation. These two household's religion is Christian.

4.5.12 School Absent During Period

Fig 16: School Absent During Period



(Source: Field Survey, 2017)

Still half girls are remain absent in schools during the Mensurationperiod.

4.5.13 Cause of Absent During MensurationPeriod in Number

Table 4: Cause of Absent During MensurationPeriod in Number

Cause of Absent During MensurationPeriod	No.
A. Health problem/pain	70
B. Problem of napkin dispose	10
C. Fear of exposure	8
D. Unavailability of sanitary pad in school	2
E. Lack of pad changing place	4
F. Social culture	0
G. lack of Water and soap in toilet	2
Multiple reasons- health problem, sanitary napkin, soap, dust bin	59

(Source: Field Survey, 2017)

Out of the 155 absent school girls, above causes were indicated. The table shows that most of the girls are remained absent because of health problem. They mentioned that weak health is one of the major causes for absenteeism at school.

CHAPTER V

SUMMARY CONCLUSION AND RECOMMENDATION

5.1 Major Findings

From the field data, the major findings are found as follows:

-) Out of 312 girls; 7 girls are unknown about the Mensuration process. Most of the respondent said that it is a physical process. Some of them are blaming of god and very few said that it is a disease.
-) About two third respondents do not know actual knowledge about places from where blood comes from during the menstruation.
-) Only 63.5% respondents know the concept of Mensuration period. They said that it happens for 4 to 6 days
-) 29 % (92 students) out of 312 were unknown about the Mensuration cycle.
-) About two-thirds of the girls use sanitary napkins during the mensuration period. There are still one third girls who do not use sanitary napkins
-) From the population who doesn't use the sanitary napkin, 60% of the population does not know about the sanitary napkins. Most of the girls who use cloth napkin get the concept from her menarche. This practice was handed over from her mother or other elder female family member.
-) Only 5% girls has bad practices of drying cloth napkins in shadow/dark place.
-) Napkins changing practice is still poor in 1/4th girls
-) About one third girls bury napkins after its use. Still many girls throw the napkins with other waste
-) Only 20% girls are following rituals days for bathing. 37% girls bath daily and 43% girls bath alternate days during Mensuration period.
-) Most of the girls (87%) have good practice on vaginal cleanliness.
-) 75% girls use clean water for cleanliness while only 25% girls use soap water.
-) 60 % householders kept their girl at her own room during the menarche, 26 % householders kept in another room, 1 % (4 House) kept theirs girls in shed and 13% householder sent their girl in Neighbor's home
-) Still 15% girls are out of access to stay at her own room during the period.

-) Still half girls are remain absent in schools during the mensuration period.
-) Most of the girls are remained absent because of health problem. They mentioned that weak health is one of the major causes for absenteeism at school.

5.2. Summary and Conclusion

After collecting the information from field this research try to address the answers of all research questions. After analysis of the data it can be concluded that family members (mother, sisters, cousin sisters, grandmother) are the major source of information of Mensurationfor adolescent girls. The knowledge generally transform from mother to daughter. This knowledge is not enough because still some girls have miss conception about Mensurationperiods and cycle. Girls still do not have good hygiene practices. They still use clothes during menstruation. However the number of such girls who are using cloths is lesser, that indicates that girls are now conscious about their health. Still more than half girls do not bath regularly during the Mensurationperiod and about 75% girls do not use soap for cleaning the vaginal part during the menstruation. Still 40% girls do not stay in their own room during the Mensurationperiod and some of them are sent to their neighbor's house as well. The superstitions of untouchability during the Mensurationare almost there in every household. They are not allowed to enter and work in the kitchen during the Mensurationperiod. It means the family members restrict the girls for doing rituals activities and other household's activities during Mensurationperiods. Still half of the girls do not go schools on the first day of the menstruation. Among many reasons the common reason for this is health problem. The girls feel physically weak during the time and some even feel severe pain so they could not attend their class.

5.3. My Experiences and Challenges

It was very nice experienced for me to collect information for such an important study. The subject matter is quiet difficult to talk in our society as our society has some rigid and this context is a private matter for girls. Being women, I tried my best to collect information by gathering 312 girls together in a single room. In the beginning girls were hesitate to answer my questions but when I shared my objectives to them and made them comfortable then they were ready to provide information for me. I even provide some lecture session for them regarding Mensurationhealth that made them comfortable on answering my questions. They leave some of the questions

blank, which I believe that they do not want to answers. During the process I got equal support from head teachers and other respected teachers and I convey my sincere greeting to all of them.

