

MENSTRUATION AND ENVIRONMENT

Menstruation is a normal physiologic process in a woman's life where the uterus cyclically sheds blood and tissue through vagina. However, the products used for its management and their improper disposal can have adverse impact on the environment.

Worldwide, 336 million women are menstruating and 64% of them use sanitary pads and 36% use other materials like cloth, reusable cloth pads, tampons and menstrual cups. In every cycle, a woman uses approximately 8 to 10 pads per month which makes up to 1 billion pads per month or 12 billion pads per year. Most of the pads and tampons are made of cotton and plastic.

Product used and the time taken for them to be decomposed is as follows:

- **Non compostable disposable sanitary napkins** are with or without SAP in absorbent Core. **These are of one time use** and they take 800 to 900 years to decompose.
- **Compostable sanitary napkins are also of one time use** and they take 3 to 6 months to decompose
- Reusable products are **cloth pad variants and menstrual cups**. They **are of multiple use** and they take 1 to 10 years to decompose.

These typically end up in landfills or are incinerated, which can have a great impact on the environment and long term deterioration of water and soil quality. The toxic chemicals leaching the soil, strong and harsh odours emitted by the wastes disposed causes both land and air pollution. Blood soiled menstrual absorbent are best culture media for disease causing pathogens, thus building a reservoir of pathogens in the environment. When incineration occurs in unsafe conditions like poorly constructed structures, low burning temperatures, insufficient waste volume, and improperly segregated waste, causes release of hazardous (carcinogenic) gases like dioxins and furans.

In view of the above mentioned hazards, safe disposal and adopting reusable menstrual products is the only way to ensure healthy safe and hygienic environment.

These methods include:

- Proper segregation of the waste at house, community and the district level.
- Installation of biomedical incinerators in place of small incinerators like tin matkas etc. being presently used.
- Using products that can be used multiple times like cotton pads and menstrual cups.
- Combustion in incinerators at high temperatures above 800°C leads to relatively harmless gases and ash, which can be used for land filling.

Sustainable menstruation refers to practices where environment-friendly alternatives to menstrual products are used, which do not produce waste. These include reusable, low energy input menstrual products such as menstrual cups, cloth pads, and period panties (Figure -1). These are brilliant innovations

with safe health benefits, cost-effective utilization, affordable and easily accessible to poor women. Not only they safeguard our environment, these have improved lives of women across all spheres ensuring a safe, healthy menstruation.

1. **A menstrual cup** is inserted into the vagina during menstruation. Its purpose is to collect menstrual fluid (blood from uterine lining) and prevent its leaking onto clothes. Menstrual cups are usually made of flexible medical grade silicone and shaped like a bell with a stem. Most menstrual cup brands sell a smaller and a larger size. Menstrual cups are sold colorless and translucent, but several brands also offer colored cups, such as pink or purple. The stem is used for insertion and removal. The bell-shaped cup seals against the vaginal wall just below the cervix. Every 4–12 hours (depending on the amount of flow), the cup is removed, emptied, rinsed, and reinserted. After each period, the cup requires cleaning. Unlike tampons and pads, cups collect menstrual fluid rather than absorbing it. One cup may be reusable for up to 10 years. This greatly reduces waste generation, and makes them more cost effective in the long run. Menstrual cups may be emptied into a small hole in the soil or in compost piles, since menstrual fluid is a valuable fertilizer for plants and any pathogens of sexually transmitted diseases will quickly be destroyed by soil microbes. The water used to rinse the cups can be disposed of in the same way. This reduces the amount of wastewater that needs to be treated. After their life span is over, the silicone cups are put in landfills or incinerated.
2. **Cloth Pads** are made of cotton, and can be washed and reused. They are inexpensive, free of irritating materials and do not harm the sensitive skin. The women should be made aware of their use, safe washing techniques and proper drying.
3. **Period Panties** are designed in triple layers of fabric. These are worn with cloth pads for best results. The first layer is absorbent which absorbs every liquid. The second layer is water-proof thus avoiding leakage. The third layer is cotton — which is responsible for providing optimum comfort to the wearer. The three layers of fabric ensure that there is no leakage. All materials used for designing a period panty are breathable and comfortable. A Period Panty ranges between Rs200 and Rs 600, a modest pricing for a product of great utility. They are also easily available for purchase.
4. **Interlabial pads** (Figure 2) are made of soft fabric and shaped like a petal. They are worn between the labia - the outer folds of the vagina. They are used for the days in which flow is light or used in conjunction with cloth pads on heavy-flow days because they absorb the "gush", so cloth pads can be used for longer time.

