

Washable Cloth Pad Pilot Study Report

*Are washable cloth pads a viable form of
menstrual hygiene management for
women and adolescent girls in rural India?*

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☉ Abstract

From 2011 to 2013 Eco Femme conducted product testing of three washable cloth pad models among women and adolescent girls in rural districts of Tamil Nadu to see if they would be practically accepted. This testing was inspired by unsolicited positive feedback on washable cloth pads in Eco Femme run sessions on menstrual hygiene management and products. Recycled old cloth is a widely used and traditional form of menstrual hygiene management in India, and when properly cared for it poses no health or environmental risks. In recent years disposable sanitary napkins have grown in popularity and availability in India, and potential national acceptance of this menstrual hygiene product presents significant waste management and environmental challenges. We see no real reason to abandon cloth as a form of menstrual hygiene management. We tested our products with 1,120 women and adolescent girls from 5 different districts of Tamil Nadu; we were able to collect and analyze data from 749 participants. Participants were asked to answer questions and report on their experience through one-on-one in person interviews with a field worker from an NGO with which the individual was affiliated. The results of the study indicate that washable cloth pads are accepted among most rural women and girls across religious, age, and caste groupings on all parameters such as effectiveness to absorb flow, comfort, appeal, and absence of leakage. The majority of women reported no significant obstacles with washing, drying, and caring for pads. Most participants indicated that they will continue to use washable cloth pads, prefer them to recycled old cloth or disposable sanitary napkins, and are willing to recommend them to others.

Abbreviations:

AVAG: Auroville Village Action Group
MHM: Menstrual Hygiene Management
MHP: Menstrual Hygiene Product
DSN: Disposable Sanitary Napkins
SEDC: Socio-Economic Development Center
PWDS: Palmyrah Workers Development Society
SHG: Self-Help Group
NGO: Non-Governmental Organization

☉ Background

Eco Femme is a women's empowerment project promoting menstrual practices that are healthy, dignified, affordable, and eco-positive. In 2010, the team of individuals that would become Eco Femme was motivated to help Auroville Village Action Group (AVAG), a NGO in Villipuram District, Tamil Nadu, transition from being a donor-funded organization to a more self-sustaining one. The team hoped to find a way to simultaneously create livelihood opportunities for women members of AVAG's self-help groups and to financially support AVAG's work with rural individuals and communities. Members of the team were familiar with the concept of washable cloth pads, a form of menstrual hygiene management (MHM) popular among eco-conscious women and a traditional form of MHM around the world. The decision was made to produce washable cloth pads through tailoring units run by members of women's self-help groups for commercial sale and export. Developing this venture naturally raised questions about MHM practices among rural women in Tamil Nadu; Eco Femme partnered with AVAG to conduct research on this topic in the form of individual surveys with rural women. The results of these

surveys¹ indicated that menstruation is a multi-faceted part of life involving complex linkages between social, cultural, economic, environmental, health, religious, and gender issues; one aspect could not really be talked about without the other, and the respondents wanted to talk. In response to the survey results, Eco Femme and AVAG hosted focus groups and seminars on menstruation in which multiple forms of menstrual products, including washable cloth pads, were presented. Eco Femme realized that women and girls were providing unsolicited favorable responses to the washable cloth pads. This positive response inspired formal product testing of washable cloth pads among rural women and girls in Tamil Nadu to see if they would be practically, as well as theoretically, accepted and to explore creating a rural market for washable cloth pads.

Another strong motivating factor for exploring the feasibility of introducing washable cloth pads to a rural audience was the negative environmental impact of disposable sanitary napkins (DSNs). In recent years, DSNs have become widely advertised and popularized across India. Currently, the Indian Government is offering highly subsidized DSNs to adolescent girls (and new mothers and female prisoners) who have heretofore had no access to them under the Scheme for Promotion of Menstrual Hygiene.² This scheme aims to make disposable sanitary napkins available to girls across the country; the first phase alone reaches 15,000,000 girls—and this is only 25% of India’s menstruating *adolescent* population. Eco Femme recognizes that national acceptance of DSN by menstruating women and girls throughout India will inevitably produce a staggering amount of waste and air pollution; a conservative estimate is 58,500,000,000 pads per year that will be incinerated, deposited in landfills, or littered in the open.³ If accepted among rural users, washable cloth pads could have the added benefit of greatly reducing this amount of waste.

Introduction:

Motivated by findings from the initial survey and mounting ecological concern, Eco Femme set out to create and test a washable cloth pad for a rural user. The goal was to make a product that would be:

- Affordable to women with limited financial means; (final cost of product should be comparable to what a woman would typically spend on DSN during 1 year)
- Durable enough to last *a minimum* of 3 years, potentially saving women thousands of Rs
- Appealing and attractive to communicate a message of holistic beauty and dignity
- Of a quality that would inspire women to provide the basic care (washing, drying and storage) necessary for product longevity and maintaining health and hygiene

¹ Report available at: <http://villageaction.in/media/outreach-material/>

² Packs of 6 DSN are distributed at Rs 6 a pack; some states distribute pads provided by the government. These ‘Freedays’ brand pads are sourced from international sanitary napkin manufacturers through a competitive bidding process. Other states distribute pads made by local Self-Help Groups. Indian Government Health Department, National Rural Health Mission, *Operational Guidelines: Promotion of Menstrual Hygiene among Adolescent Girls (10-19 years) in Rural Areas* (New Delhi), 10.

