

**KNOWLEDGE AND PRACTICES REGARDING MENSTRUAL  
HYGIENE AMONG HIGH SCHOOL ADOLESCENT GIRLS  
(A Study of Kathmandu Metropolitan City, Ward No. 13 & 14)**

**A Thesis**

**Submitted to Faculty of Humanities and Social Sciences Department  
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Master's Degree Arts in Rural Development**

**Submitted By**

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BY: SABITA DHAKAL, SEPTEMBER, 2018**



## RECOMMENDATION LETTER

This thesis entitled **Knowledge and Practices Regarding Menstrual Hygiene Among High School Adolescent Girls** has been prepared by **Sabita Dhakal** under my guidance and supervision. I hereby forward this thesis for evaluation committee for final evaluation and approval.

.....

(Mr. Ram Prasad Tiwari)

Thesis Supervisor

# APPROVAL SHEET

## ACKNOWLEDGEMENTS

I would like to express my sincere gratitude to the Saptagandaki Multiple Campus for supporting for carrying the research entitled "Knowledge and Practices Regarding Menstrual Hygiene Among High School Adolescent Girls" A Study of Kathmandu Metropolitan City, Ward No. 13 & 14. This study is undertaken as partial fulfillment for Master's Degree of Arts in Rural Development.

I am extremely happy to express my sincere gratitude to my thesis supervisor Lecturer Mr. Ram Prasad Tiwari, for his invaluable and comprehensive suggestion, enlightening ideas, inspiration, help and co-operation which are indispensable to prepare this thesis in this form.

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Sabita Dhakal

## ABSTRACT

This research entitled **Knowledge and Practices Regarding Menstrual Hygiene Among High School Adolescent Girls: A Study of Kathmandu Metropolitan City, Ward No. 13 & 14** is carried out for the partial fulfillment of the requirement of the course Master's 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 menstruation 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. For My research out of 7 government school in Kathmandu 13 & 14 as a sample only 3 government schools including Jana Prabhat Secondary School (40 girls, Kalimati-13, Kathmandu), Nil Barahi Secondary School (78 girls, Tankeshwor Kalimati, Kathmandu-13) and Kuleshowor Awash Secondary School (78 girls, Kuleshowor-14 Kathmandu) total 190 girls students as a sampling 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 menstruation for adolescent girls. The knowledge generally transform from mother to daughter. This knowledge is not enough because still some girls have miss conception about menstruation 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 menstruation 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 menstruation period and some of them are sent to their neighbor's house as well. The superstitions of untouchability during the menstruation are almost there in every household. They are not allowed to enter and work in the kitchen during the menstruation period. It means the family members restrict the girls for doing rituals activities and other household's activities during menstruation 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

Adolescence is a transition period from childhood to adult life during which pubertal development and sexual maturation takes place, thus adolescents have to face physiological development challenges. Adolescent girls often lack of knowledge regarding reproductive health including menstrual hygiene which can be due to socio-cultural barriers in which they are grown up.

Adolescence is defined as the period from the onset of puberty to the termination of physical growth and attainment of final adult height and characteristics. It is characterized by rapid physical growth, significant emotional, psychological and spiritual changes. It is also a period of greatly enhanced awareness and attention to physical status and well being. Adolescence is characterized by appearance of secondary sex characteristics, sexual and reproductive maturity, development of mental process and adult identity. It is period of transition from childhood to adulthood. Adolescence is a significant period in the life of a woman. Adolescent girls often lack knowledge regarding reproductive health including menstruation which can be due to socio-cultural barriers in which they grow up. These barriers create various problems for the adolescent girls. The present need of the girls is to have proper information, education and favorable environment to cope with menstruation issues. The hygiene-related practices of girls in the adolescent period related to menstruation can have effects on their health. The event of earache may be associated with taboos and myths existing in our traditional society which has a negative implication for women's health, particularly their menstrual hygiene. In our society, parents do not communicate about sexual characteristics with their growing girls. The taboos surrounding this issue prevent girls and women from communicating their needs and problems; which is the main reason for adopting unhygienic practices during menstruation. It is an important issue which needs free and open discussions. Before bringing any change in menstrual practices, they should be educated about the facts of menstruation and its physiological implications. The girls should be educated about the significance of menstruation and development of secondary sexual characteristics,

selection of a suitable sanitary absorbent and its proper disposal. Menstruation and its practices are still clouded by taboos and socio-cultural restrictions resulting in ignorance of the scientific facts and hygienic health practices in adolescent girls, which sometimes result in adverse health outcomes. Attitude of parents and society about discussing the related issues are barriers to the right kind of information, especially in the rural areas. Menstruation is thus construed to be a matter of embarrassment in most of the cultures. It was therefore decided to conduct a study to explore the knowledge and practices regarding menstrual hygiene among the adolescent girls of urban areas of Kathmandu metropolitan 13 & 14 among government high school adolescent girls and to recommend interventions for improving health among adolescent girls (WHO, 2012).

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, 2010).

Adolescence in girls has been recognized as a special period which signifies the transition from girlhood to womanhood. Menstruation is 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 first menstrual period and menstruation. There is a substantial lacuna in the knowledge about menstruation among 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 menstruation among 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 menstruation have 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 menstruation to 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).

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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 menstruation hygienically 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 menstruation related 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 menstruation are 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 of the Statement**

The issue of menstrual hygiene has the growing attention of women in developing countries. Many researches showed that menstruation hygiene 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 menstruation is 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 menstruation related 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 menstruation was better than practice. Around 71% girls used to miss school during period of menstruation often and no girls were allowed to cook during menstruation (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 menstruation period. 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 menstruation hygiene. This research is therefore carried out to explore the hidden truth of menstruation hygiene of the girls.

### **1.3 Research Question**

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

What are the sources of information of adolescent school girls about menstruation?

What are the social cultural traditions and restrictions practiced during menstruation?

What are the reasons of school absenteeism during menstruation?

### **1.4 Objectives of the Study**

The general objectives of this study is to determine the level of knowledge and practices regarding menstrual hygiene among high school adolescent girls

Specific objectives are:

To assess the knowledge and sources of information of adolescent school girls about menstruation

To identify the socio-cultural traditions and restrictions practiced during menstruation

To identify 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 Kathmandu Metropolitan City, Ward No. 13 & 14, Nepal.

### **1.6 Limitations of the Study**

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

My study is only based on students of government schools Kathmandu Metropolitan City, Ward No. 13 & 14, so the findings may not reflect overall scenario of the nations.

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.

The limited time and resources are other factors due to which I could not cover overall population in the study.

## **1.7 Organization of the Study**

This study has been divided into five chapters. The first chapter deals with background, statements of the problems, objectives of the study, limitations of the study, importance of the study, and organization of the study. Chapter two contains the review of literature. Chapter three describes research methodology in which relational of the site selection, research design, nature and source of data, universe and sampling procedure, data collection methods, and analysis of data are described here. In chapter four, it deals with the analysis and interpretation of field survey data. Finally, chapter five is closely related with the major findings, conclusion, and recommendations.