5.4. Recommendation

From this study the following recommendation are made:

-) Mensurationfriendly toilet facility must be available in the school.
-) Woman teacher must be selected as of focal teacher for sanitation especially on MensurationHygiene Management.
-) Child Clubs must be reformed and activate for sanitation promotion of the school.
-) Sanitary pad must be available in school and dust bin must be available inside the toilet for safe disposal
-) Soap and water must be available inside the toilet for hand washing and vaginal part cleaning before changing napkin.
-) Sanitation fund must be upgraded and used for sustainability of Water sanitation and hygiene (WASH) in schools.
-) Awareness risingextra curriculum activities must be conducted in schools focusing on menstrual hygiene management including hand washing, waste management and on other indicators of total sanitation.
-) Regular and effective monitoring system must be developed and implemented for clean and healthy education institutions as guided by National Total Sanitation Guideline, Environment Friendly Local Governance (EFLG) and Child Friendly Local Governance (CFLG) policy guideline.

REFERENCES

- American Academy of Pediatrics (AAP), (2006): *Mensuration in Girls and Adolescents: Using the Menstrual Cycle as a Vital Sign*. American Academy of Pediatrics, Committee on Adolescence, American College of Obstetricians and Gynecologists and Committee on Adolescent Health Care. *Pediatrics* 2006;118:2245-2250.
- Adhikari P, Kadel B, Dhungel S & Mandal A. (2007): *Knowledge and practice regarding menstrual hygiene in rural adolescent girls of Nepal*. Kathmandu University Med J 2007;5:382-386.
- Bhardwaj S. & Patkar A. (2004): *Menstrual Hygiene and Management in Developing Countries: Taking Stock, Junction Social*. Mumbai, India, November
- Bhattacharya, S. (1999): *Experiences of girls about their menarche*. *Journal of the Institute of Medicine* 1999; 21:1-61.
- Dangal G.A. (2008): *A study of reproductive morbidity of women in the Eastern Terai Region of Nepal*. *Nepal J Obstet Gynaecol* 2008;3:29-34.
- El-Gilany, A. Badawi K. & El-Fedawy S. (2005): *Menstrual Hygiene among Adolescent Schoolgirls in Mansoura, Egypt*. *Reproductive Health Matters* 2005;13(26):147– 152.
- Family Health Division, Department of Health Services Ministry of Health, Government of Nepal (FHD/MoHP), (2000): *National Adolescent Health and Development Strategy*. Kathmandu, Nepal.
- Kandel, N., Bhandari, AR. and Lamichanne, J. (2006): *"Chhue, Chhaupadi and Chueekula Pratha" – Menstrual Sheds: Examples of Discriminatory Practices against Women in the Mid- and Far-Western Regions of Nepal: Considering Women as "Impure" or "Unclean" During Mensuration and Post-Partum Periods, 2006*.
- Kirk J. & Sommer M. (2005): *Mensuration and body awareness: linking girls' health with girls' education*.
- Mahon, T. & Fernandes, M. (2010): *Menstrual hygiene in South Asia. A neglected issue for WASH (water, sanitation and hygiene) programmes*. WaterAid, London.
- MoHP/New Era, (2011): *Nepal Demographic Health Survey 2006*. Kathmandu, Ministry of Health and Population

- Oster E. & Thornton R. (2009): *Mensuration and education in Nepal*. NBER working paper no.14853. National Bureau of Economic Research, Cambridge.
- Pathak, TK. (2009): *Menstrual Problems and its Effect on High school Girl students of Madhyapur Thimi Municipality*, Bhaktapur, November 2009.
- Rana N. (2006): *A Study on knowledge, perception and practices on puberty and Mensuration among adolescent girls of Kathmandu*.
- Sharma, M. & Gupta, S.(2003): *Menstrual pattern and abnormalities in the high school girls of Dharan: a cross-sectional study in two boarding schools*. Nepal Coll Med J 2003;5:34-36.
- Sharma N. (1999): *A study of social and psychological problems related to puberty among high school students*. Journal of the Institute of Medicine 1999; 21: 1–50.
- Ten V. (2007): *Menstrual Hygiene: A Neglected Condition for the Achievement of Several Millennium Development Goals*, Europe External Policy Advisors.
- Thakre S., Reddy, M., Rathi N., Pathak N. and Ugadhe S. (nd): *Menstrual Hygiene: Knowledge and Practice among Adolescent School Girls of Saoner, Nagpur District*.
- WaterAidNepal(2009): *Is menstrual hygiene and management an issue for adolescent school girls? A comparative study of four schools in different settings of Nepal*. A WaterAid in Nepal publication.
- WHO (2003): *Towards adulthood: Exploring the sexual and reproductive health of adolescents in South Asia*, WHO, Department of Reproductive Health and Research.
- WHO (2005): *Sexual and reproductive health of adolescents and youths in China: a review of literature and projects 1995-2002*. WHO, Western Pacific Region.
- Zegeye D., Megabiaw B. and Mulu A. (2009): *Age at menarche and the menstrual pattern of secondary school adolescents in northwest Ethiopia*, BMC Women's Health 2009, 9:29.

APPENDIX

QUESTIONNAIRE

Do you like to take a part in this research study?