Approximately 20 pads/tampons per month, equating to 240 per year which over the average lifespan of a menstruating female (approximately 40 years of periods) gives us the grand total of 9,600 feminine hygiene products used during one woman's lifetime. Now multiply that by the 3.5 billion women on the planet and we have a considerable amount of potentially avoidable waste!! The environmental benefits of these products create a significant, applaudable and positive impact on the planet, where every woman's contribution to this transition from disposable to sustainable menstrual products matters.



Figure 1: Cloth pads and Menstrual cup



Figure 2: Labial pads

References:

1. Menstrual options for smart women. Available at www.greentehred.in
2. Sustainableperiodproject.org

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Menstrual hygiene and waste disposal – Firmly on the map : But still a long way to go

Dr.Akshatha Garg

INTRODUCTION

Menarche is an important biological milestone in a women's life as it marks the onset of the reproduction phase of her life; but menstruation and menstrual practices still face many social, religious and cultural restrictions which are a big barrier in the path of menstrual hygiene management. Exposing oneself in the open, especially during menstruation affects women's dignity and sense of self worth.

Ask anyone what it will take to make women's equality a reality and "toilets" will probably not be the response. Yet, it is difficult to exaggerate the impact that access to private, safe and sanitary toilets would have on the daily lives and long-term prospects of the 1.3 billion women and girls that are currently doing without. The burdens of water hauling are widely understood, less discussed and the blows to health, productivity and dignity that result from poor environmental sanitation. Needs and requirements of adolescent girls and women are ignored despite the fact that there are major developments in the areas of water and sanitation.

CONTINUED PRIORITY TO SCHOOL SANITATION

Environmental sanitation is fundamental to all development enhanced sanitation services be it women sanitary complexes, school toilets with incinerators or informing, educating and communicating regarding healthy sanitation hygiene practices is the need of the hour. The best way to do capacity building is in an environment that allows and encourages people to change and improve. Developing gender sensitive tools at the national sanitation programmes is a huge requirement of the hour. There is a need for a structured approach to identify best environmental practices from across the country be it usage of clay incinerators, sanitary pads made from bio degradable material like sea sponge and banana fiber; documenting the process involved and disseminating them and consciously encouraging these for upscaling the initiatives. With many business opportunities coming up in environmental sanitation programmes like vermi-composting and solid waste management, production of sanitary

napkins and designating environmental sanitation plans. Provision of sanitation facilities in schools and other public spaces requires special attention. Though huge progress has been registered in terms of creating water and environmental sanitation facilities in schools; in large numbers of schools, sanitary and hygienic conditions are appalling, characterized by the absence of properly functioning water supply, sanitation and hand washing facilities. Special provision to ensure separate toilets for girl children is crucial. Adequate attention needs to be paid in terms of construction quality, design elements, student to facility ratio apart from ensuring that it has facilities for physically challenged children. Hygiene, environmental sanitation, and water in schools can create an enabling school environment that contributes to children's improved health, welfare, better attendance of girl children and learning performance.

Menstrual hygiene management should be an integral part of education curriculum in schools. In addition to this proper and safe waste disposal and treatment of menstrual wastes is also a very sensitive issue to establish appropriate institutional arrangements at the state and local levels which ensure participation of communities and civil society and ensures community procurement and management.

LESSONS LEARNT

Investment in children as change agents and health ambassadors has shown remarkable results in persuading the family and community to build toilets and adopt appropriate sanitation behaviour.

Sanitation facilities in public areas need improvement in maintenance and strict compliance.

