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Nepal: Combating Lethal and Restrictive Taboos

6.25 years. That is exactly how long a woman will menstruate continuously over the course of a lifetime. The average woman will have 450 menstrual cycles spanning approximately 38 years of her life, bleed 37 pints and use 15,000 hygiene products. Are you uncomfortable? Good. That is the point. Menstruation is a taboo topic, especially in developing countries around the world. Fortunately, in the United States, women have resources to deal with their menstrual periods. Unknown to many though, is that in other countries, such as Nepal, women do not. Due to stigmas, prohibitions, and people's general unwillingness to talk about the topic, little is being done to support Nepali women who face endless challenges surrounding their monthly menstrual periods. Because of this, women are dropping out of school, battling detrimental infections and being killed by suffocation.

Background

Nepal, officially the Federal democratic Republic of Nepal, is a mountainous country in South Asia, surrounded by the Himalayan Mountains. Here resides 29.94 million people as of 2019. Among this population, 15.39 million are women. Overall, 83 percent of the country still lives in rural areas leaving 17 percent of the country in the cities. ("Nepal Population 2019"). Due to the large amount of people that are living in rural, undeveloped areas, Nepal has a Human Development Index (HDI) of 0.574 putting Nepal 149th out of 189 countries as of 2017 ("Nepal 2019"). Though most of the population lives in rural areas, the country is urbanizing rapidly, although this isn't without the difficulties of low development and lack of resources. The growth of these cities leads to numerous challenges including uncontrolled areas, rapid sprawl, and infrastructure demands. ("Nepal Population 2019"). Nepal lacks advanced technological luxuries leading to a lack of connectivity between urban and rural areas of the country, which poses challenges for developmental improvement in these areas. This technological challenge leads to segregation and virtual distance between the urban and rural areas.

Up until 2008, Nepal functioned as a Hindu monarchy. After strenuous protests, the abolition of this monarchy became official and Nepal became a federal democratic republic, publishing a new constitution in 2015. (Chepkemoi). Through this new government, executive, legislative, and judicial branches were established, governing the country in a very different way than it was previously run. Through the newly formatted government there is an opportunity for 40 percent of the representatives to be women, improving from only 20 percent in 1997. With increased representation in the Nepal government, women have defended and supported other women in their country by promoting the passing of the Domestic Violence Crime and Punishment Act of 2008. (Hewitt). Although this advancement has pushed women's rights leaps and bounds farther than it was before, there is little that is still being done about women's menstrual health.

Despite the fact that there is an opportunity for 40 percent of government representatives to be women, the only requirement is that women are nominated for these positions, but they are not required to be filled by women. This puts Nepali women at yet another disadvantage and continues to impede upon women's political participation. Intersectionality¹ poses additional challenges due to different beliefs among regional districts in Nepal (Hewitt). This leads to decreased government influence among districts, preventing officials from regulating women's access to education and reproductive health, contributing to practices such as Chhaupadi² and menstrual taboos. Intersectionality and decreased connectivity across the country also contributes to the strong influences of patriarchy among the majority of the population. Even if government representatives made attempts to improve conditions for women living in rural areas, policy implementation, especially in rural areas, isn't always successful due to the limited connectivity across the country.

A typical family in Nepal traditionally consists of multiple generations of family members, from the male's side of the family, living under the same roof. Essentially, Nepali households consist of men, their wives, and their daughter in laws. Although nuclear families are gaining popularity in urban cities, the majority of the country lives in multigenerational households. Due to the strong role and presence men have in Nepali families and the influence of patriarchy, most of the responsibility is put on the oldest son. Patriarchy not only puts responsibility on the men in the family but creates distinct gender roles among families. Women are characterized as caregivers and are completely dependant on their husband's income. Women are expected to maintain virginity and purity until marriage, something that is not expected of the men (Pier). The disparities and inequalities of gender roles, create tension between men and women, provoking difficulty when trying to live in harmony together. This lifestyle also encourages gender stereotypes and stigmas, enforcing the belief that men are superior and more capable than women. These household dynamics foster another factor that minimizes women's rights and the ability to lead a life of their choosing. As a result of the complete reliance women have on the men in their lives, it puts them in a vulnerable state that can lead to a life of discrimination. This is yet another factor

When considering food security in Nepal, the outlook is not good. According to Evan Orleck-Jetter, 1 in 4 people live below the national poverty line of 50 cents/day. To the people living below this line, common necessities such as clothing, shelter, food and water become threats that must be combatted on a daily basis. The majority of the people living below the poverty line are living in rural or mountainous areas of the country. Nepali people in these regions are more likely to suffer from hunger. The 2016 Global Hunger Index found that 7.8 percent of Nepal's population was undernourished leading to stunting³ which affects 35 percent of children. Stunting in children leads to mental health issues and poor cognition which continues to hinder the Nepali population, continuing trends of nutritional issues. Due to the high rate of stunted growth in children, the United States Department of Agriculture (USDA) funded the National School Meals Programme in Nepal which has led to the nourishment of 190,000 children nationwide