- I) Yes
- II) No

Class :

Name :

Age :

Religion :

Educational and Economic Status

A. Monthly Family Income in NRs :

B. Educational status of house owner

- I) Master degree
- II) Bachelor's degree
- III) Intermediate/Plus 2
- IV) High school (SLC)
- V) Lower Secondary
- VI) Primary/ Literate
- VII) Illiterate

C. Occupation of householder

- 1 Doctor/advocate/engineer/ Chartered accountant
- 2 Teacher/ government staffs
- 3 Shopkeeper/ farmer/Government worker
- 4 Electronic instrument related, plumber, driver
- 5 Tailoring, embroidery
- 6 Daily wages
- 7 Foreign employee
- 8 Un employee

PART 1: KNOWLEDGE RELATED QUESTIONNAIRE

1. How old you were at Menarche?
2. In your opinion, how many days menstruating process occurs?
 - a. 1-3 days
 - b. 4-6 days
 - c. more than 6 days
3. Do you know about the Mensuration cycle, how long is it?
 - a. less than 26 days
 - b. 26-35 days
 - c. more than 35 days
4. Had you aware about the Mensuration before menarche?
 - a. Yes
 - b. No

If, Yes, from whom you had got information (multiple answer)

 - a. Mot
her
 - b. Frie
nd
 - c. Teac
her/ Curriculum book
 - d. Elde
r sister/ elder female member
 - e. New
s paper/ TV/ Radio
 - f. Fath
er/ Brothers
 - g. Othe
r
5. Who had given knowledge on Mensuration hygiene? (multiple answer)
 - a. Mother
 - b. Friend

- c. Teacher/ Curriculum book
 - d. Elder sister/ elder female member
 - e. News paper/ TV/ Radio
 - f. Father/ Brothers
 - g. Other
6. In your opinion, what is the process of menstruation?
- a. Disease
 - b. Physical process
 - c. Crush of god/goddess
7. Do you know, from where blood comes during menstruation?
- a. From Abdomen
 - b. From Uterus
 - c. From Vagina
8. Do you know, what problems can be seen before menstruation? (Multiple answer)
- a. Lower abdomen pain
 - b. Dizzy
 - c. Nausea
 - d. Backbone pain
 - e. Breast pain
 - f. Headache
 - g. Weakness feeling
 - h. Body weighty feeling
 - i. Don't know
9. What problems can be seen during the Mensurationperiod?
- a. Lower abdomen pain
 - b. Dizzy
 - c. Nausea
 - d. Backbone pain
 - e. Breast pain
 - f. Headache

- g. Weakness feeling
- h. Body weighty feeling
- i. Don't know

PART II: BEHAVIOR/PRACTICE RELATED QUESTIONNAIRE

10. Where you go if you have got any problem during the Mensurationtime?
- a. Domestic treatment
 - b. Nearby health institution
 - c. Traditional healer
 - d. Other

11. What types of cloth or pad you use mainly during menstruation?
- a. Sanitary pad of market
 - b. Reusable cloth pad

If you use sanitary pad, which pad you use

How much rupees you afford for sanitary pad ?.....

(for those girls students who does not use sanitary pad)

Where you dry your cloth pad after washing?

- a. Inside the home but sunny place (Terrace/ Kausi)
- b. Inside the home, dark place (under bed stead)
- c. Shed
- d. Other

How many times you change pad in a day ?

12. What you do used sanitary pad/ non- reusable cloth pad ?
- a. Through with other wastage
 - b. Bury
 - c. Burn
 - d. Through in River/ stream/ cannel
 - e. Through in toilet pan
 - f. Other

13. What is the bathing pattern of you during the menstruation?
- a. Daily

- b. Alternate
- c. As per religious day
- d. Other

14. How many times / how you clean vaginal area during the menstruation?

- a. Every time of pad changing
- b. Every time of bathing
- c. Once in a day
- d. Don't clean

15. Where you sleep/ stay during menarche?

- a. Own room
- b. Another room of own home
- c. Shed
- d. Others/Neighbour's home

16. Where you sleep during Mensuration after that?

- a. Own room
- b. Another room of own home
- c. Shed
- d. Others/Neighbour's home

17. Is there any restriction in your home during menstruation?

- a. Yes
- b. No

If restriction, what restrictions are existence at your home

- a. Cooking/ go inside Kitchen
- b. Having food together
- c. Worship to god/ to go to temple
- d. Touch to male members of home
- e. Other

18. Do you have absent in school due to any kind of problem during menstruating days?

- a. Yes
- b. No

If yes, what are the causes (Multiple Answers?)

- a. Due to pain/health problem
- b. Problem of pad disposal
- c. Fear of blood can be flows out and seen by others
- d. Sanitary pad is not available at School
- e. Lack of pad changing separate place/ used cloth pad washing facility
- f. Social restriction/rituals
- g. Non-availability of soap and water inside toilet