## CHAPTER- II

### LITERATURE REVIEW

#### 2.1 First Menstrual Period

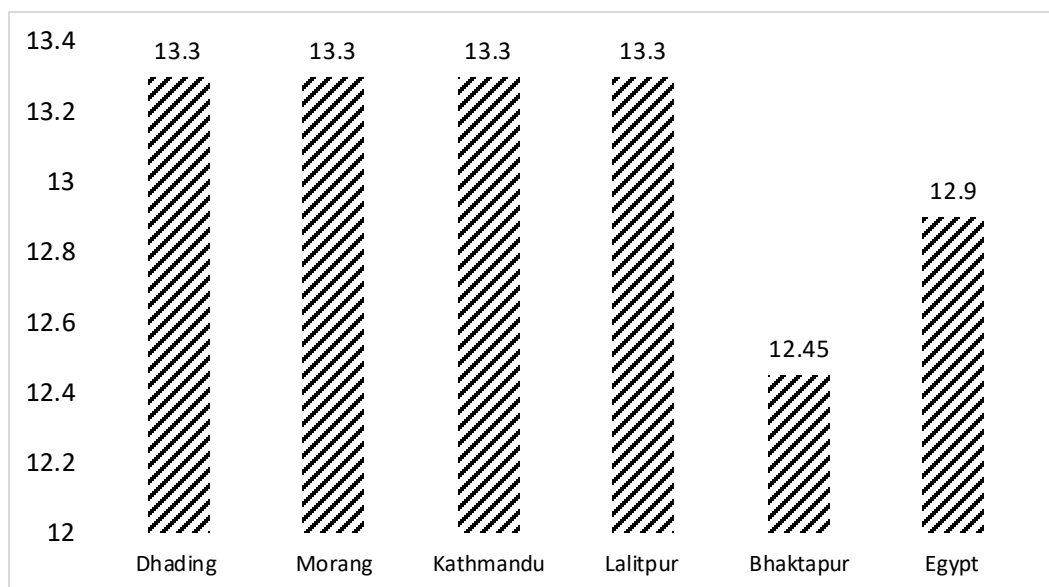
First menstrual period is the onset of menstruation and it is one of the most significant milestones in a woman's life. The mean age at first menstrual period varies from population to population and is known to be a sensitive indicator of various characteristics of population including nutritional status, geographical location, environmental conditions and magnitude of socioeconomic inequalities in a society. Studies suggested that first menstrual period 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 first menstrual period, 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 first menstrual period 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 menstruation before it began. Another study found that over half of the married adolescents in the study were unaware of the causes of menstruation (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 first menstrual period is attained between 10-16 years, and the mean age of first menstrual period being 13.3 years (Water Aid, 2009). Meanwhile the age at first menstrual period in study conducted in Bhaktapur was 12.43 years (Pathak, 2009). In Egypt, the age at first menstrual period 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 first menstrual period 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 (3-5days) 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 and Jumla 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 socio-cultural beliefs behind are based on concepts of “pollution” surrounding the conditions of menstruation and usually mothers imparted these beliefs to the girls as important know how related to the practices during menstruation (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 menstruation in the family caused embarrassment, and some even felt that having menstruation 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 menstruation 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 Study Area and Rationale

The study is conducted in three government schools of Kathmandu Metropolitan City, Ward No. 13 & 14. The reason for selecting these schools is that I am very much familiar with the area and mostly the students of these government schools are nature of rural background.

#### 3.2 Research Design

A descriptive cross sectional study is designed to assess the level of knowledge and practices regarding menstrual hygiene among high school adolescent girls of Kathmandu Metropolitan City, Ward No. 13 & 14, Research is quantitative in nature. The data was collected from field survey.

#### 3.3 Universe and Sample Size Procedure

In total, the numbers of government high school in Kathmandu Metropolitan City, Ward No. 13 & 14 are 7. They are Jana Prabhat Secondary School (40 girls, Kalimati-13, Kathmandu), Nil Barahi Secondary School (78 girls, Tankeshwor Kalimati, Kathmandu-13), Panchakanya Secondary School (26 girls, Chauni-13, Kathmandu), Janapath Secondary School (56 girls, Kalanki-14, Kathmandu), Kuleshowor Awash Secondary School (78 girls, Kuleshowor-14 Kathmandu) Janabikash Secondary School (41 girls, Kumari club, Balkhu-14, Kathmandu) and Kuleshowor Secondary School (29 girls, Kuleshowor-14, Kathmandu). For My research as a sample only 3 government schools including Jana Prabhat Secondary School (40 girls, Kalimati-13, Kathmandu), Nil Barahi Secondary School (78 girls, Tankeshwor Kalimati, Kathmandu-13) and Kuleshowor Awash Secondary School (78 girls, Kuleshowor-14 Kathmandu). Out of 7 schools; three government high schools had been selected for my study which covers 55% 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 190 girls of three schools including Jana Prabhat Secondary School (40 girls, Kalimati-13, Kathmandu), Nil Barahi Secondary School (78 girls,

Tankeshwor Kalimati, Kathmandu-13) and Kuleshowor Awash Secondary School (78 girls, Kuleshowor-14 Kathmandu) total 196 girls students as a sampling are taken as respondents. 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 Ward office, District Education Office, 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

Menstruation 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 menstruation 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 menstruation 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 menstruation 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 Kathmandu Metropolitan Ward No. 13 & 14 on Menstrual Hygiene Management in coordination with District Education Office (DEO) and concern schools, I visited three government High schools that located in Kathmandu Metropolitan City Ward no. 13 & 14 to facilitate/conduct session to girls students of class 9 and 10 of Jana Prabhat Secondary School (40 girls, Kalimati-13, Kathmandu), Nil Barahi Secondary School (78 girls, Tankeshwor Kalimati, Kathmandu-13) and Kuleshowor Awash Secondary School (78 girls, Kuleshowor-14 Kathmandu) total 196 girls students.

