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India, Water & Sanitation, Stigma Surrounding Menstruation and the Availability of Feminine Products

### **India: Menstrual Health and Hygiene Management**

When organizations deliberate over issues such as sanitation, hygiene, health, education, and employment, they often overlook another key aspect of human health: menstruation. This biological function that is essential to human health and reproduction occurs once a month for all women in their teens to their fifties. With women making up 49.6% of the population worldwide, this topic should be more commonly discussed (Ritchie). However, this natural function is shrouded in shame and embarrassment for far too many women worldwide. In every country, countless women are affected by period poverty due to lack of a job, resources, or an educated family and community. In poverty-stricken areas where adequate toilets and sewage disposal are not available at academic institutions, and where many students do not have the resources to obtain feminine products, girls are forced to miss up to one week of school every month to avoid the unfortunate societal consequences of their menstrual cycles. Additionally, many women are forced to miss one week of work each month, which directly impacts the families of these laborers and the economy. Without this powerful, natural function, humans would not be able to propagate. It is a beautiful and remarkable cycle and should be treated as such, but because it crosses many areas of human health, this issue does not fit easily into the set analytical categories. Women's health is a subject that should be of more concern to society. When women lose roughly eighty-four days per year of education and productive work life due to stigma surrounding menstruation, the unavailability of feminine products, or simply not having the resources to purchase these products, the whole of humanity suffers.

Throughout much of human history, women have been thought of as unequal and inferior to men. Society has yet to correct this issue, even thousands of years after the first incidents of gender inequality. One example of this inequality is a common view towards menstruation. This view led to the creation of menstrual taboos, which cause many challenges including trouble with managing periods, missing school and work, problems with the reproductive system, social ostracization, sanitation, diseases, and in some cases, death. Menstrual stigma is a "form of misogyny," (Druet). This stigma has led women all around the world to feel shameful about the natural process, and it encourages them to hide their feminine products. Menstrual euphemisms are found in holy books including the Quran, which states, "go apart from women during the monthly course, do not approach them until they are clean" (Quran 2:222). The Bible states, "...in her menstrual impurity; she is unclean... whoever touches... shall be unclean and shall wash his clothes and bathe in water and be unclean until evening" (Leviticus 15). These taboos can even be traced back to the very first Latin encyclopedia from 73 BCE, "Contact with [menstrual blood] turns new wine sour, crops touched by it become barren, grafts die, seed in gardens are dried up, the fruit of trees fall off, the edge of steel and the gleam of ivory are dulled, hives of bees die, even bronze and iron are at once seized by rust, and a horrible smell fills the air; to taste it drives dogs mad and infects their bites with an incurable poison" (Druet). Other classical societies such as India shaped similar taboos.

According to the historian N.N. Bhattacharyya, different places in India had notions of a menstruating goddess. In Punjab, Mother Earth, Dharti Ma, "slept" for one week each month. In Deccan, the "navaratra" goddess temples closed from the tenth to the day of the full moon while she rests and "refreshes" herself (10). In the Malabar region, Mother Earth rested during the hot weather "until she got the first shower of rain" (10). Furthermore, in the Kamakhya temple of Assam and in Orissa, the rituals of

the menstruation of the goddess are celebrated during the seasons of monsoons (10). However, even in some cultures where menstruation is celebrated, the beliefs are not always beneficial because they have a “reductionist view” that the ultimate goal of a woman is reproduction (10). These patriarchal notions are rooted in religion, where the issue initially began. These views cause many women to believe that their bodies are impure and unclean during menstruation. In many places in India, women are not allowed to go into temples, mosques, or gurudwaras, and they cannot handle holy books. It is considered “disrespectful” to participate in Hindu prayer rituals (Dewan). Additionally, some families do not allow maids to enter their houses when they are on their periods. Women are considered “sick and untouchable” while in their cycle (Dewan). In many cases, the shame is so overwhelming that women resort to using dirty rags found around the house or the workplace instead of feminine products due to the stigma surrounding menstruation. In a study done in India, it was found that only 5.2% of females used sanitary pads, 77% used pieces of cloth, and the others used a combination of both (Ali). These women must then wash the cloths discretely so that their male family members do not witness the “impurity.” The cloths are then dried in hidden places, which leads to the growth of micro bacteria and insect larvae (Ali). According to a National Family Health Survey, more than 40% of women from ages fifteen to twenty-four do not have access to any feminine hygiene products, which, again, causes them to resort to using cloth (Mergens). Furthermore, due to more religious stigma, the use of tampons is looked down upon because of the societal notion of virginity. This issue eliminates yet another option for period management. Many believe that utilizing feminine products that enter the body make a woman impure.