Health implications of menstrual wastes should be properly investigated

RECOMMENDATIONS FOR SUSTAINING BENEFITS AND SCALING UP

Environmental sanitation improvement cannot be implemented as a top-down infrastructure-led programme or project. While rural sanitation improvement faces a challenge for demand creation and people's initiatives to construct and use toilets, urban sanitation improvement is dependent to a great extent on government intervention and investments in city-wide infrastructure and inclusion of the slum dwellers in large infrastructure projects. Sector professionals, NGOs and government

programmes tend to look at individual factors like technology, finance and behaviour change –as targets for intervention to improve sanitation coverage .There is also a need to consider poverty,nature of rural livelihoods [migratory or farm based] and livelihoods insecurity as sufficient reasons inhibiting sanitation improvement in rural areas of India.Lack of water availability is also a major problem in certain parts of India.It is possible that a combination of all the above mentioned factors are operating that inhibit construction and usage of household toilets in rural areas of India and hence need to be comprehensively addressed to provide sustainable health and hygiene benefits to the rural especially poor populace of India.Women in lead roles has proved effective in terms of management,innovation and community based behaviour change

No solution to society's social,economic and political problems can be found without the full participation and the full empowerment of women, the energy and the will of women is out there ,but in regard to waste and environmental sanitation ,it has to be measured by strong and sturdy partnerships to lay down the nessary foundation.

MENSTRUAL HYGIENE DAY

2020

We live in a society where we were taught that menstruation should be kept hidden and whispered

We live in a society in a society where cigarette is sold in a way so fantastic but pads are sold in a black plastic

We live in a country where many women use old cloth instead of sanitary napkin we seriously need to create awareness about menstrual hygiene!!!

In a country like India there are many myths associated with menstruation or as we call it periods, PERIODS is something in our society that is secretive and something that should be kept hidden. In many parts of our country menstruation is still considered dirty and impure. Women are UNTOUCHABLE during their periods, WOMEN are prohibited from participating in their normal life, and she must be “PURIFIED” before she is allowed to return to her family and day to day chores of her life. However, scientifically it is known that the actual cause of menstruation is ovulation followed by missed chance of pregnancy that results in bleeding from the endometrial vessels and is followed by preparation of the next cycle. Therefore, there seems no reason for this notion to persist that menstruating, to break all these TABOOS surrounding menstruation, and to raise awareness about the importance of good menstrual hygiene management worldwide. MENSTRUAL HYGIENE DAY is an annual awareness day on MAY 28 to highlight the importance of good menstrual hygiene management. There are many women in our country who

still uses a damp, old cloth during periods, but keeping a dirty or soiled cloth intimate with your body for a long time can cause untoward reactions. This can put one in a tight spot, especially young girls at school. So for creating awareness about these issues we are going to celebrate menstrual hygiene day on 28 may, 2020. SO LETS TAKE A PLEDGE TOGETHER



#MenstruationMatters
#nomorelimits



BY

TRISHA SIDHU

Daughter of

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MENSTRUATION AND ENVIRONMENT

By - CHETNA RAWAT

Earth is the only planet which sustains life and perhaps the only one to “sustain a massive amount of waste and pollution”. Environment is attacked by umpteen number of hazardous factors of which sanitary waste is always overlooked. We roll it, chuck it, sparing a little thought on what will happen to sanitary pads after use. But the fact that “sooner or later ignorance has to pay a heavy price” should not be underestimated.

When we start digging up history, we find that the problem of menstrual management is not new but is an old one. In ancient Greece ‘period blood’ was seen as “bad blood” also various myths surrounded many other countries and these may be the strongest reasons for a failed menstrual management. But menstruation was an unavoidable reality that had to be dealt with, and as a result women in India started using scrap cloth from old saris and towels and in the same way women in US used “bricolage” approach that meant using of scraps of fabrics and soft strips of bark as absorbent. As things evolve with time and menstrual management was no exception to this and as a result around 1960s chemists were busily developing sophisticated plastics and synthetics to be used in menstrual products.