#### 4.1 No of Participants

**Table 4.1: No of Participants**

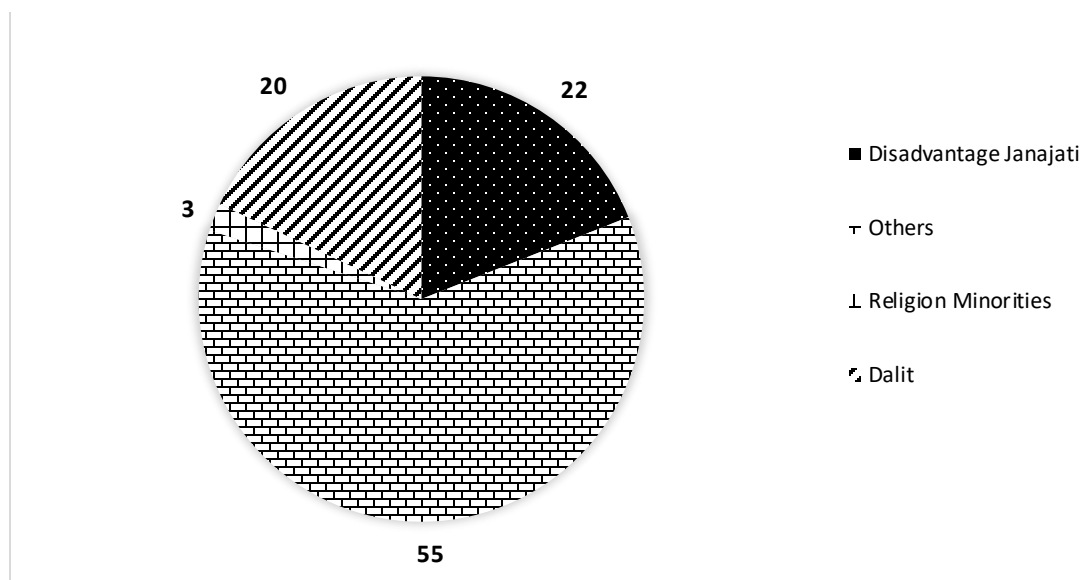
SN	School	Class 9	Class 10	Total
1	Jana Prabhat	15	25	40
2	Nil Barahi	43	35	78
3	Kuleshowor Awash	35	43	78
<b>Total</b>	<b>3 schools</b>	<b>93</b>	<b>103</b>	<b>196</b>

*Source: Field Survey, 2018*

Out of 196 girls, menstruation 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 4.1: Caste Based Population**

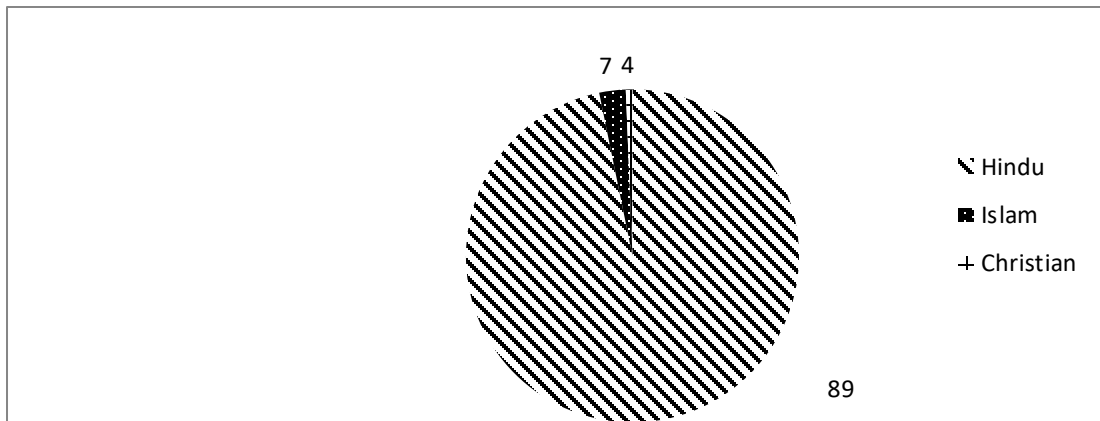


Source: Field Survey, 2018

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

### 4.3 Religion Based Population

Fig 4.2: Religion Based Population



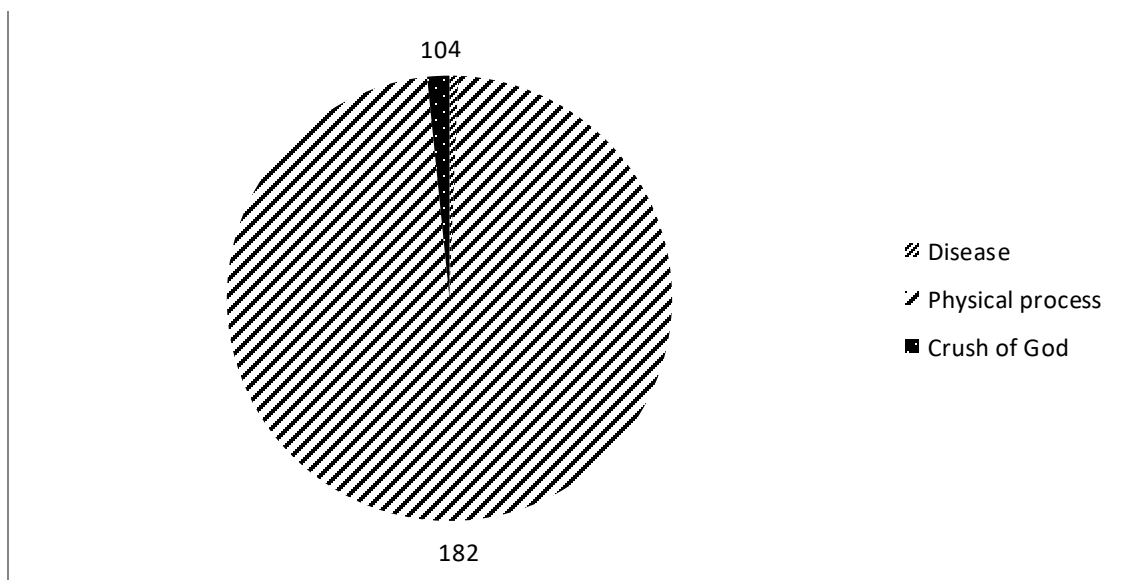
Source: Field Survey, 2018

In total 89% respondents were Hindu whereas remaining 4% were Islam and 7% Christian.

### 4.4. Knowledge on Menstruation Health Management (MHM)

#### 4.4.1. What is Menstruation Process?

Fig 4.3: Understanding of Menstruation Process

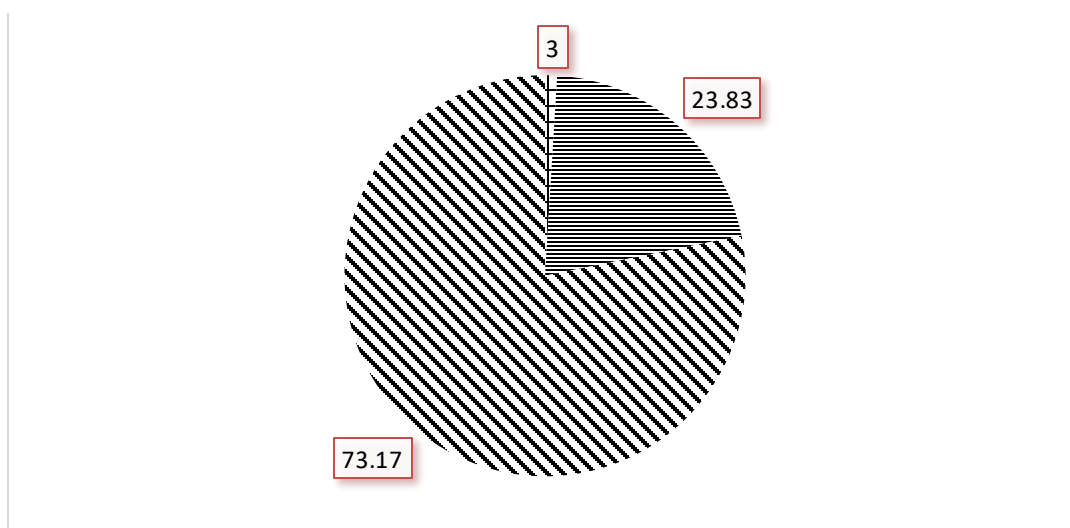


Source: Field Survey, 2018

Above chart shows that only 4% girls are unknown about the menstruation 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 4.4 Knowledge about Blood Coming Place**



Source: Field Survey, 2018

Above chart shows that only 23.83% 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.