¹ "The complex, cumulative manner in which the effects of different forms of discrimination combine, overlap, or intersect...especially in the experiences of marginalized people or groups" (Merriam-Webster)

² Chhaupadi is a social system in Nepal which prohibits a woman from participating in normal family activities during menstruation because they are considered impure. (Merriam-Webster)

³ "Stunted growth reflects a process of failure to reach linear growth potential as a result of suboptimal health and/or nutritional conditions" ("Description")

(World Food Programme). The National School Meals Programme not only provides nourishment but also gives girls an initiative to go to school, as some parents send their girls to school for the sole purpose of receiving a meal. This program has allowed the country to appreciate a "24 percent increase in the prevalence of children receiving a minimum acceptable diet in Nepal." ("Nepal"). The programme has a focus on girls to help them maintain their schoolwork and the pressures of household responsibilities. The World Food Programme reports, "Educating girls, provides a major step towards ensuring inclusive development, reducing poverty and discrimination, and improving food security." For these reasons, issues arise when girls start dropping out of school on account of menstrual health.

Lack of Menstrual Support Impacts Women's Lives and Education

As a result of ancient traditions, the practice of Chhaupadi consumes rural Nepal. Chhaupadi is a practice rooted in a belief that women are unclean, unpure, and dirty when they are menstruating. To many people, menstruation is regarded as a "dirty polluting process" (Morrison). This belief has lead people to confine women to menstrual huts while they're on their period. Many families participate in the practice not necessarily out of cruelty but out of fear that the women are impure (Rodriguez). Menstrual huts are small cow sheds with no climate control or ventilation system. Without climate control, women resort to fire which has lead to death due to smoke inhalation and suffocation. It is appalling to know that women and girls are still being found dead in 2019. Technically, Chhaupadi is an illegal practice and those participating are punishable with three months in prison and a 3,000 rupee fine (Rodriguez). Immediately after this law was initiated, death by Chhaupadi began to decline. But with time, progress has slowed and large numbers of deaths are still occuring nationwide. Although it is illegal, the lack of connectivity throughout the country hinders law enforcement from administering a punishment, especially in rural Nepal, where the issue is the greatest.

Throughout Nepal, stigma surrounding menstrual periods is so strong, that girls feel too embarrassed to even speak a word about it, and most men don't know that menstrual cycles even exist. As a result of the fierce stigma, little is being done by government officials to solve the hardships women face on the day to day. According to Leah Rodriguez, "People who make and run programs often don't understand the impact a women's monthly period may have on her ability to go about life if she doesn't have what she needs to manage it". With the large number of men making laws that pertain to women's health, they aren't able to empathize and create programs to truly solve the root of the problem. Though lawmakers have made an effort to ban Chaupaudi and advocate for women, little has changed in the country. The stigma is so forceful that people will still support the practice of chhaupadi, despite possible repercussions that may follow.

Not only do periods endanger girls because of the stigma and taboos surrounding it, but infections consume the lives of young women, as a result of the lack of sanitary products. Kay Standing reports, "Unhygienic menstrual practices have been linked to negative outcomes for women and girls in relation to reproductive health". Most commonly, women use dirty cloths, rags and leaves to help manage their periods, many which do not help solve the problem. In addition to lack of absorption and control, many of these dirty products lead to infections that can turn deadly. A study done showed that women using rags during menstruation had a higher rate of reproductive tract infections (Kafle). Some might suggest that simply using sanitary pads will solve the problem but in many rural areas they are so expensive that it is

unrealistic to obtain them, leaving women with no choice but to deal with infection and products that do not help their situation.

More than anything, the challenges surrounding menstrual periods affects girls' schoolwork and their ability to achieve higher education. When girls in Nepal begin a menstrual period, many, mostly due to the lack of hygienic products, skip school while on her period. In fact, 50 percent of girls reported it was difficult to concentrate in class out of fear of leakage, because of lack of hygiene products. Continuing, 21 percent of girls reported they would never raise their hand in class when menstrating and 32 percent would not write on the board when menstruating (Morrison). These challenges not only cause inconveniences for the girls living with these circumstances, but offsets their life track, leading them to discontinue further education, hindering their future and the life they may eventually pursue. In fact, many girls end up dropping out of school completely by the age of 15 due to the amount of school they have missed as a result of the inconveniences of menstrual periods, a body process they should not have to sacrifice their education for. School leads to stress for girls out of fear of discomfort and leakage, as schools do not accommodate the needs to manage their menstrual health; 18.4 percent of schools in Nepal don't have a toilet. Without a toilet, girls do not have a place to tend to their needs. If a school does have a toilet, it is often inaccessible due to lack of water in rural areas. Education truly is everything for Nepali children. School provides food, knowledge, and hope for the future. Without this, girls are missing their key to success.

