

# Knowledge on Sanitary Practices and Waste Management Among Sherubtse College Girls

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**Abstract** *Sherubtse* College under Royal University of Bhutan has a total of 1582 students, where 787 Of them are female. They suffer from menstrual and menstrual cramps every month and they use napkins to stay clean and healthy. As all the college girls are educated on the norms and use of sanitary napkins, the proper management of the waste generated is lacking. The disposal of used sanitary napkins and management is a challenge to the college management. This small research aims to investigate on how girls in college campus manage the menstrual waste and the amount of sanitary napkins used. The lack of proper dumping areas leads to the improper sanitary waste management and sometimes the waste generated from the sanitary napkins are toxic and unhealthy. It is very important to initiate some ways to dump the pads and its related problem should be seriously addressed by the college management. It is also important to come up with different solution and management of these wastes for sustainable environment. Therefore, this research will be mainly mentioning about the suggestions and how the sanitary waste is being managed in *Sherubtse* College campus and the amount of sanitary pads used in a month or an year.

**Keywords:** *sanitary, menstrual, female, waste, management, eco-friendly*

## Introduction

Menstruation and menstrual practices still faces restrictions from social, cultural, and religion in regard to proper management of menstrual hygiene and disposal [22]. Sanitary napkins can be defined as a disposable absorbent pad used to absorb the uterine flow during menstruation [5]. The girls or women living in the remote part of the country are not prepared and are not aware of the menstruation and sanitary practices. As a result they face difficulties and challenges at home, schools and work places. Some girls face lot of complications and health issues because of poor menstrual hygiene and disposal of sanitary napkins [13]. A person aged between 10 and 19 years is considered as an adolescent, or it can be also said as the transition period between the childhood and adulthood. Physical, psychological, and biological development of the child occurs during this period [16]. It is recognized as one of the special periods in a female's life cycle which requires special attention and more support from her loved ones. Menstruation is an important biological milestone in a woman's life as it marks the onset of the reproductive phase of her life. Menstruation is a natural and normal process of life but it is still a taboo in society as it is considered unhygienic and dirty [15]. Menstruation wastes are the wastes that are generated by a female in her reproductive years, and such wastes are commonly known as menses, periods, or monthly bleeding cycle [1].

There are different types of disposable sanitary napkins; Panty liner - designed to absorb daily vaginal discharge, light menstrual flow; Ultra-thin - a very thin pad which may be as absorbent with less bulk; Regular - a middle range absorbency pad; Maxi/Super - a large absorbency pad useful for the start of the menstrual cycle when menstruation is often heavy; Overnight - a longer pad to allow for more protection while the wearer is lying down, with the absorbency suitable for overnight use; Maternity - usually slightly longer than a maxi/super pad and are designed to be worn to absorb lochia (bleeding that occurs after childbirth) [12].

Most of the females have very limited/no knowledge about reproductive tract infections caused due to ignorance of personal hygiene during menstruation time. In rural areas, women know very little about the types and method of using sanitary pads and some of the females are not able to afford the products due to high cost of the napkins [21]. To avoid paying high costs, they rely mostly on reusable cloth pads. Adolescent girl's needs and requirements are ignored despite the fact that their health is wealth to the nation [13]. Most of the women dispose of menstrual products in domestic wastes and in public toilets and they flush them in the toilets without knowing the consequences of choking. So, there should be a need to educate and make them aware about the environmental pollution and health hazards associated with improper disposal of sanitary

napkins [8]. Implementation of modern techniques like incineration can help to reduce the waste. Awareness and campaign should be created to emphasize the use of reusable sanitary products [13].