#### 4.4.3 Knowledge of Menstruation Period

**Table 4.2: Knowledge of Menstruation Period**

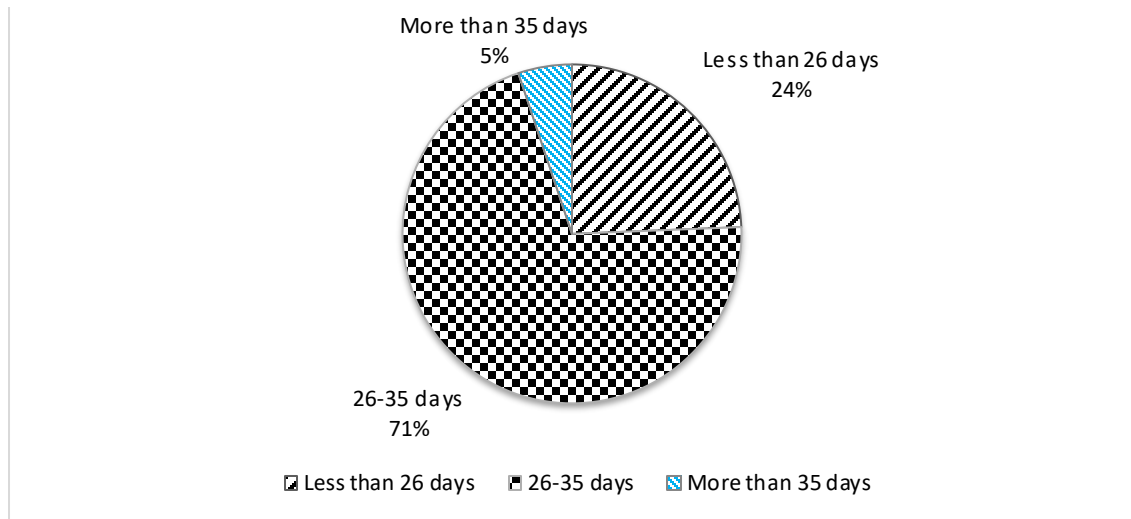
Days	No of Respondent	Percentage
1-3 Days	48	24.48%
4-6 Days	126	64.28%
More than 6 Days	22	11.22%

Source: Field Survey, 2018

Above table shows that only 64.28% respondents know the concept of menstruation period. They said that it happens for 4 to 6 days.