³ There are about 300 million women and girls between 15-54 (average menstruating age) in India. Assume each person has 12 menstrual periods a year that last for 4-8 days and uses an average of 3 pads per day. $12(\text{periods}) \times 6(\text{days}) \times 3(\text{pads}) \times 300,000,000(\text{women and girls}) = 64,800,000,000$. Sandeep Naik and B S Pancholi “Manufacturing and Market Potential of Sanitary Napkins,” *The Indian Textile Journal*, (October 2008), Nov. 8, 2013 (<http://www.indiantextilejournal.com/articles/FAdetails.asp?id=1567>).

Between March 2011 and June 2013, Eco Femme conducted extensive product testing of washable cloth pads with women and girls from rural communities in Tamil Nadu in order to see if our products met these requirements and pleased users. Additionally we aimed to determine which of three different washable cloth pad models was most popular and to assess the demand and potential market for the product.

Product testing sought feedback on the following parameters: design and functionality of product (comfort, effectiveness to absorb flow, size), hygiene and health factors (ease of washing, drying, and storage), general appeal of the product, cost and value for money, and dignity factor. We also inquired about current menstrual products used and monthly expenditure on products.

Eco Femme developed 3 washable cloth pad models for testing; the insert model, comprised of a cloth pad holder with wings to hold it in place into which absorbent cloth pieces are inserted; the foldable model, an adaptation of a single piece of cloth that folds into a rectangular shape with wings on the base layer to hold pad in place; and the belt model, designed for a user who does not wear underwear, it is secured with a belt around the waste. All models were made from highly absorbent brushed cotton flannel. For each model we developed three sizes, each in a different color: small (blue), medium (pink), and large (brown) to be used according to an individual's flow and personal preference.⁴

Figure 1. Products Tested (medium size):



⁴Proper care of washable cloth pads includes: soaking a used pad in cold or warm water for 30+ minutes or until all the blood comes out; washing with soap or laundry powder by rubbing cloth against itself (do not use a scrub brush); rinsing with cold or warm water; hanging to dry in direct sunlight, which naturally disinfects the cloth pad; storing in a clean dry place away from dust and insects.

Methodology:

Eco Femme worked closely with the Socio-Economic Development Center unit of Synovate⁵, an international market research and product testing company, to develop the pilot study. We were interested in partnering with an independent agency to reduce the risk of subjectivity that might accompany an in-house product trial. The strategy was to collaborate with multiple NGO's and test the products with women self-help group members and their menstruating daughters. Early on, the Palmyrah Worker's Development Society asked if they could participate in conducting this study, as they were also keen to explore non-polluting methods of MHM among their self-help groups and affiliated NGOs.⁶ Through the partnership with PWDS Eco Femme was able to establish a geographically diverse area for study that included seven NGO's; each NGO agreed to introduce 140 participants, 50% women and 50% adolescent girls.⁷

With help from SEDC we were able to design a monadic product test. The scientific design of the pilot study ensured:

- Participants of diverse age and socio-economic status in rural Tamil Nadu
- An event split of women aged 18-45 and adolescent girls aged 11-17
- A thorough selection process to prevent bias
- A control group of women (1/4 of participants) using disposable pads⁸
- Random allocation of products to participants with equal distribution of 3 different models
- Intensive training of NGO staff responsible for product placement and data collection
- At least a 3 month product testing period

The Pilot Study included an educational seminar offering a basic biological explanation of the menstrual cycle, an interactive presentation on different menstrual products, and a chance to speak about menstrual experiences in a safe environment.⁹ Each participant tried only one model, insert, folding, or belt; she received a set of three washable cloth pads, one in each size, with a storage/carry pouch and easy to follow graphical care instructions.

Participation in the pilot study was voluntary and no NGO or SHG services were compromised based on an individual's decision to participate or not.

After developing the methodology and launching the pilot study, certain practical challenges and limitations of ability were revealed. These challenges, combined with the fact that our contact at SEDC became increasingly unavailable and unreliable, resulted in a formal separation from SEDC and slight restructuring in order to complete the implementation of the pilot study.

⁵ Now known as Ipsos, this unit in particular offered the experience of having worked in the field of product testing in rural communities in India.

⁶ Currently, PWDS implements 66 field projects, has promoted eleven support organizations with mainstream linkages, and works in 30 districts in Tamil Nadu through network programs with 44 NGOs as partners. See more at: <http://www.pwds.org/site/>

⁷ Auroville Village Action Group agreed to take on 2 cohorts for a total of 280 participants.