The menstrual flow varies from female to female and may be more or less at the beginning of menses or may change throughout the cycle [12]. The color of the menstrual fluid varies between red, bright red, and dark brown to black. Menstrual fluid may or may not have unpleasant aroma especially when it comes in contact with air. Compared to the urban areas, women in rural areas do not have access to sanitary products or they know very little about the types and method of using them or are unable to afford such products due to high cost. So, they mostly rely on reusable cloth pads which they wash and use again [11]. Women manage menstruation differently when they are at home or outside; at homes, they dispose of menstrual products in domestic wastes and in public toilets and they flush them in the toilets without knowing the consequences of choking. So, it would be better for the girls if they are educated properly about the use of sanitary napkins and make them aware about the environmental pollution and health hazards associated with them [6].

28<sup>th</sup> of May is marked as International Menstrual Hygiene Day to mainly help break the silence and build awareness about the importance of good menstrual hygiene management in the life of women and girls as well as to manage the waste [18]. It has seen that 500 million women and girls globally lack adequate facilities for menstrual hygiene management [20]. It is mainly faced by the women in her work place, public places, schools and colleges. As many developing countries face the same problem, they tend to throw their used pads to open area and flush inside the toilet resulting in solid waste and blockage of toilets which contribute to global problem [17].

## 1. Literature Review

In most of the literature, the menstrual waste management like used-napkin disposal area, social marketing of low-cost napkins, production of reusable napkins to generate less waste, issues of washing solid waste materials and production of biodegradable napkins are described as possible ways to reduce the waste and ill effects of waste on environment and the public health [10]. While menstrual hygiene is gaining attention elsewhere, the management of sanitary waste disposal remains as non-issue in some countries. They figure it out that in average women's life she is likely to use 15,000 sanitary napkins [19]. Every year over 12 billion used

napkins are disposed in landfills and more than 2 billion of napkins are flushed down to toilets which lead to sewage related debris [7]. Most of the women are comfortable to dump sanitary waste in bins but some flush in toilets while some burn them down [3].

Sanitary waste and its disposal is a critical issue currently all over the world. Women use different kind of things to prevent menstruation from leakage and in India 57% of women use sanitary napkins, 41% use cloth, 1% use ash, dried leaves, soil where other 1% use tampons and menstrual cups [4]. Different woman used different kind of disposal method depending on the product they used, facilities, time, location and social beliefs. 40% of women throw sanitary waste in dustbin, 18% throws in river or roadside, and 18% bury the waste, 15% burn it where as 9% flush down the toilet [14]. A normal woman in India dumps around 150 kg of non-biodegradable waste every year and with change in the life style and hygienic sanitation, women are becoming more aware of the importance of their health so, the number of sanitary napkins used increases, leading to the problem of sewerage system, landfills and water bodies [4].

Menstruation waste is the waste that is produced from menstruation materials used by the females during her reproductive age. As menstruation is the cyclic process for all the women, they use sanitary napkins monthly as a way to maintain their health and hygiene. Menstruation cycle has three phases namely follicular phase, ovulation phase and luteal phase [9]. Management and the strategies to vary from country to country due to availability of resources, economic status, personal choice, education status, cultural traditions and believes [13]. From these factors cultural traditions and believes play a vital role since most of the counties believes that menstruation is a misfortune and dirty [4]. To avoid humiliation from the people, women uses different method to maintain hygiene by using pads, napkins, cloths and other menstruation products which is becoming a waste as proper management is lacking.

Management of sanitary napkins is a problem faced by everyone, especially women and it should be dealt with proper methods. Now a days, cloth napkins are replaced by good quality sanitary napkins which is a good absorbent. Good quality and absorbed napkins is also known as disposable sanitary napkins, it's manufactured with a non-biodegradable materials [2]. Women from the low income country uses cloth napkins because they are unable to afford good sanitary napkins, as a result they dispose them inappropriately. Some youths and

elderlies women are not aware of the hygiene problems caused by the improper disposal of sanitary pads. In a nutshell disposal of sanitary napkins not only cause sanitary waste but also hygiene problem. Therefore, this paper aims to understand the knowledge on menstrual practices among Sherubtse College girls.