#### 4.4.4 Knowledge on Menstruation Cycle

**Fig 4.5: Knowledge on Menstruation Cycle**

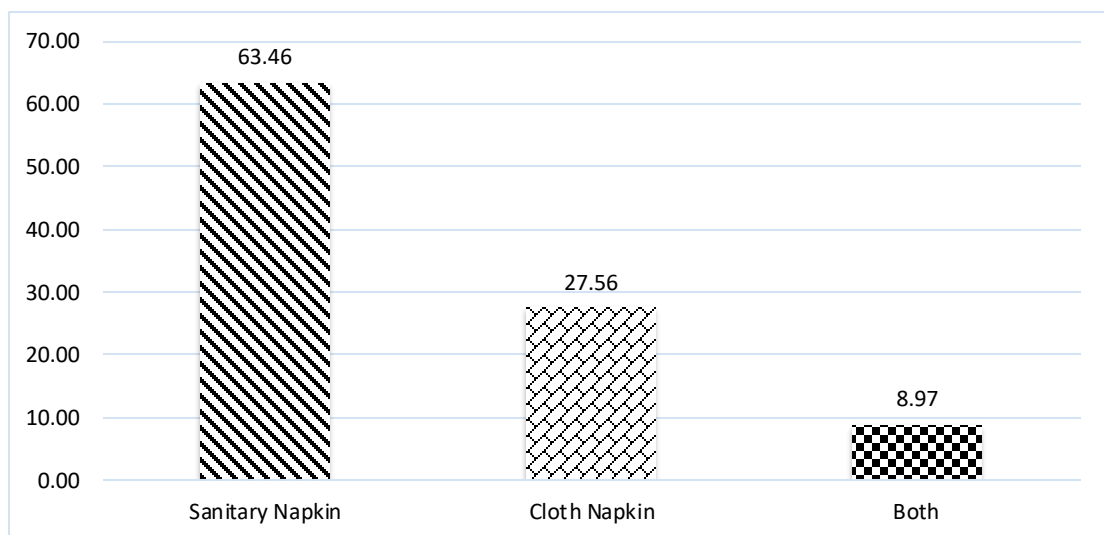


Source: Field Survey, 2018

#### 4.5 Practices on Menstruation Hygiene Management

##### 4.5.1 Material use During Period

**Fig 4.6: Material Use During Menstruation**



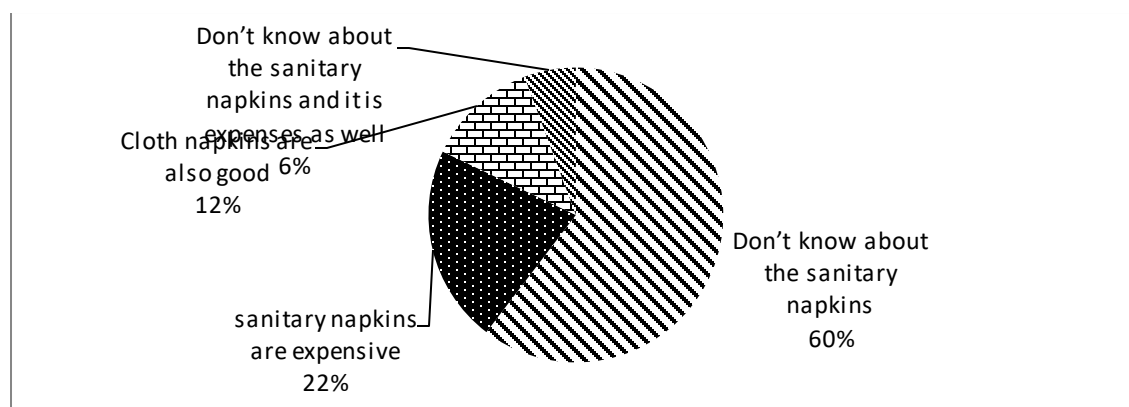
Source: Field Survey, 2018



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

#### 4.5.2 Cause of Not Using Sanitary Napkins

**Fig 4.7: Cause of Not Using Sanitary Napkins**

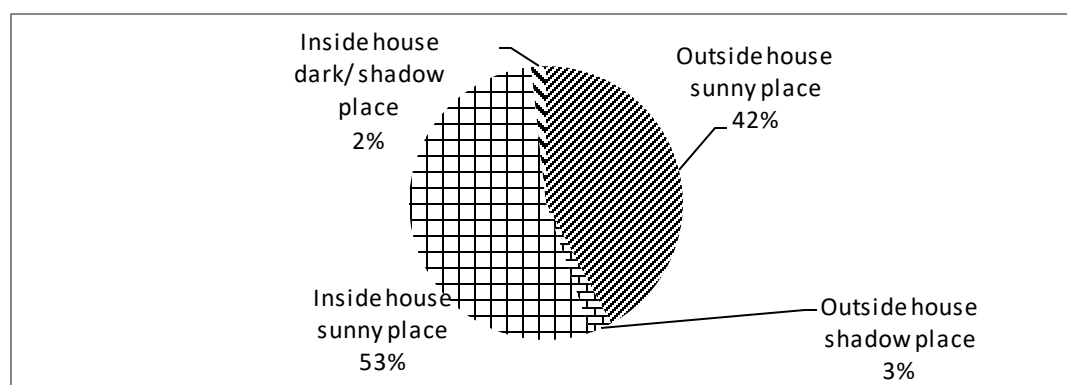


Source: Field Survey, 2018

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 first menstrual period. This practice was handed over from her mother or other elder female family member.

#### 4.5.3 Cloth Napkins Drying Place

**Fig 4.8: Cloth Napkins Drying Place**

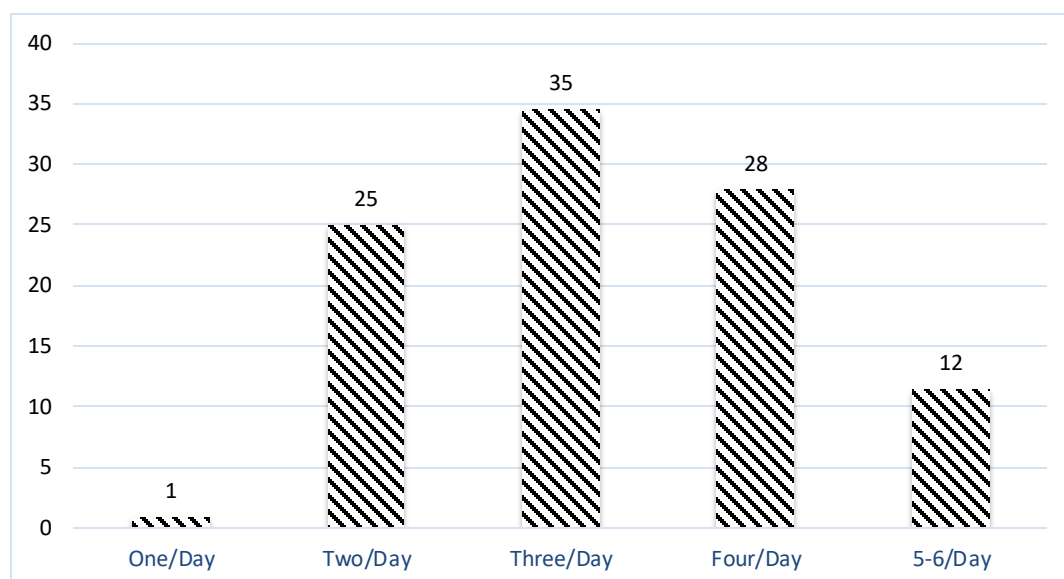


Source: Field Survey, 2018

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 4.9: Sanitary or Cloth Napkins Using Practicing Per Day**



Source: Field Survey, 2018

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 (1/4<sup>th</sup> girls).

#### 4.5.5 Used Napkins Disposal Practice

**Table 4.3: Used Napkins Disposal Practice**

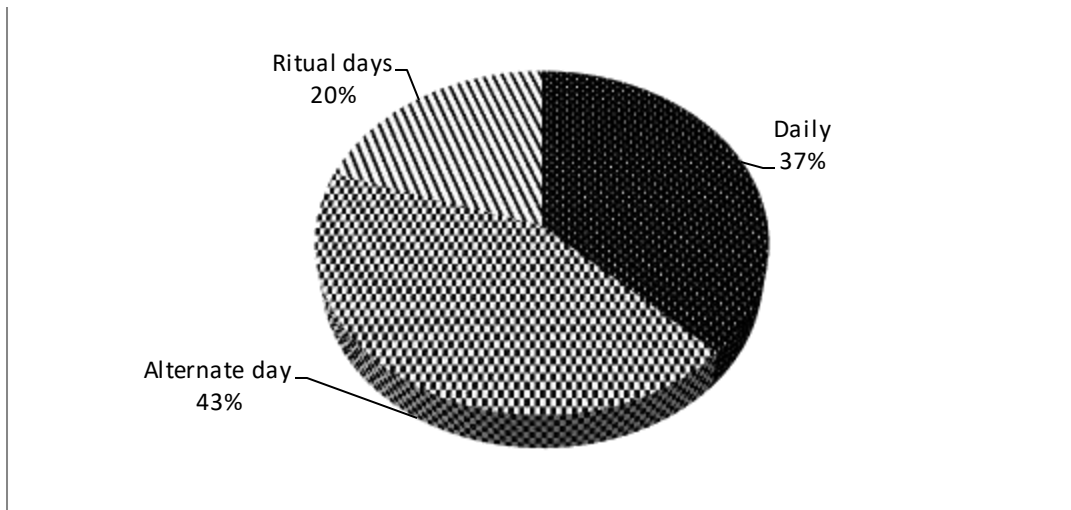
Method	Nos	Multiple method	Nos
A. Throw with other waste	60	A & B	24
B. Bury	70	A & E	5
C. Burning	35	B & C	10
D. Throw in Cannel/river	10	B, C & E	2
E. Throw in Toilet Pan	21	B & E	6
Total	196		

Source: Field Survey, 2018

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 4.10: Bathing Practice During Period**