⁸ The control group was ultimately eliminated due to poor quality of products and in order to ease the interview load for NGO file workers.

⁹ Women and girls attended separate seminars; seminar size was limited to about 80 women.

Partners and Participants:

Figure 2. Partner NGOs:

NGO Name	Area	Number of participants
Auroville Village Action Group - Auroville	Vanur block, Villupuram district	280
Pitchandikulam - Auroville	Marakanam block	140
Association for Integrated Rural Development (AIRD)	Ramanathapuram	140
Centre for People's Education (CPE)	Thirunelveli	140
Rural Education Development (RED)	Thirunelveli	140
Scientific Educational Development for Community Organization (SEDCO)	Thoothukudi District	140
Centre for Social Responsibility (CSR)	Thoothukudi District	140

Each NGO provided a list of all self-help group members and daughters of menstruating age. These lists were sent to SEDC where they made a random selection of 140 women and girls from each NGO who would participate in the study. If for some reason a woman/girl was ineligible to participate or did not want to, the next individual on the list was taken. A random selection of participants from a third party helped us to avoid bias in our population.

The initial pilot study involved 1,120 women and adolescent girls; due to the restructuring of the pilot study's design, the control group of 280 individuals (1/4 of participants) was eliminated. The field workers were able to conduct final interviews with 817 of the remaining 840 women and girls. 759 of these individuals reported that they used an Eco Femme washable cloth pad for at least one cycle during the course of the pilot program (though 10 did not state which model they used and model variety was not recorded). 52 individuals reported they did not use an Eco Femme washable cloth pad at least once, and 6 gave no answer regarding usage. The statistics and analysis regarding product experience refer to the 749 respondents who used an Eco Femme washable cloth pad at least once and identified the model they used, unless otherwise noted.

Data Collection:

Eco Femme trained NGO field staff to conduct one-on-one surveys with individual participants; each participant had 6 points of contact with NGO field staff: 1) a first screener interview to ensure eligibility to participate in the study, 2) an educational seminar on menstruation and MHPs, 3) product placement visit and interview to collect baseline data on menstrual experience, 4) a first interim visit to ensure understanding and use of product after one month, 5) a second interim visit after 2 months, and 6) a final interview in the form of the main survey on overall experience after at least 3 months of product use. 17 NGO field staff collected responses in the field and then manually entered the data into a computer database.

One-on-one question and answer survey was the main form of data collection in the pilot study. Some questions had a specific range of answers and some were more open ended.

Participant Demographics:

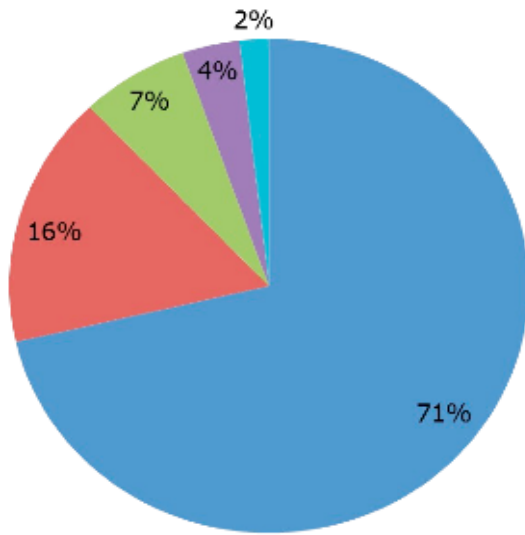
Employed: 42%

Unemployed: 55%

No answer regarding employment: 2%

Figure 3. Religion and Caste Distribution of Participants:

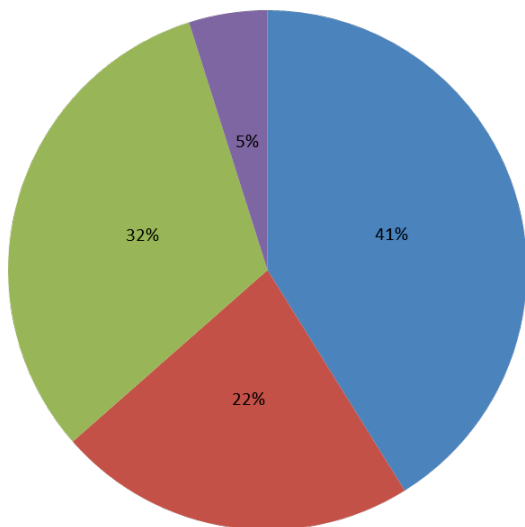
■ Caste Hindu ■ Dalit ■ Christians
 ■ Muslims ■ Others



Religion	Number	% of pilot population
Caste Hindu	583	71%
Dalit	135	16%
Christian	55	7%
Muslim	29	4%
Other	15	2%
Total	817	100%

Figure 4. Age Distribution of Participants:

■ upto 19 ■ 20-30 ■ 31-40 ■ 40+



Age	No. of individuals	% of pilot population
Up to 19	336	41%
20-30	183	22%
31-40	258	32%
40+	40	5%
Total	817	100%

Findings

Washable cloth pads are accepted among rural women and girls across religious, age, and caste groupings on all parameters such as effectiveness to absorb flow, comfort, appeal, and absence of leakage. Most women reported no significant obstacles with washing, drying, and caring for pads. The majority of participants indicated that they are prepared to continue to use cloth pads, prefer the washable cloth pads over recycled old cloth or DSN, and are willing to recommend washable cloth pads to others.