If we talk about present scenario, about 432 million sanitary napkins are generated annually in India alone, this number has the potential to cover landfills spread over an area of 24 hectares and also according to a study a single menstruator would use about 5-15 thousand pads over the course of a lifetime. And these figures are quite alarming as according to Menstrual health alliance India, it takes about 500-800 years for one sanitary pad to decompose as plastic is non- biodegradable.

This persuades us to think of a solution for another major problem that is “disposal of sanitary waste”. According to a solid waste management official, “there is no clarity about the classification (bio-medical or dry waste) of sanitary waste and also there is no awareness regarding proper disposal of the waste among people living in rural as well as urban areas. Most women living in urban areas dispose sanitary napkin in a dustbin which eventually piles in a landfill creating a problem cycle, also many of them flush down the napkin after use which results in clogging of underground drain which severely affects the health of manual scavengers. Whereas women in rural areas prefer to wash the napkins and bury them in a pit. Also disposal of the waste is highly dependent on whether it is being disposed at home or at school/workplace, and unfortunately due to lack of facilities in public and school washrooms girls often tend to flush down the sanitary pad. All these factors lead to dangerous health and environmental consequences, including diseases such as HIV and AIDS, loss of soil fertility etc. All these things clearly

suggest that we need to change our habits, and as said it is “never too late to mend our ways” so keeping this in mind we should work on our habits.

Now, there are myriad ways to work in the direction of sustainable menstruation management, starting from awareness and health campaigns to the use of sustainable menstrual products. List of menstrual products include **menstrual cups** they are most cost effective and inexpensive, with a life span of about 10 years without any health hazards, also they are travel friendly and leak-proof with ample storage. **Cloth pads** are also a good alternative for sanitary napkins, women with sensitive skin might benefit from these because unlike the regular pads they are made of cotton and not plastic and do not irritate the skin and also are environment friendly. **Period panties** are designed in triple layers of fabric, also these are worn with cloth pads for best results, it ranges between Rs. 200 and Rs. 600 also they are comfortable. **Bamboo fiber pads** in these pads bamboo pulp is used as an absorbing material and they have more absorbing capacity and are safer to use. They are affordable, easily decomposed, and environment-friendly pads and also possess antibacterial properties. **Water hyacinth pads** these are menstrual pads manufactured using water hyacinth and are sold under the brand name ‘JANI’. They are cost effective, easily decomposed and ecofriendly in nature.

Use of ecofriendly products would not work alone, it should be backed by proper disposal of sanitary waste. The best way to practice it is by following the government’s guidelines. The Indian central pollution control board has set guidelines for the disposal of sanitary waste and has specified role of all stake holders of the product to dispose them. Some of them include setting up of low cost incinerator in rural areas, electric incinerator in urban areas high temperature incinerator for bio-waste in urban areas, using deep burial technique for compostable materials in rural areas etc. According to the guidelines, the waste can be disposed by either incinerating (central incinerating units for urban or low-cost incinerating units for rural) or disposing in landfills. Both of these ways are easily doable but need to be implemented effectively on every level systematically. The required infrastructure and facilities should be made more accessible especially on rural fronts. Though these methods sound ideal, they have their own setbacks, too, as incineration is not an ideal method as the carbon trapped in fossil fuels is released into atmosphere along with other gases, while land filling is a major source of pollution and the plastics do not degrade for several years. Hence, we need to find better ways of handling our sanitary napkin waste by either recycling them or by using environment friendly products. The least an individual can do is to wrap the used sanitary napkin in a disposable wrapper which is provided by most pad manufacturers. This is important for the hygiene and safety of waste pickers. But we should keep this in mind that all these steps will only help in controlling the problem and not eradicating it, so it is imperative to encourage the manufacturing of organic sanitary napkins and other stuff.