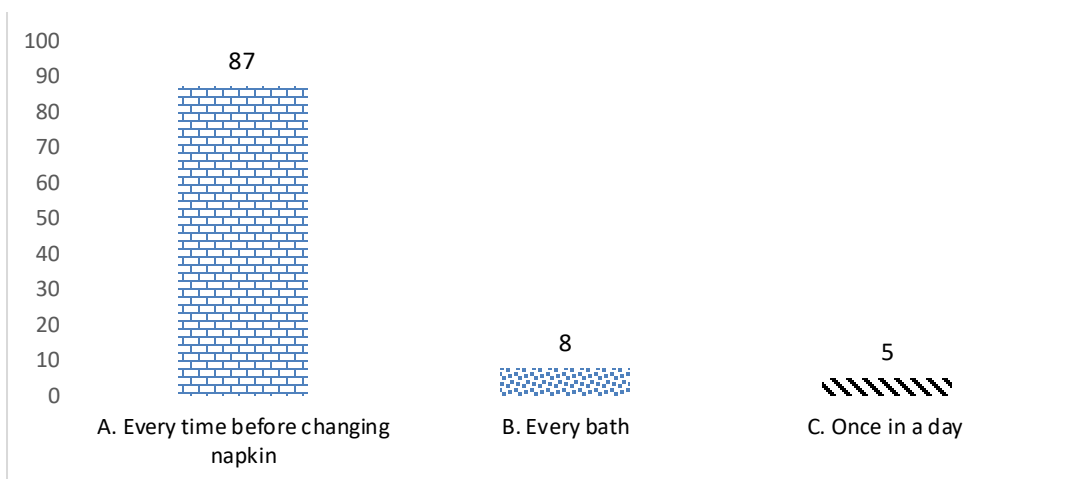


Source: Field Survey, 2018

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 menstruation period.

#### 4.5.7 Cleanliness of Vaginal Part During Menstruation Period

**Fig 4.11: Cleanliness of Vaginal Part during Menstruation Period**

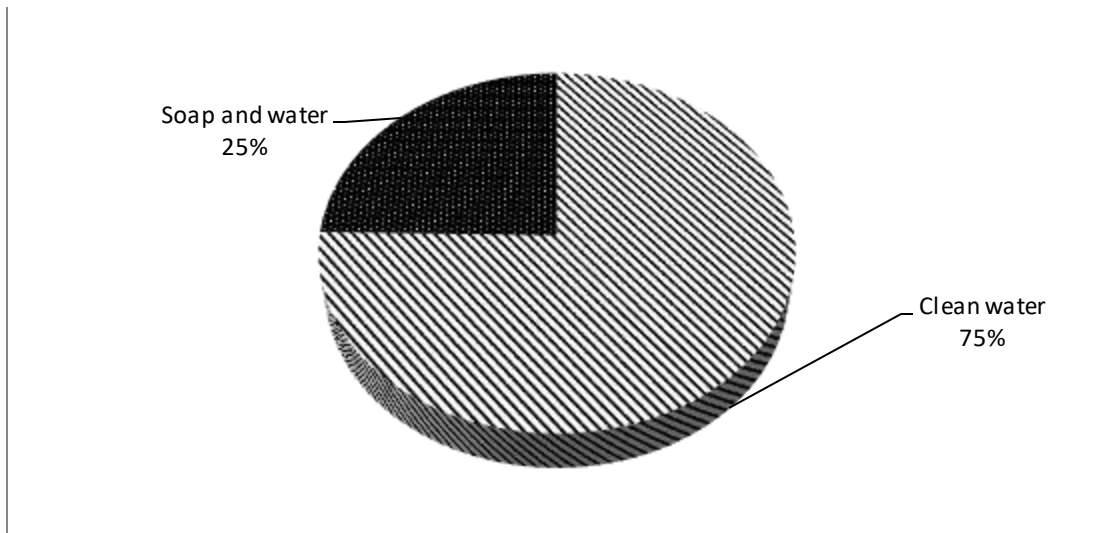


Source: Field Survey, 2018

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

#### 4.5.8 Material Use For Vaginal Part Cleanliness

**Fig 4.12: Material Use for Vaginal Part Cleanliness**

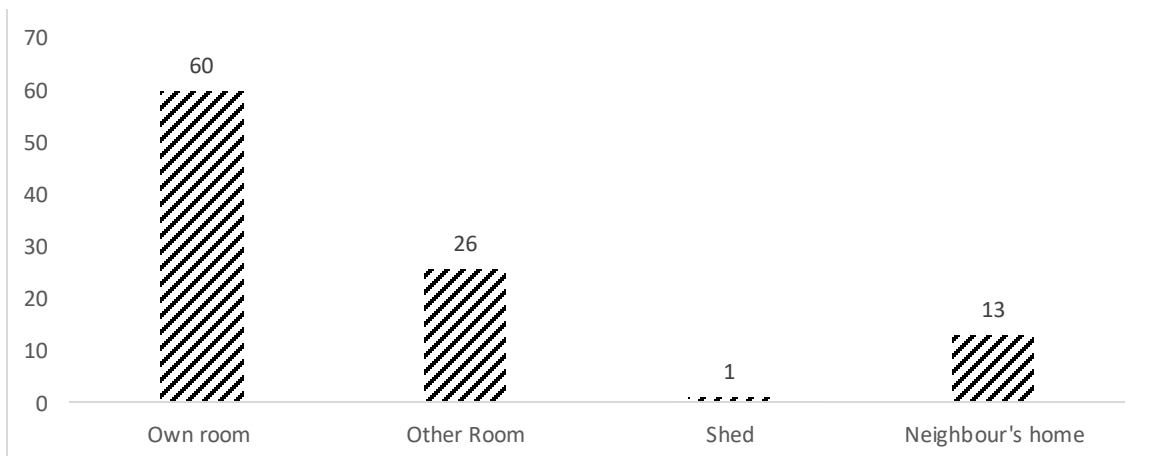


Source: Field Survey, 2018

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

#### 4.5.9 Sleeping Place During First menstrual period

**Fig 4.13: Sleeping Place During First menstrual period**



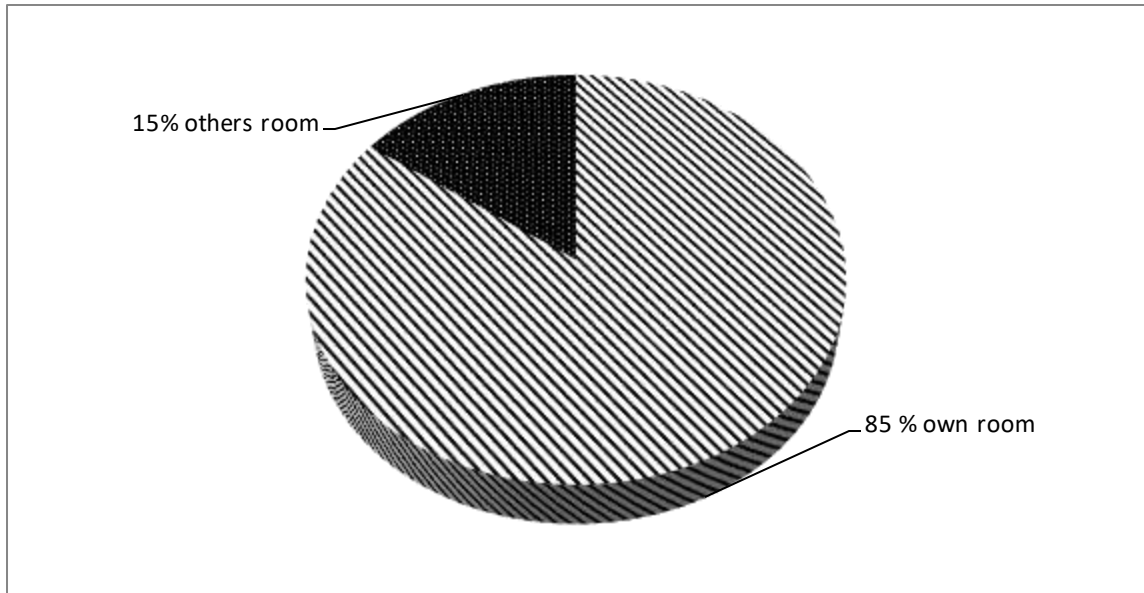
Source: Field Survey, 2018

Above chart indicates that however the menstruation taboo is still alive in urban area, 60 % householders kept their girl at her own room during the first menstrual period,