Menstrual Hygiene Management Status Quo:

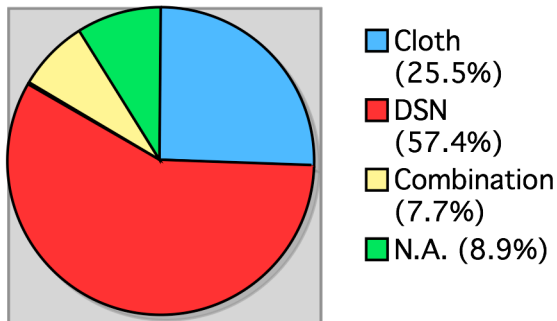
Our study included an exploration of the products women and girls are already using for MHM. This allowed us to observe what products participants would compare the washable cloth pads to and to deepen our understanding of the menstrual hygiene status quo in rural Tamil Nadu. Prior to the pilot study 43% of respondents used DSN, 39% used cloth, 9% used a combination of cloth and DSN, and 9% provided no answer.

Figure 5. Menstrual Hygiene Products Used Prior to Pilot Study:

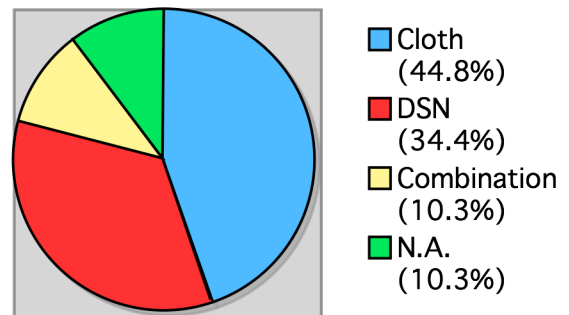
Product Used	Number of Women
Disposable Sanitary Napkins	351
Cloth only	318
Combination of cloth and DSN	76
Other	1
No Answer	71
Total	817

Figures 6-9: MHP usage by Age Group:

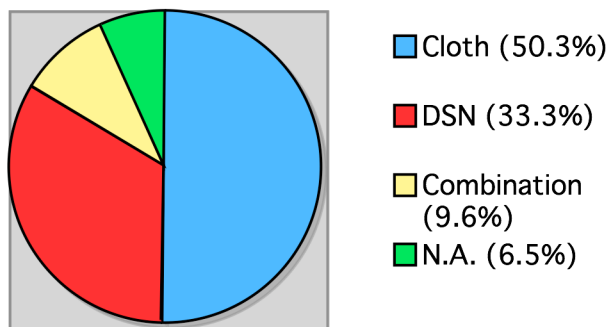
Age Group: up to 19



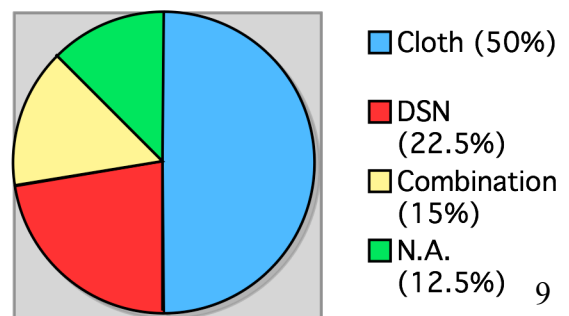
Age Group: 20-30



Age Group: 31-40



Age Group: 40+

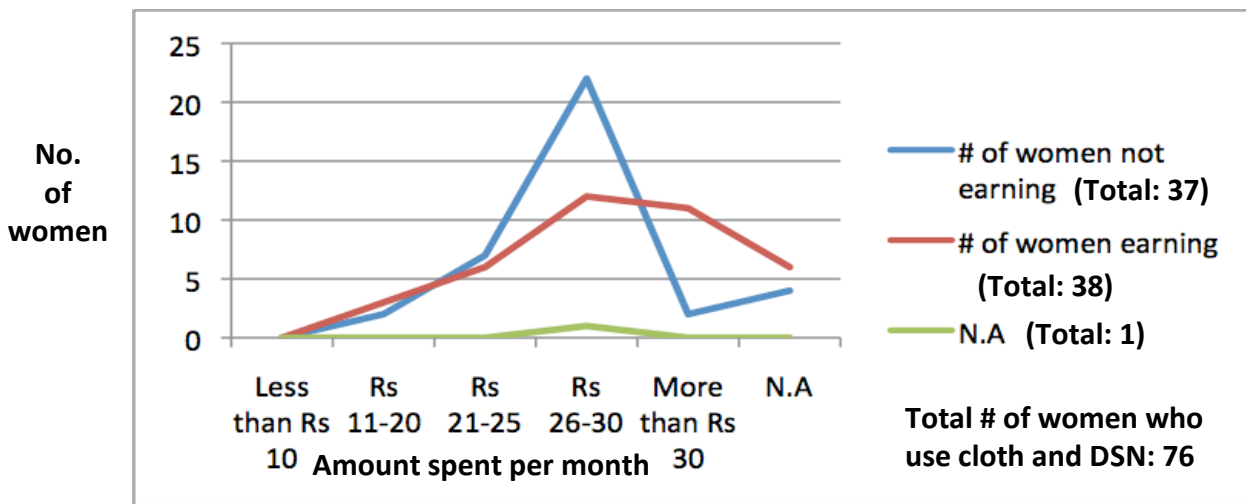


The data demonstrates a shift in dominant product usage from cloth to DSN among adolescent girls and younger women. Only 25.5% of adolescents (up to 19) use cloth compared to the 44.8% of respondents aged 20-30 and 50% of respondents 31 and over and primarily use cloth. 44% of respondents reported burning used menstrual products in either an open pit or incinerator; 13% reported throwing them away; 39% gave no answer on disposal; and 3% reported an unspecified other method.

Amount Spent per Month on DSN:

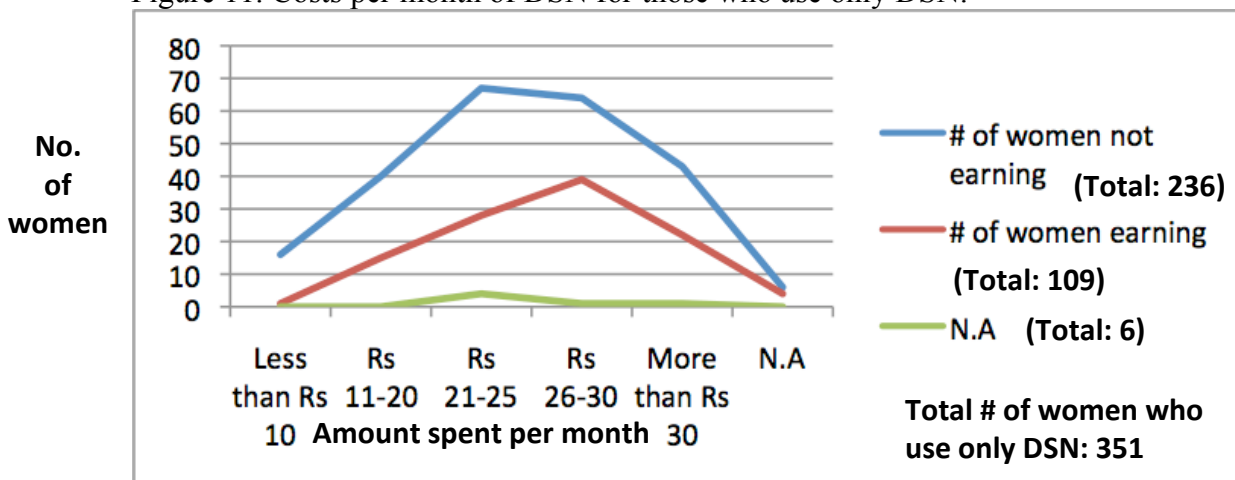
We also inquired about the amount of money women and girls spend per month on MHM. Assuming that the cloth used for MHM is recycled old cloth from the home and thus free we asked women and girls to report how much they spend per month only on DSN.

Figure 10. Costs per month on DSN for those who use a combination of cloth and DSN:



Most women and girls who use a combination of cloth and DSN, both not earning and earning, spend Rs 26-30 per month on DSN. 30% of women earning an income spend more than Rs 30 a month (11 individuals), while only 5% (2 individuals) of those not earning spend more than Rs 30 a month.

Figure 11. Costs per month of DSN for those who use only DSN:



Most women and girls who use only DSN spend between Rs21 and 30 per month. Slightly more earning women (35%) than non-earning women (27%) spend Rs 26-30. Proportionally, earners and non-earners spend about the same amount of money on DSN per month.

Functionality of Product (comfort, effectiveness to absorb flow, size, design):

Each individual’s experience of menstruation—her needs, preferences, and conditions—is different. As such, some features of the washable cloth pads satisfied the majority of participants while the very same features were not sufficient for others. Eco Femme recognizes that MHM is very personal and hopes to make a product that suits as wide an audience as possible, while also realizing that satisfying each and every person is not realistic. Overall respondents were pleased with the shape, size, material, and appearance of the washable cloth pads, especially because they resembled disposable pads. Whereas a few women disliked washing and reusing inserts and pads, many liked that the pads were easy to wash and held no stains.