This issue does not only reside in households. Many women and teens in India miss work, skip school, and are excluded from sports for one week a month during menstruation. Schooling is a formative experience for all girls in their growing stages. The average age for the menarche, the first period, is twelve (“Talking to Your Child”). From age twelve to eighteen, there are seventy-two weeks in which a girl menstruates. If girls had access to adequate feminine products and facilities, these seventy-two weeks could be spent in school, learning. Up to twenty-five percent of teaching can be squandered each month. This percentage is an alarming reality for far too many teenage girls in India. Additionally, it is vexingly common for girls to simply drop out of school after they reach this phase in puberty. Estimations state that “1 in 5 girls” leaves school after her menarche (Rueckert). In areas such as Maharashtra, a large state in Western India, the estimation jumps to “4 in 5” girls (Rueckert). Females missing school for a week or plainly withdrawing does not bode well for India’s growing economy. It is no secret that the education of women serves many purposes. In the wise words of Jo Bourne of UNICEF, educating girls is an irrefutable factor for “every development outcome, from mortality declines to economic growth, democracy, and equity,” (Bourne). The benefits of education range from better jobs and higher wages, to an elevated GDP, to fewer child marriages and domestic violence, and to enhanced future generations (Bourne). The more days girls can be in school, the more education they can receive.

In India, one of the largest sources of employment for women is in agriculture. Of all women that can work, 80% are commissioned in this industry. Additionally, women consist of 33% of the laborers in the business and make up 48% of “self-employed farmers” (“Move”). Women fought for their place in the working world after facing adversity for their gender due to the traditional patriarchal standards that are a normality in India. When they miss up to a week of their important work each month, the whole community suffers. Not only does this disrupt the farms themselves and their economic standings, not working for a week directly affects how well a mother can provide for her family. Furthermore, when society deems women inferior due to their biological processes and prohibits them from going about their daily lives, becoming respected equals in the economic world is an impossibility.

Men make up 82% of the labor force in India, which means that men run most drugstores or shops where feminine products are sold (“Quick Take”). Women who go into these stores to buy the products are then ridiculed, which makes them feel even more ashamed of this natural human process. In many cases, a shopkeeper will not even look a woman in the eye when she is purchasing sanitary pads (Mergens). The unhygienic practices that both women and teens are forced to adopt can lead to fungal infections, reproductive tract infection, urinary infection, and infertility (“6 Health Risks”). Without open conversation about the menstrual cycle, it is incredibly difficult for young women to learn about the process and to understand the risks of poor hygiene. In India, it is extremely common for teenagers to be taught to hide their periods. These lessons are not beneficial to these girls or the following generations. When changes are not made, and these girls do not receive proper education about menstruation, the previously stated problems manifest and cause issues for women throughout India. Around 70% of women in this country risk severe infection, sometimes leading to death, due to poverty, ignorance, and the shame surrounding menstruation (Ali).

In India, the accessibility of feminine hygiene products is so low, and the prices are so high, that less than 10% of women use actual sanitary pads (Venema). A school dropout from a poor family in southern India by the name of Arunachalma Muruganantham created a solution for some women in India. Muruganantham invented a machine that makes inexpensive sanitary pads. The invention took years to create, and the man was ridiculed by the people in his village to the point that his wife and his mother left him to fend for himself. He started by investigating the cost of normal sanitary pads and found that while the ten grams of cotton from which the product is made should cost ten paise, the pads sell for four rupees, forty times the price. After this discovery, he started investigating ways to make cheaper products. Muruganantham wanted to find volunteers to test out his product, but this task proved to be incredibly difficult, so he decided to test the pads out himself. He fashioned a “uterus” from a football bladder with holes, filled it with goat’s blood, and participated in the daily activities that any woman would, in order to test the sanitary pad’s absorption rates. He then designed his own user-friendly machine and entered a national innovation competition. The inventor was awarded first-place, and suddenly his life and the lives of many underprivileged women changed. Muruganantham spent the next eighteen months building machines, which he brought to many states in Northern India. This solution is viable for those who have enough available electricity, workers, and demand to make and sell these products. However, it is not eco-friendly, the machine is expensive, and in rural areas without enough electricity, it would not function. One key component of the invention is the hydraulic press which compresses the material. This component can prove to be problematic, however, because it requires electricity to run. Although the machine might eventually pay for itself from the profit of the products, many villages do not have the 75,000 Indian rupees, approximately 1000 American dollars, available to purchase the invention in the first place (Venema). While this creation could quite possibly aid in the fight against period poverty, it is unrealistic for much of India.