## 2. Methods and Materials

The Study mainly focuses on the female students of Sherubtse College under Royal University of Bhutan. We randomly selected 10 participants from each hostels (10 hostels in total). The names of the hostels are *Gakiling*, *Pemaling*, *Tshogayling*, Degree Hostel III, Mother Peter's Hostel (MPH), Degree Hostel V, *Yetsholing*, *Norbuling*, *Gatsaling* and *Dekiling*. Around 15 % of girls were interviewed from each hostel. The study was a part of undergraduate course project. The questionnaire were designed and prepared to analyze the knowledge of college girls regarding sanitation and menstrual hygiene, waste disposal, effects of improper disposal of waste and to come up with some suggestion for college management to improve things. We also interviewed the waste collector about where the sanitary napkins are dumped after it is being collected from the hostel, whether it is dumped separately or dumped together with other solid waste. The graphs and pie charts were generated using Microsoft Excel Sheet. The authors and organizations are cited properly as and when required.

## 3. Results and Discussion

Names of the hostel	Total no of girls	no of sanitary pads used (month)
Gakaling	95	9690
Pemaling	96	9890
Dekiling	99	13889
Tshogayling	99	11125
Yetshogayling	46	3780
Norbuling	24	2790
Gatsaling	43	3960
Degree Hostel III	98	8232
Degree Hostel V	84	9990
MPH	83	9271
Total	767	82617

Table 1: Hostel and the number of pads girls use in a month

As we have seen before the use of sanitary napkins differ from individual as menstrual cycle is different for different female. From table 1, we can conclude that the amount of pads use differ from each girl's hostel. The highest number of sanitary napkins

used was from *Dekiling* hostel generating 13,889 and the lowest number of sanitary napkins used came from *Norbuling* hostel generating 2,190. The result concludes that around 82,617 used menstrual pads are generated from 10 girl's hostel. Yearly, 991,404 pads are being produced which is a huge amount.

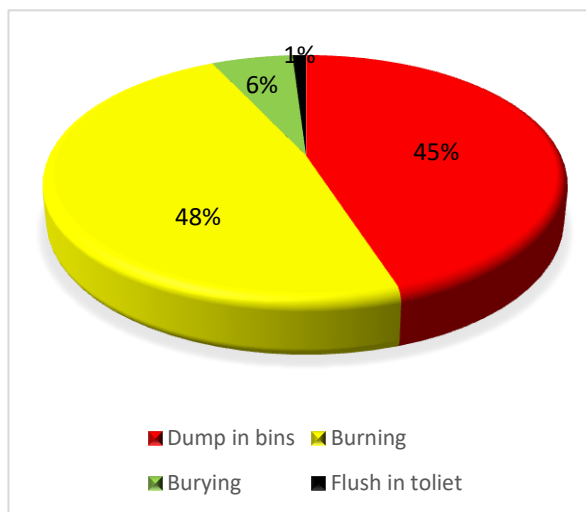


Figure 1: Methods of dumping menstrual waste

Figure 1 shows the most commonly practiced ways of disposing off the menstrual waste. Out of 100 girls interviewed, 48 % preferred burning as the best solution, 45 % preferred dumping it in bins, 6 % preferred burying and rest 1 % found it suitable to flush it down the toilet.

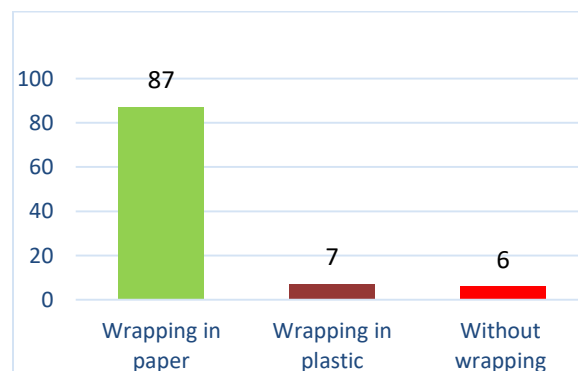


Figure 2: methods of handling menstrual waste

Figure 2 shows some of the popular methods in handing menstrual waste among girls of Sherubtse College. Out of 100 girls interviewed from 10 hostels, 87 % dumped the menstrual waste by wrapping it with plastic, 7 % wrapped it in plastic, and 1 % preferred dumping it without wrapping.