In more ways than one, this natural body process impacts a girls' education which thereby impacts her nutrition. Because the school lunch program in Nepal feeds approximately 190,000 students a day, when a girl drops out of school due to her period, she will lack a nutritious meal that will not be offered at home. Without food, these girls are not only going hungry but also continuing the pattern of stunted growth, witnessed among Nepali children. Based on multiple studies, childhood stunting linked to malnutrition has extreme negative consequences on cognition in children (Woldehanna). These consequences related to cognition could be the reason women cannot achieve higher education or fulfill government positions. Essentially, it all starts with a meal. When women are nourished, their brains develop and they have the capability to make effective legislative changes. When girls are dropping out of school, they are missing the first and most important step: nutrition.

Arunachalam Muruganantham's Pad Machine

Arunachalam Murugantham is an Indian man who noticed women facing challenges surrounding their periods in his home country. He became educated about infection rates in his country and the direct correlation to unsanitary hygiene products. To help the situation, Arunachalam Muruganantham created a pad machine for women that creates completely biodegradable pads from locally sourced materials ("The Pad Project"). Muruganantham became aware of menstrual challenges women face when he first married his wife. He was not previously aware of what a period even was. From here, he was inspired to provoke change, bettering the lives of women across his country. His pads are created using cellulose from local flora which is a material that is abundant in Nepal. These pads contain maximum absorbency which could get a girl through a day of school, allowing drop out rates to decrease significantly. The pads could also give women the option to work around the house or in the community as her bleeding will be controlled.

It will be less obvious that a woman is on her period as she will no longer be freely bleeding. Women's periods will therefore draw less attention of community members, giving them the opportunity to break free from the confinement of Chaupaudi and discrimination. If the practice of Chaupaudi slowly decreases because of this new solution, the feat of altering the stigma in society can begin. When citizens witness women accomplishing day to day tasks while menstruating, they may begin to understand the capability women have and the fact that a period should never hold them back. In addition, these pads are completely sanitary which would decrease infection rates among women. Because of the high cost of traditional menstrual hygiene products, women resort to dirty materials. Luckily, the pads from Muruganantham's machine costs "less than a cup of tea" (Pareek) or, 3 rupees each. 4 Due to the affordability of these pads, women will be able to keep a high supply of them, supporting them for multiple menstrual periods. These pad machines have been implemented in India already, but not in Nepal, making them a perfect candidate to use this machine to combat stigmas, infection, discrimination, and education rates among women. Through Murugantham's persistence, he was able to overcome the taboo in his own country and distribute sanitary pads to 1,300 villages (Venema). This proves that there is an opportunity to overcome the stigma in Nepal as well and provide girls with opportunities they deserved a long time ago.

These machines will improve the quality of life for women across the country through convenience, and will provide a steady source of income for local Nepali women. Instead of having this machine make the pads in one large plant, and ship the pads to Nepal, individual machines will be implemented in various towns in Nepal, hiring only Nepali citizens. Once these women learn how to manage the machine and export the pads to other Nepali citizens, the machine and the women working with it will create an independent, self-sufficient microeconomy ("The Pad Project") This machine gives these women a steady income, allowing them to be self sufficient and provide for their families. Not only is the additional money convenient for families, but it also provides empowerment allowing women the opportunity to work outside of the household and make money aside of her husband ("Nepal 2019"). This will provide yet another opportunity for women to overcome the stigma of common society as men are customarily the sole breadwinner of the family. The pad machine will provide hope for women and will prove their capabilities. With this additional income, families are able to have more money to send their children to school, buy more food, and improve the quality of life for their children.