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**

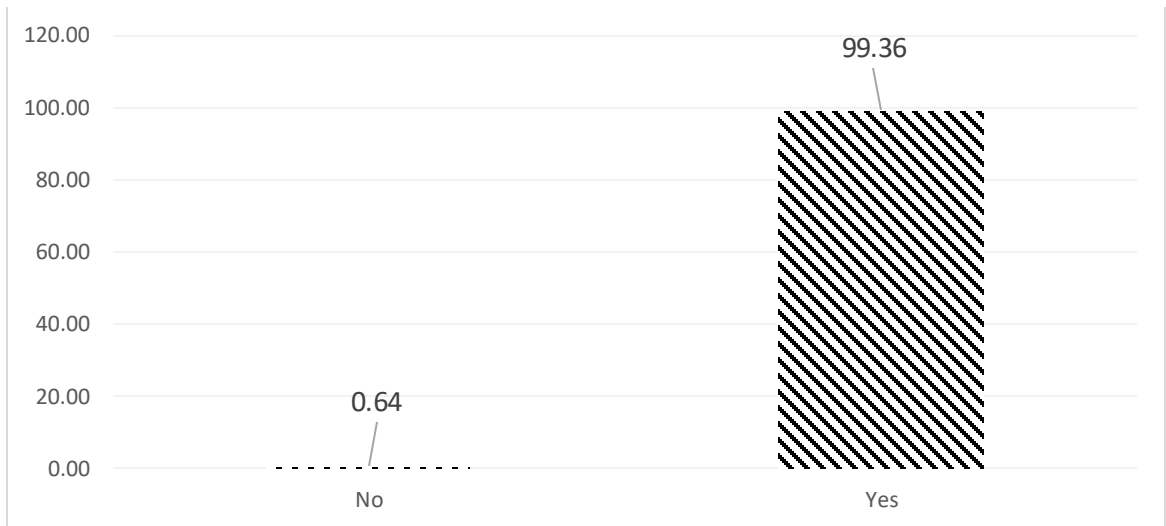


Source: Field Survey, 2018

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

#### 4.5.11 Restriction During the Menstruation

**Fig 4.15: Restriction During the Menstruation**

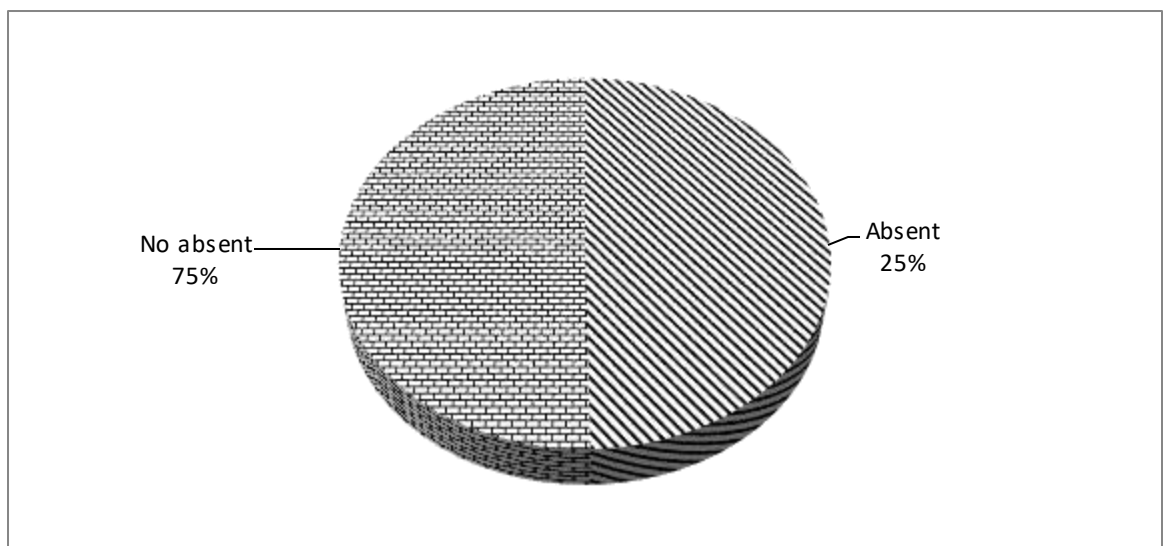


Source: Field Survey, 2018

According to the survey, there is restriction in almost all houses (99.36%) during menstruation. Only 0.64% 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 4.16: School Absent During Period**



Source: Field Survey, 2018

Still half girls are remain absent in schools during the menstruation period.

#### 4.5.13 Cause of Absent During Menstruation Period in Number

**Table 4.4: Cause of Absent During Menstruation Period in Number**

<b>Cause of Absent During Menstruation Period</b>	<b>No.</b>
A. Health problem/pain	20
B. Problem of napkin dispose	14
C. Fear of exposure	12
D. Unavailability of sanitary pad in school	5
E. Lack of pad changing place	4
F. Social culture	0
G. lack of Water and soap in toilet	3
Multiple reasons- health problem, sanitary napkin, soap, dust bin	58

(Source: Field Survey, 2018)

Out of the 58 absent school girls, above causes were indicated. The table shows that one third 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 Summary

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

Out of 196 girls; 7 girls are unknown about the menstruation 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 64.28% respondents know the concept of menstruation period. They said that it happens for 4 to 6 days

24 % students out of 196 were unknown about the menstruation 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 first menstrual period. 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 1/4<sup>th</sup> 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 menstruation 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 first menstrual period, 26 % householders kept in another room, 1 % ( 4 House) kept their 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 one third girls are remain absent in schools during the menstruation period.

One third girls are remained absent because of health problem. They mentioned that weak health is one of the major causes for absenteeism at school.

Jana Parbhat Secondary School, Kalimati – 13, Kathmandu 80% of students are don't use sanitary pads and 20% use pads. Sanitary pads are easily available because of Capital City. Pads are found on medical halls, hospital, beauty pallor, cosmetics and most general stores. As per our survey we found 85% are allowed to entered in kitchen but they are not allowed to do/ use any things in kitchen. This is because they share single room where as 20% of girls are allowed to sleep together with their younger brother and sister.