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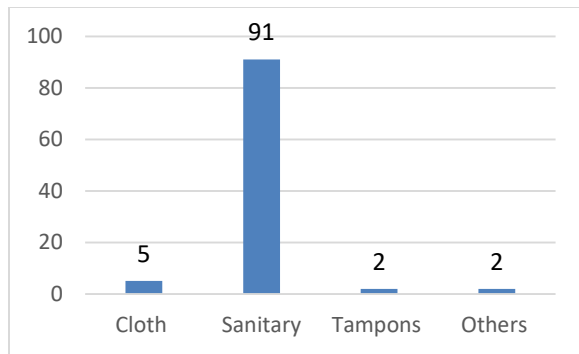


Figure 3: Types of menstrual product used

Figure 3 shows the most popular menstrual product used by the college girls. Around 91 % preferred using the most available product in market, while 5 % opted for napkins made from cloth (mostly reusable). 2 % preferred using tampons, while rest of the 2 % used other products available.

Questionnaire	Yes	No	No Idea
Is there any sanitary disposal problem in your area?	37	63	
Does college management take initiative to manage sanitary napkins in college?	49	14	37
Is sanitary napkin burning machine being affective in hostel dorms?	0	100	
Do you think improper disposal of sanitary napkin cause health problem?	90	10	

Table 2: Some of the 'yes', 'no' and 'no idea' questions

After interviewing and collecting our surveyed data we found out that most of the girls feel that they do not have sanitary disposal problem in their area (Table 2). 63 % of girls don't seem to have disposal problem in their area, whereas 37 % of the girls have disposal problem around their area. Some of the girls suggested about reducing the dog population in campus to reduced sanitary waste being scattered. Moreover, some of the girls mentioned about the incinerator being made available in every hostel. The incinerators are available in two of the hostels but it is kept idle as most of the girls don't have proper knowledge in handling the machine. Girls claim that they dispose their pads in proper area and in proper manner but they have no idea where these pads go after it is taken by the waste collector. As we have interviewed the person that collect the waste, he said that all the sanitary napkins are mixed with other waste and dumped with other waste as the

waste collector claimed they don't segregate menstrual waste separately.

Our research recommend college management to provide eco friendly bag for sanitary napkins disposal instead of plastic bag which is main cause of waste production. If college management provide facilities like training and workshop on use of sanitary burning machines, so many things would change. If management could install disposal bin only for pads in and around academic toilets. It will help in maintaining waste. Our respondent recommended that college management should emphasize on using *Chechey* pads (locally made eco-friendly sanitary pads) to reduce the sanitary waste generated. We recommend the future researchers to measure the weight of waste generated from sanitary napkins as our research failed to do so.

We took 10 representative samples from 10 hostels, but the number of napkin used differ from individual, so we couldn't get exact number of napkins used and generation of menstrual waste by all girls in a month. We were not able to survey those girls staying outside the campus. As we have surveyed only 10 representatives from each hostel the suggestion we got from them were similar and limited. Some participants were reluctant to answer some questions and we felt that they were lying about the answer that they were mentioning.

## 4. Conclusion

While collecting and the reviewing the scholarly works on menstrual waste management, we found out that girls around the world still faces restriction and humiliation for going through natural process once a month. In regard to Bhutanese context, menstruating girls are considered as impure and unhealthy because of blind faith in religion. With education and change in time, this sort of discrimination is decreasing. Most of the girls of Sherubtse are quite aware about the practices of menstrual hygiene and the ways to dispose of the waste. More researches are needed to understand the extent of affects caused by the improper disposal of menstrual waste into environment. There is a huge knowledge gap in regard to menstrual hygiene and menstrual waste in Bhutan. More researches needs to be done to fill up the gap.

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