Now, one of the main reasons why menstrual hygiene is neglected is gender inequality, unequal rights given to men and women result in women’s voices being ignored within households and communities and in development

programs. Due to cultural norms and stigmas, menstruating women are not allowed to use water and sanitation facilities and in some cases even excluded from home as menstruation is considered impure. Therefore, comprehensive programs that engage both men and women should be organized related to menstrual hygiene. Also our education sector plays an important role in child's growth and development by allowing them to respond to changes and challenges they are facing in day-to-day life. But many times it avoids issues related to the menstruation and menstrual hygiene management by considering it one's personal matter and should be discussed within the home so in order to create awareness about menstrual hygiene and proper disposal of sanitary waste discussion over such topics is necessary.

Being a responsible denizen of the country we all should come together and should help in spreading awareness about the menstrual hygiene with proper sanitary waste disposal management so that as a nation we can inspire other countries to follow the same path and also we can contribute in making our planet beautiful again, And as said nothing is impossible as "were there is a will, there is a way".

MENSTRUATION & HYGEINE

- ✚ Menstruation is a physiological phenomenon which starts at 10 to 12 years of age, having impact on **psycho and social behaviour of girls**.
- ✚ Menstruation itself is not bad for environment but products used to manage menstrual blood can have negative impact on environment.
- ✚ Tampons and pads use to contain plastics and chemicals which are bad for environment as they reach soil causing ground water pollution loss of soil fertility clogging underground drains.
- ✚ It takes **500 to 800 years** for one sanitary pads to decompose.
- ✚ There should be awareness and health campaigns to popularize the idea of healthy ways to utilise menstrual care products without any impact on environment.
- ✚ Pads and tampons should be disposed either by **incinerating or disposing** in landfills.
- ✚ Cotton cloth and menstrual cups are better options towards benefits of green menstruations as they can be washed, reused and they are biodegradable.
- ✚ Ideally, use of **organic pads** should be encouraged.
- ✚ Various initiatives are taken for **green menstruation**.
- ✚ **GOONJ, ECOFEMME, KAMAKHYA** are few organisations currently working on this.

Policies should be focused on menstrual hygiene schemes in urban and rural areas.

Dr.Renu Bansal

MENSURATION AND ENVIRONMENT

BY: KRITIKA GUPTA (14Years)

'She can bleed heavily and bear those cramps, with a smile on her face ; Do you still think she needs "YOU" to conquer the world? 'With these beautiful lines we can get to know what a women goes through. Mensuration is a cycle of women that comes after every 28-30 days.

When a small girl child reaches the age of puberty i.e. between 8-12 years these hormonal changes start taking place. These changes are very normal for girl but, in many religions, this mensuration is considered bad. People think women are untouchable during this period, which is wrong though. In western countries, mensuration education is frequently given along with sex education. But in India, this type of education is mostly ignored due to lack of knowledge on mensuration preparedness and management or shyness and embarrassment due to which situation becomes worst for girls. Mensuration is a taboo in Indian society and it is considered unclean and dirty.

Mensurational hygiene is major concern as it has health impact ; also poor hygiene have negative effects on adolescence health. Women manage mensuration differently when they are at home or outside; at home they dispose of in domestic wastes and in public toilets, they flush them in toilets which may cause choking. According to Menstrual Health Alliance India, one sanitary pad could take 500 to 800 years to decompose as the plastic used is non-biodegradable and can lead to health and environmental hazards. Considering 36 per cent of the menstruating females use sanitary napkins, their environmental footprint is high. Most of these pads have over 90 per cent plastics and each pad is an equivalent to four plastic bags. Now, according to the Solid Waste Management rules, it says that sanitary waste should be kept in the dry waste bin and should be handed over separately. However, nothing of this sort has happened on the ground. There is no uniform way to dispose such pads so that they are identifiable. In most of the cases, it is disposed in bins even without wrapping. The waste collector separates this waste from other household waste with bare hands, making them more susceptible to infections and diseases such as HIV

and Hepatitis. From here, it would either be washed into drains or end up in dumpsites. Most of the sanitary pads have Super Adsorbent Polymers (SAPs) such as polyacrylate, which can further lead to water clogging and contamination. So, there should be a need to educate and make them aware about the environment pollution. Also awareness should be created to emphasize the use of reusable sanitary products, like Menstruation cups or the natural sanitary products made from Bamboo fiber, sea sponges and so on. And considering the affordability and environmental impact of sanitary pads, cloth is also an effective option. While women have in the past used handmade cloth pads, it is gaining momentum again. That's how the name 'GREEN MENSURATION' will come into practice. Now it is clear that education plays a key role in menstruation hygiene management.