Other countries including Pakistan and many in Africa suffer from similar issues with feminine hygiene products, mostly rooted in the stigma surrounding menstruation (Johnston, Litman). Some of these places have found solutions in reusable tampons. Evidence shows that these products are better for the body and reduce the effect that feminine products have on environmental degradation. Disposable tampons and pads create waste, especially in rural areas without good sanitation facilities. Reusable tampons can save women a significant amount of money because they are a one-time purchase. However, this product would not be the best solution for India because of the societal notion of virginity. Additionally, the reusable tampon could be hard to obtain, especially for those in rural areas. Similar to this reusable product, menstrual cups have the same mission: a more sustainable feminine hygiene product that makes

“dealing” with the menstrual cycle easier (Mergens). Both of these products help reduce leakage and embarrassment. Despite these benefits, the cup has comparable issues to the reusable tampon.

A reusable pad could combat these issues and prove to be a sustainable option for women in India. Depending on how these products are made, they provide superior feminine hygiene protection for a longer duration of time than the typical cloth that most Indian women use, they are eco-friendly, and can be reused for up to twelve months, which is much more cost-effective than typical sanitary pads. This alternative option provides solutions to most of the problems surrounding menstruation. Sophia and Paul Grinvalds were inspired by the idea of washable pads and designed their own to help women in Africa. The creators spent long hours tracing fabric, cutting pieces out, and sewing the pads. The Grinvalds started their company called AFRIPads and began educating women and teenagers all over Africa about menstruation and their reusable pads (“Products”). As a result, the headmistress of a government boarding school approached the innovators about the project. Sophia and Paul were informed that girls at the school had been using pieces of foam from their mattresses to absorb their menstrual flow (Fallon). Most of the parents or guardians of the girls could not afford pads, and the school did not have the finances to provide every student with the necessary hygiene materials. However, this new solution was more economically viable due to the reusability factor. The low-cost washable cloth pads cost 30% less than any other alternative. The sanitary products are now sold throughout Uganda and are moving into Kenya and Sierra Leone to help all women and teenagers with their menstrual issues. This organization not only provided a reasonable solution, the leaders made sure that their revolution would continue by educating the girls in school about their menstrual cycles. That knowledge can now be widely known and passed down throughout the coming generations. With education comes power.

I believe that these reusable, inexpensive sanitary pads could be utilized in India with some adjustments. The AFRIPads use an absorbent fabric called hemp fleece. This fabric is not readily available in India, but cotton is a prevalent resource. India is the second largest producer of cotton in the world, and therefore, this material is a viable option for the absorbent fabric of the pad. A study proved that the absorbency rates of the two fabrics are incredibly similar, so the Indian women would not be sacrificing quality (“Absorbency Test”). In addition, cotton is much less expensive and easier to find than hemp fleece in India, especially in the rural parts. If women in India are given instructions on how to make a reusable pad, they have all the necessary materials and skills to carry out the task. The other materials that one would need to acquire in order to make a reusable pad are scissors, thread, a needle, cotton to make the outside of the pad, cotton for the absorbent section, and snaps or a hook-and-loop. These components are all easily accessible in most parts of India. The first step is to measure on the body to see how wide and long to make the casing. Then, trace the measurements on the fabric and draw “wings” in the middle where the snaps will be to connect the pad around the underwear. The next step is to cut out that piece of fabric and do the same thing again so that there are two layers. Next, trace that same pattern, minus the wings, onto four to six pieces of absorbent cotton, and cut them. Then, sew the lining pieces together half of an inch inside the edge. After completing the sewing, trim the edges close to the seam. Next, sew the two pieces of the casing together, leaving the rear agape. Turn the casing inside out in order to obtain maximum comfort on the skin. Then, insert the absorbent pad inside, and continue sewing until the casing is sealed. Place snaps or sew a hook and loop on the wings, and the pad is completed. The pads are made of materials that can be washed and dried normally among all other laundry. The steps are simple enough that any woman or teenager could manufacture one or many of the products (Miner). This technology could be revolutionary for the women and girls in India because it is one of the only culturally appropriate options as it is discreet, outside the body, environmentally conscious, and handcrafted.