In a survey we found 90% of girls have bleeding problem and in a same ratio they have a stomach pain. We found all of them use medicine for 1 – 5 times of menstruation period. First menstruation age 12 – 15 years. Family members, friends, sisters, relatives and mother are aware on menstruation to their daughter. Menstruation cycle normally we found 21 days to 40 days. Speak about menstruation in public they fell shy, so they don't speak in public but they share with their friends. In our research mostly we found aware about their periods due to technology, media, friends and circle. Word use to describe girls in menstruation period called mins. Time period to change pads in school time 3 – 4 hrs. 2 – 7 days long time dose a period for first time. Prone position, hot drinks, hot water bags, medicines for relief the pain. No healthy diets are available at that time because of economic problem among their family.

## **5.2. 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 menstruation for adolescent girls. The knowledge generally transform from mother to daughter. This knowledge is not enough because still some girls have miss conception about menstruation 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 menstruation 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 menstruation period and some of them are sent to their neighbor's house as well. The superstitions of untouchability during the menstruation are almost there in every household. They are not allowed to enter and work in the kitchen during the menstruation period. It means the family members restrict the girls for doing rituals activities and other household's activities during menstruation 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.

### **5.3. Recommendation**

From this study the following recommendation are made:

Menstruation friendly toilet facility must be available in the school.

Woman teacher must be selected as of focal teacher for sanitation especially on Menstruation Hygiene 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 rising extra 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.

#### **5.4 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 from 196 girls. 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 menstruation health 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.

## REFERENCES

- American Academy of Pediatrics (AAP), (2006): *Menstruation 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 first menstrual period*. 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 ObstetGynaecol 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 ChueekulaPratha*" – *Menstrual Sheds: Examples of Discriminatory Practices against Women in the Mid- and Far-Western Regions of Nepal: Considering Women as "Impure" or "Unclean" During Menstruation and Post-Partum Periods, 2006*.
- Kirk J. & Sommer M. (2005): *Menstruation 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): *Menstruation 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 menstruation 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*.
- WaterAid Nepal (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 first menstrual period 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?

Yes

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 QUESTIONNARE**

**How old you were at First menstrual period? .....**

**In your opinion, how many days menstruating process occurs?**

- a) 1-3 days
- b) 4-6 days
- c) more than 6 days

**Do you know about the menstruation cycle, how long is it?**

- a) less than 26 days
- b) 26-35 days
- c) more than 35 days

**Had you aware about the menstruation before first menstrual period?**

- a) Yes
- b) No

**If, Yes, from whom you had got information (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

**Who had given knowledge on menstruation 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



**In your opinion, what is the process of menstruation?**

- a) Disease
- b) Physical process
- c) Crush of god/goddess

**Do you know, from where blood comes during menstruation?**

- a) From Abdomen
- b) From Uterus
- c) From Vagina

**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

**What problems can be seen during the menstruation period?**

- 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**

**Where you go if you have got any problem during the menstruation time?**

- a) Domestic treatment
- b) Nearby health institution
- c) Traditional healer
- d) Other

**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 ? .....**

**What you do used sanitary pad/ non- reusable cloth pad ?**

- a) Through with other wastage
- b) Bury
- c) Burn
- d) Through in River/ stream/ cannal
- e) Through in toilet pan
- f) Other

**What is the bathing pattern of you during the menstruation?**

- a) Daily
- b) Alternate
- c) As per religious day
- d) Other

**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

**Where you sleep/ stay during first menstrual period?**

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

**Where you sleep during menstruation after that?**

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

**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

**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

## CASE 1

*A grade 9 student of Janaprabhat Secondary School, Kalimati-13, the first rank holder in class with a lot of dreams to excel in life- this is Sita who is just 13 years old. Dipayanti is 14 and she is in grade 10.*

*Both Sita and Dipayanti share two things in common. They go to the same school and they both are members of the school committee. Water for people have installed an arsenic filter, sanitary block and drinking water station in their school as well as established a committee with students and teachers as its members to look at the operation and maintenance of the created facilities.*

*Sita and Dipayanti have done exemplary work in their school. Since the installation of arsenic filter, they have been active members of the Committee and have set examples for other students. Within the Committee, they keep the sanitary facilities clean and hygienic. They make sure that the water is not wasted recklessly by fellow students; they also act as hygiene educators- they go to each class to teach about the importance of hygiene and maintain the facilities hygienically. Today, they have evolved to be effective leaders within their schools; they take things in their stride, make decisions, give lessons, and maintain the school facilities properly. They enjoy being on the committee because they have had leadership capabilities within the schools. However, the scenario was entirely different before Water For People's intervention. Sita and Dipayanti refrain themselves from coming to school during their menstrual period.*

*There were no proper girl friendly sanitary facilities at school and their knowledge of maintaining good hygiene practices were bare minimum. Since they were absent from classes, they were not in sync with the ongoing course curriculum which eventually affected their studies. However with the new sanitary block that Water For People established, things changed. They had changing rooms in the new sanitary block which had an incinerator to dispose their used napkins. In fact the sanitary napkins were also made available in school for the girl students. They started to come to school regularly, they started gaining interest in studies, took part in outdoor activities as they were much more comfortable during their menstrual period. Today, both these girls serve as examples to rest of the students. They started taking interest in maintaining the sanitary blocks and making the students aware of the best hygiene practices.*

## CASE 2

*Due to lack of availability of sanitary napkin, she used clothes like other rural girls in her village during the days of menstruation. In her school, the level of awareness about the menstrual hygiene was very low. Moreover, there was no provision of separate girls' toilet, change room to dispose or change cloth, no sanitary napkin facilities, no incinerators and no such running water and soap facility to wash hands. Ambika (Name changed) confessed that she was not comfortable going to school those days. She also told that recurrent absenteeism in school every month also affected her studies. She could not take part in extra-curricular activities, stayed away from the playground and never took part in outdoor activities during her menstrual days.*

*Today, Ambika is a happy girl. She is a regular in school and is excelling in her studies. She remains present during her menstrual days also. She does not miss her classes and during her free time, she plays with her friends, takes part in extra-curricular activities. Like Ambika, many other girls of her school who have reached their puberty, do not hesitate to come to school during these days. Reviewing the entire WASH situation of the school, Water For People along with its local partner NGO, implemented School Water Sanitation and Hygiene programme. A package of financial assistance, technical and software support has been given. With active support of the concerned school, partner NGO, a two-storied sanitary block has been constructed in Nil Barahi Secondary School, Tankeshwor, Kalimati-13. A simultaneous effort has been taken to construct change room and incinerator, to provide running water, soap, and sanitary napkin facilities.*

*Today, Ambika like other girls have learnt to use sanitary napkins and incinerator for disposal and she is happy that they have got a good sanitary block with all the facilities which is girl friendly and a good running water supply.*