It can be concluded by saying that, menstrual hygiene should be promoted by implementing a course on menstruation and menstrual hygiene management. Teachers should be educated and trained to impart knowledge about menstruation and menstrual hygiene management among students.

Social and electronic media also play an important role to make the girls and women aware about the latest menstrual products, different manufacturers, government policies, and so forth. Subsidies should be given on menstrual products so that every girl/women can afford them easily. Non-government organizations should come forward to educate rural people about menstruation, menstrual hygiene management, importance of toilets at homes, hand washing, diseases related to reproductive tract due to poor hygiene, and so forth. Emphases should be given on the use of reusable sanitary or cloth pads to overcome the problem of disposal. Girls and women should be aware of the consequences of disposing used menstrual products in open or flushing them in toilets. Dustbins with proper lids should be placed in the toilets. This study reveals that lack of privacy is a major concern both in household and in schools. Also, ignorance, misconceptions, unsafe practices, and illiteracy of the mother and child regarding menstruation are the root causes of many problems. So, there is a big need to encourage adolescents at school levels to practice safe and hygienic behaviours.

MENSTRUATION AND ENVIRONMENT

Menstruation is an important biological milestone in a woman's life, a key indicator of her health and vitality. It is a mark of her femininity and fertility. But unfortunately this inseparable and invaluable natural phenomenon of a woman is fraught with taboos and superstitions resulting in poor menstrual hygiene and inappropriate disposal of menstrual waste leading to a big environmental hazard.

With increasing awareness and due to the commendable initiative of the Indian Govt., the women are slowly moving towards hygienic menstrual products, the most popular of which are the sanitary napkins as they are long lasting, affordable, comfortable and stain free.

According to National Family Health Survey Report, about 48% of women in rural areas and 78% in urban areas use sanitary napkins during the menstrual cycle. Thus, statistically, about 121 million Indian women are using disposable napkins generating about 1,13,000 tons of sanitary waste annually.

However, most of the users are ignorant of the fact that the sanitary napkins are 90% plastic (containing as much plastic as 4 supermarket bags) and with superabsorbent polymers (SAP – some of which are carcinogenic), non-woven plastic components that make it non-compostable. It takes almost 600 years for these napkins to decompose adding to the huge garbage pile globally. Also, the plastic layers which are used to make it stain free and chemicals used in producing it get further transferred between soil and water contaminating underground water resources.

Apart from the product used in its manufacturing, napkins contaminated with blood (in a lifetime, a female generates 120-150 kgs of blood) are biological hazards and pose great health risks to the waste collector. Most alarming is also the fact that due to the stigma attached, ignorance and lack of disposal facilities there is no proper mechanism of disposing these pads. They are either flushed down the toilet, clogging sewerages or just tossed away posing greater health hazards. Ideally, these pads should go in an incinerator but in India this rarely happens as we do not have an incinerator which conforms to WHO standards.

Thus, we see how these monthly periods contribute to the mounds of garbage piling up in our cities, clogging our drains, polluting our environment and ruining the health of our sanitation workers.

Alternatives to Sanitary Napkins:

Because of so many demerits of commercially sold napkins, several NGOs and Non-Profit organizations have come up with eco-friendly reusable and affordable alternatives such as

- The reusable eco-friendly cloth pad which can last up to 3 years
- Menstrual Cups – These are made of medical grade silicone that are inert and do not affect the vaginal environment. They produce zero waste and can last up to 10 years

There are many other innovations which are being launched like the relief pad, period panties etc. Thus, with better outreach and education on sustainable menstrual product, it is possible to improve the situation and stop our menstrual waste from increasing our environmental footprint.

So, as responsible women folk, let us pledge to keep our environment clean by going from **Red to Green**.

Dr.Smita Agarwal.