Menstrual hygiene management needs to be more widely addressed within the fields of sanitation, hygiene, health, and education. Clearly, instructive conversation and acceptance of the menstrual cycle among all women in India is crucial in order to convince women to make and use the pads. Women having comfortable, hygienic, and absorbent pads will boost confidence, improve health and hygiene, allow teenagers to participate in school even while on their cycle, allow working-women to continue with their jobs, normalize menstruation, and they will unite and empower all Indian women similar to what Mahatma Gandhi did during the Partition of India with his use of cloth. Gandhi made a very powerful political gesture when he urged his followers to dispose of their European-style clothing and return to the ancient and more traditional way of dress (Brown). The leader spun his own thread for the historic loincloth that he wore to reject the Western ideas and to symbolize those who suffered from poverty in India. Gandhi encouraged his most powerful supporters to do the same. This homespun movement united all classes in India through one common thing: cloth. Reusable pads can do the same thing for women. The products can act as the glue keeping all women in India connected and empowered. The use of these pads will help spread knowledge and acceptance of menstruation throughout Indian society. The prevalence of menstrual taboos and the stigma surrounding menstruation will decline. The most important factor is that women will feel more comfortable with themselves and the natural process of menstruation. Women will find strength and unity within themselves and others who benefit from the reusable pads. With strong, confident, and powerful women, societies around the world will begin to explore their true potential.

### Works Cited

“Absorbency Test: Zorb, Hemp, Bamboo, Cotton MF.” *BabyCenter Community*, 23 Sept. 2013, [community.babycenter.com/post/a44742397/absorbency\\_test\\_zorb\\_hemp\\_bamboo\\_cotton\\_mf](http://community.babycenter.com/post/a44742397/absorbency_test_zorb_hemp_bamboo_cotton_mf).

This article was only helpful with information about the absorbency rates of cotton and hemp fleece.

Ali, Tazeen Saeed, et al. “Are Unhygienic Practices during the Menstrual, Partum and Postpartum Periods Risk Factors for Secondary Infertility?” *Journal of Health, Population, and Nutrition*, International Centre for Diarrhoeal Disease Research, Bangladesh, 25 June 2007, [www.ncbi.nlm.nih.gov/pmc/articles/PMC2754005/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2754005/). This article was helpful with the medical information about menstruation. It did not, however, contain any information about menstruation in India.

Bourne, Jo Touré, et al. “Why Educating Girls Makes Economic Sense.” Global Partnership for Education, 2020 Global Partnership for Education, 6 Mar. 2014, [www.globalpartnership.org/blog/why-educating-girls-makes-economic-sense](http://www.globalpartnership.org/blog/why-educating-girls-makes-economic-sense). This article was useful for the facts given about why educating women is beneficial for the economy.

- Brown, Theodore M, and Elizabeth Fee. "Spinning for India's Independence." *American Journal of Public Health*, American Public Health Association, Jan. 2008, [www.ncbi.nlm.nih.gov/pmc/articles/PMC2156064/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2156064/). This article was helpful because it gave information about how Gandhi united India through common clothing and cloth.
- Dewan, Angela. "Life Stops for Many Women and Girls in India during Their Period." CNN, Cable News Network, 28 May 2018, [www.cnn.com/2018/05/28/asia/india-menstruation-myna-mahila-intl/index.html](http://www.cnn.com/2018/05/28/asia/india-menstruation-myna-mahila-intl/index.html). This source was helpful for my initial research. I learned that women in India miss work and school during their menstrual cycle.
- Druet, Anna. "How Did Menstruation Become Taboo?" *Hello Clue*, BioWink GmbH, 7 Sept. 2017, [helloclude.com/articles/culture/how-did-menstruation-become-taboo](http://helloclude.com/articles/culture/how-did-menstruation-become-taboo). This article was incredibly helpful because it gave many great sources including the Quran, the Bible, and the first Latin encyclopedia. These sources contained information about how each religion and society viewed menstruation.
- Fallon, Amy. "Afripads: A Simple Innovation That Transformed These Young Girl's Lives." *Chatelaine*, 24 Oct. 2013, [www.chatelaine.com/living/real-life-stories/afripads-feminine-hygiene-cloth-pads-in-africa/](http://www.chatelaine.com/living/real-life-stories/afripads-feminine-hygiene-cloth-pads-in-africa/). This article was helpful because it gave information about how the company AFRipads began. It did not, however, give any information about the making of the products.
- Holkar, Kena. "How The Taboo Around Menstruation Is Rooted In Religion And Culture." Youth Ki Awaaz, 26 Nov. 2018, [www.youthkiawaaz.com/2018/05/why-do-we-need-to-break-the-silence-around-menstrual-taboo/](http://www.youthkiawaaz.com/2018/05/why-do-we-need-to-break-the-silence-around-menstrual-taboo/). This article was helpful because it gave information about the different views of menstruation and how they relate to religion in India. It was not as helpful with solutions to the issue.