In order to implement a pad machine in Nepal, funding will be supported from the Pad Project which is a California non-profit corporation who initially supported Muruganantham's machine implementation in India. When a machine is implemented, the company supplies a machine and a years worth of supplies in order to get the women started. After that, they will be completely independent. In order for these two factors to be supplied, around \$10,000 USD would be required. In 2018, 12 students from Oakwood University in California learned about the challenges women in India faced surrounding menstruation and created a documentary which is now on Netflix: 'Period. End of Sentence'. This documentary raises awareness of this issue, and raises money to support the pad machines. So far, the documentary has raised over \$150,000 and currently funds machines across India. Due to the growing popularity of this subject, more money is continually being raised, providing an opportunity to expand into Nepal. When the Pad

 $^{^{4}}$ 3 rupees = \$0.04 (USD)

Project non-profit is considering implementing a pad machine in a community they first learn about the areas specific needs from local experts. This is to ensure that the community has the resources to power the machine. If there is a lack of resources, solar panels are implemented to ensure the community has the opportunity to benefit from the machine. The people involved in this non-profit are passionate about creating a sustainable lifestyle for women and giving them all of the glory for their work. One student reports, "From the beginning, we've been conscious of the fact this could all sound very white savior...we made sure everyone was aware that we were working with the women in India, not helping them out" ("Nepal 2019"). Due to the firm focus on women, and the available funds, this machine would be a prime option in order to support women and girls across Nepal. The fact that the machine is run solely by Nepali citizens is key. This will allow the machine to be implemented in society without being disrespectful to the people.

If women are able to have a pad that will be absorbent and inexpensive enough to get them through the day, the fierce taboos that consume their society will slowly decrease. The topic of menstruation is fresh in citizens minds when girls are leaving school, and women are living in huts. But, if a change could be instituted to allow girls to consistently stay in school and women to remain in the workforce, other citizens won't be as quick to shame or discriminate against her for a normal body process. When citizens can witness a menstruating woman effectively contributing to society, they may begin to understand that she is in fact, not impure in any way. Instead, they may begin to understand that she is, in fact, capable of accomplishing anything that she would otherwise do any other week of the month.

If the pad machine were to be implemented in Nepal, girls would be able to stay in school, solving a number of current issues. First off, if girls can stay in school, they are immediately granted the benefits of receiving a daily nutritious meal, subsequently decreasing the stunting rates in Nepal. With the new pads they will no longer have a reason to go home throughout the year. Excessive tardiness is typically the reason girls are led to drop out. In the case where they have the ability to use pads, they will be given the right to remain in school. This accessibility to a nutritious meal sets girls on a path without stunting and a lack of development. This developmental advantage will help solve the issue of low cognition in girls. If, cognitively, they are more able-bodied, girls will be more apt to achieve high power jobs which could put them in the power to make legislative change, transforming the fate of other girls.

Shaleen Khanal, a PHD student of Nepal who wrote for the MIT Press Journal reports that, "Empowering women is crucial for the socioeconomic development of any country. Studies report that higher levels of education in women lead to higher economic growth (Coulombe and Tremblay 2006)" (Khanal). Achieving higher education will not only be pivotal for individual women, but for the country as a whole. This progress cannot be made, though, unless women are able to stay in school, with the help of Arunachalam Murugantham's Pad Machine. If women are granted the right to higher education and government positions, this could also be the key to transforming the stigmas surrounding menstrual periods in Nepal. Today, little is being done to solve menstrual related problems in the country, specifically due to the fact that almost all lawmakers are men. This provides a lack of motivation for the government to solve women-specific needs. If women were in higher power positions, this could ignite a fire to initiate change and educate Nepali citizens, weakening the taboo. Even if male lawmakers are willing to help, women are essential in government roles as their understanding of families, children and

other women would provide vital insight to government decisions. This could continue to aid in increased equity between genders in all areas, even aside from menstrual rights. Women's ideas could contribute to the allotment of resources and help the country make decisions that would continue to benefit young girls for years to come.

Conclusion

American society wouldn't be the same without educated female leaders. Harriet Beecher Stowe, an author whose writing led to a meeting with Abraham Lincoln, urging him to run for president. Clara Barton, a nurse who became the founder of the American Red Cross. Maya Angelou, a poet who exemplified to other Americans, how to respond to prejudice. Maya Lin, a Yale student who designed the Vietnam Memorial and advocates for environmental awareness. Our lives here in America would be vastly different and significantly lacking without the influence of these educated women. Who's to say that there isn't brilliant Nepali women who could change her own country? Nepal needs the minds of women and their menstrual periods should not be a burden that holds them back. Nepali women and girls are currently suffering from malnutrition and stunting, lack of education, death by Chaupaudi, and worst of all, suffering from held back potential. The most effective way to combat this lies within Arunachalam Muruganantham sustainable pad machine. With the use of this machine the country will see a decrease in infection, stunting, malnutrition, and mortality rates. Most importantly though, Nepal will witness a vast increase in education rates and empowerment, the key to unleashing young women's potential. Hopefully now, Nepali women will be able to start their own timeline of innovations, development, and transformations that they will make on their country. The world is ready to see what they have to offer, and this time, nothing is going to hold them back.

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