Johnston, Bea. "Menstrual Views Around the World." Women's Rights Awareness Program. Women's Rights Awareness Program, Apr. 2019, Culver, Indiana. This presentation was helpful because it gave information about how menstruation is viewed in different countries. It was not as helpful with India, however.

Litman, Jill. "Menstruation Stigma Must Stop. Period." *The Public Health Advocate*, The Public Health Advocate, 8 June 2018, pha.berkeley.edu/2018/06/05/menstruation-stigma-must-stop-period/. This article was helpful in that it assessed the taboos surrounding menstruation in countries other than India.

Mergens, Celeste. "9 Simple Ways Sustainable Feminine Hygiene Solutions Shift the World." HuffPost, HuffPost, 7 Dec. 2017, www.huffpost.com/entry/9-simple-ways-sustainable\_b\_7214262. This article was helpful because it gave possible solutions to the availability and sustainability of feminine products.

Miner, Virginia. "DIY Cloth Menstrual Pads (Easy Sewing Tutorial)." *Red and Honey*, 6 Mar. 2017, redandhoney.com/make-your-own-cloth-menstrual-pads/. This article was helpful because it gave instructions on how to make a reusable pad. It was not as helpful with the cost information of the materials.

"Move Over 'Sons of the soil': Why you need to know the female farmers that are revolutionizing agriculture in India." (2018, November 15). Retrieved August 27, 2020, from <https://www.oxfamindia.org/women-empowerment-india-farmers>. This article was helpful as it provided statistics about women in agriculture jobs in India.

"Products & Services." *AFRIPads*, www.afripads.com/our-products/. This website was helpful because it has a solution for limited availability of feminine products in Africa, which could be transferred over to India. It was not helpful in the formation of the product.

- “Quick Take: Women in the Workforce-India.” *Catalyst*, Catalyst, 11 July 2018, [www.catalyst.org/research/women-in-the-workforce-india/](http://www.catalyst.org/research/women-in-the-workforce-india/). This source was helpful with providing information about the population and work force in India.
- Ritchie, Hannah, and Max Roser. “Gender Ratio.” Our World in Data, 13 June 2019, [ourworldindata.org/gender-ratio](http://ourworldindata.org/gender-ratio). This article was useful for the statistics about the gender ratio worldwide.
- “6 Health Risks of Poor Menstrual Hygiene.” *Nua Blog*, 14 Feb. 2019, [nuawoman.com/blog/6-health-risks-poor-menstrual-hygiene/](http://nuawoman.com/blog/6-health-risks-poor-menstrual-hygiene/). This article was useful in that it gave information assessing the risks of poor menstrual hygiene.
- “Talking to Your Child About Periods (for Parents) - Nemours KidsHealth.” Edited by Robyn R. Miller, KidsHealth, The Nemours Foundation, Oct. 2018, [kidshealth.org/en/parents/talk-about-menstruation.html](http://kidshealth.org/en/parents/talk-about-menstruation.html). This article was useful only for information about the average age of the first period.
- Rueckert, Phineas. “Why Periods Are Keeping Girls Out of School - and How You Can Help.” Global Citizen, 2012-2020 Global Poverty Project, Inc, 30 May 2018, [www.globalcitizen.org/en/content/menstrual-hygiene-day-education/](http://www.globalcitizen.org/en/content/menstrual-hygiene-day-education/). This information was useful for information about girls missing school due to their periods.
- Venema, Vibeke. “The Indian Sanitary Pad Revolutionary.” *BBC News*, BBC, 4 Mar. 2014, [www.bbc.com/news/magazine-26260978](http://www.bbc.com/news/magazine-26260978). This article was helpful in that it gave a possible solution to the problem about availability of feminine hygiene products in India.