Comfort:

Most women reported that all models of pads were comfortable; respondents noted in particular that the fabric was soft and that the medium sized pads especially large enough to remove fear of leaking through the pad and staining clothes without being bulky.

Effectiveness to absorb flow:

Most respondents stated they liked the absorption capabilities of the pads (52 specified ‘effectiveness to absorb blood’ as something they liked about the pads), though others (6 individuals) reported that they were insufficient at absorbing menstrual flow; the data on how often the pads were changed and how many hours of protection they provided indicate that in general the washable cloth pads are capable of fully absorbing an average flow:

Figure 12. Hours of Protection Provided by a Single Washable Cloth Pad:

Hours:	Percentage of participants:
Less than 4	25.9%
4-6	34.3%
6-8	29.2%
8-10	5.3%
N.A.	5.2%

Most participants reported that the washable cloth pads provided 1-8 hours of leak proof protection during the heaviest flowing days of a period (with the most reporting 4-8 hours). 58.8% of respondents reported that they changed their cloth washable pad less than other products, such as DSN or recycled old cloth; 20.4% changed their washable cloth pad as often as other products, 9.2% changed it more frequently, and 11.6% provided no specific answer. Most women and girls stated that three or less washable cloth pads would be sufficient for each period.

Size:

One theme common among feedback on all three models was that the small sized pads were too small and the large sized pads were too big, such that the sides rolled up uncomfortably when being worn. Across each model (belt, insert, and folding) the medium size was preferred (by

68%) over the small and large sizes.

Design:

The insert model was the least popular, and this may account for the slightly lower percentage that would continue to use them (75% compared to 87.2% (folding) and 82.2% (belt)). A few respondents did not like the brown colored pads, and the suggestion was made to have all the sizes in the same color. 17 respondents indicated discomfort with the belt model stating that the belt was loose, too big, or generally uncomfortable. 3 respondents stated that the folding model was difficult to wash, but otherwise issues were reported.

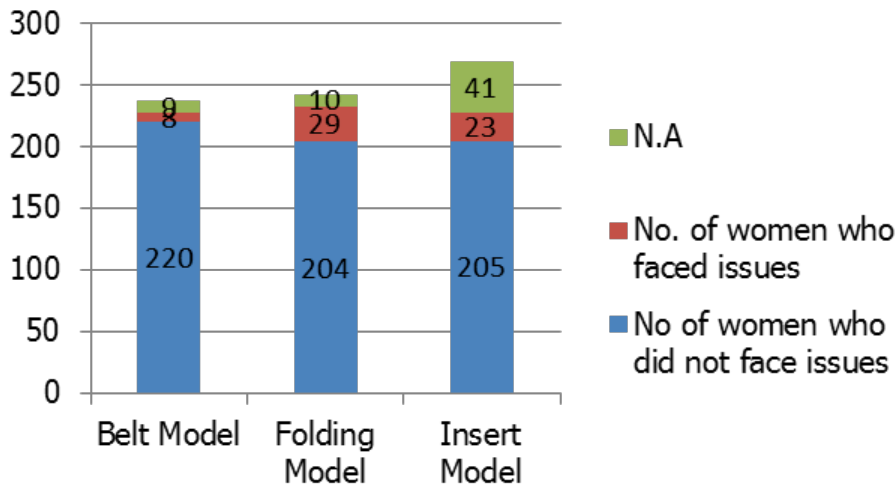
Hygiene and Health Factors (ease of washing, drying, and storage):

One of the main issues of concern around using washable cloth pads in rural India is that they must be washed and dried properly to ensure health maintenance—and during his process family members and/or neighbors may see them. However, 84% of participants reported no challenges in washing and drying the pads; 8% did report practical or social challenges, and 8% gave no specific answer.

Washing:

For the population covered by this study, washing cloth pads does not present a significant challenge; only 60 out of 749 individuals (8%) felt discomfort and/or faced practical challenges with washing their cloth pads after use. The challenges included: access to water and space, having time to wash the pads, a general dislike of handling the used pads, and embarrassment or shame connected to washing them in view of others.

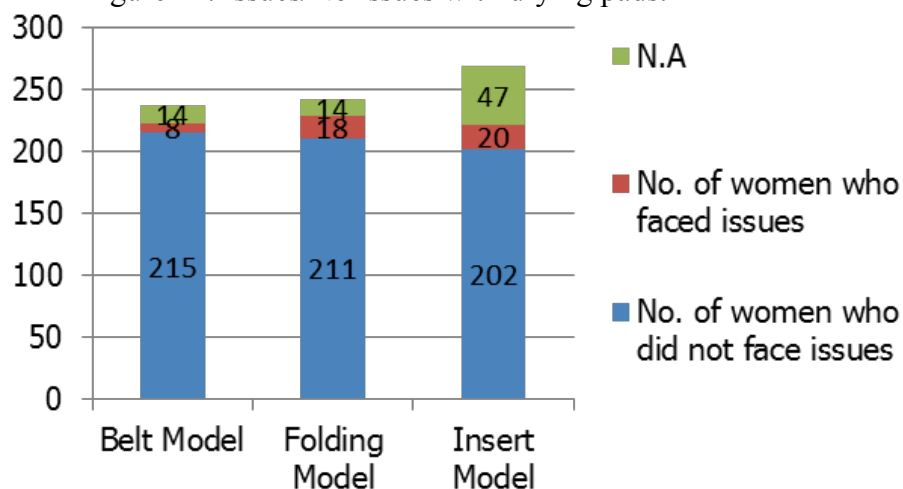
Figure 13. Issues/No Issues With Washing Pads:



Drying:

Feedback was similar with regards to drying the pads: 83% of the 749 women and girls who used the pads faced no issue drying them in the sun. 6% did report difficulty drying them; the main difficulty was embarrassment of having them in public view. Not having a place to dry pads only prevented 3 individuals from using washable cloth pads.

Figure 14. Issues/No Issues with drying pads:



Storing:

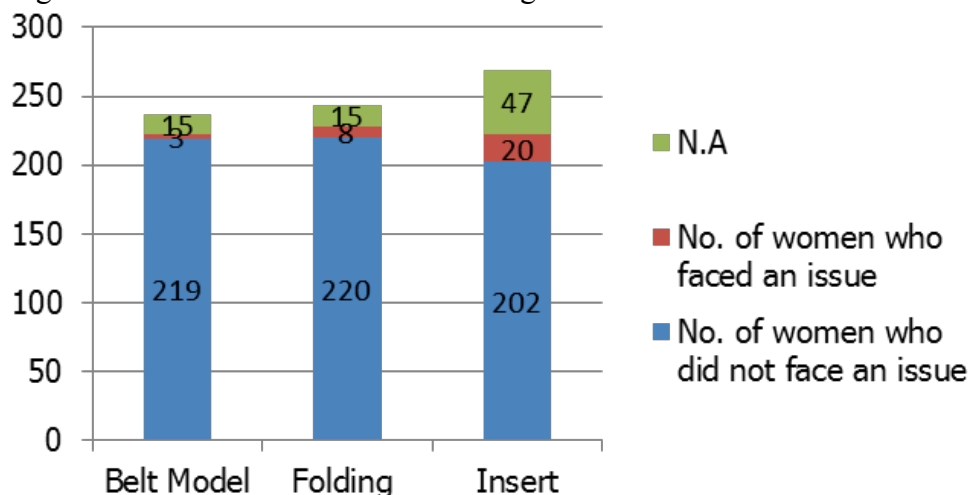
85.5% of participants faced no significant issues storing the washable cloth pads. 40% of those who used the pads utilized the provided plastic ziplock pouch and 37.5% used the provided canvas drawstring pouch. The cohort that used the pouches the most was the group of adolescent girls; 50% of this cohort used the ziplock pouch and 43.5% used the canvas drawstring pouch.

Figure 15. Ziplock and Canvas Drawstring Pouches:



It is not clear if the same individuals used both the ziplock and the drawstring pouches. Pouches were used for storing clean pads or transporting used ones when away from home according to the individual's preference. Though most respondents had no problem storing their pads, the provided pouches were not extensively used. It became clear that the quality of the Ziplock bag was poor, and this may account for low rates of use.

Figure 16. Issues/No Issues With Storing Pads:

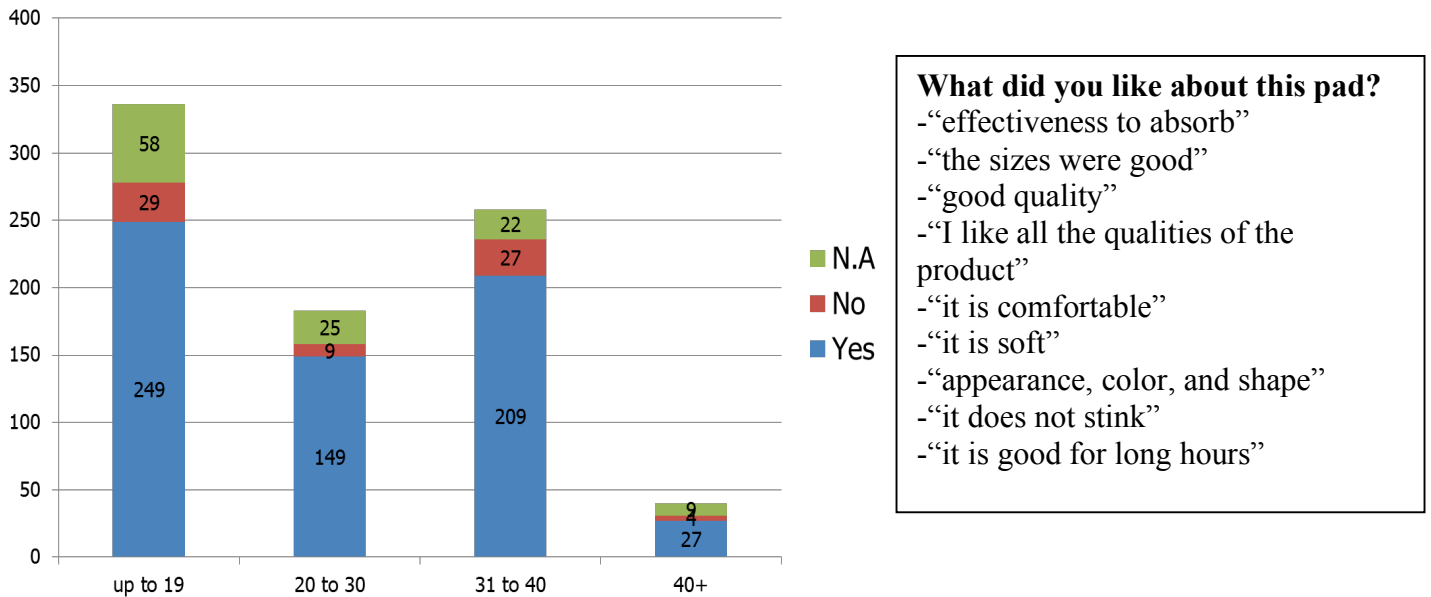


Overall, the vast majority of respondents had no difficulty properly caring for the washable cloth pads.

General Appeal of Product:

Preference for washable cloth pads (of all models) over DSN or recycled old cloth was high across all age groups.

Figure 17. Do You Prefer the Washable Cloth Pad Over Current MHM Product?



In total, 77% of the pilot study population prefers washable cloth pads to other menstrual hygiene products. Stronger preference for washable cloth pads among women aged 20-40 (81% prefer) may be due to the fact that many in this cohort are already using cloth, and washable cloth pads function similarly.

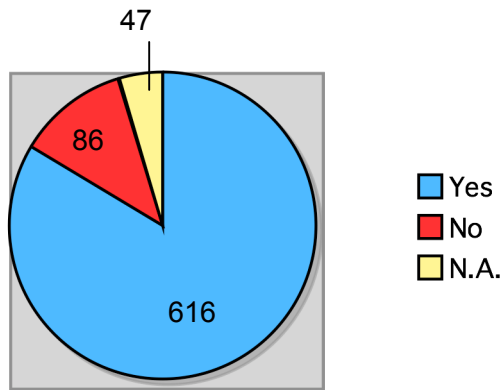
Preference for washable cloth pads among religious groups was nearly evenly distributed, except for among the Christian cohort where preference was slightly lower: Caste Hindus, 79% prefer washable cloth pads; Dalits, 84% prefer washable cloth pads; Muslims, 83% prefer washable cloth pads; Christians, 53% prefer washable cloth pads.

Overall, 82.3% of the 749 respondents said they would continue to use the washable cloth pad (in the size they liked best). Desire to continue using the pads was similar for the belt and folding models (belt: 85.2% of users would continue use; folding: 87.2% of users would continue use), and slightly lower for the insert model (75% of users would continue use). 11.4% of the 749 respondents stated they would not continue using the pad due to general dislike, discomfort, and preference for other products.

Table 18. Desire to Continue Using Washable Cloth Pads in the Preferred Size:

Will you continue to use the preferred size pad?	Belt Model	Folding Model	Insert Model	Total
Yes	202	212	202	616
No	27	26	33	86
N.A.	8	5	34	47
Total	237	243	269	749

Figure 19. Will you continue to use the preferred size pad (all models)?



52 individuals began as participants in the pilot study but did not actually use the washable cloth pads. 21% of these 52 participants (11 individuals) stated discomfort with washing used pads as their reason for not using them. Other reasons included:

- moving to another place and having issues with mobility (7 individuals)
- already using disposable pads provided by another institution (6 individuals)
- insufficient place to dry the pad (3 individuals)
- difficulty in changing pads during school/work day (3 individuals)
- did not like the model given for the pilot study (2 individuals)
- pregnancy (1 individual)
- irregular period (1 individual)
- forgot to use them (2 individuals).

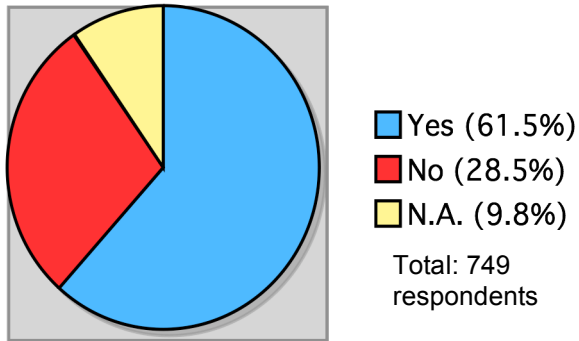
16 individuals gave no explanation for not using the pads.

81.4% of participants would recommend the washable cloth pad model they tried to other women and girls; 8.8% would not recommend the pad model, and 9.7% gave no answer on recommendation.

Cost and Value for Money:

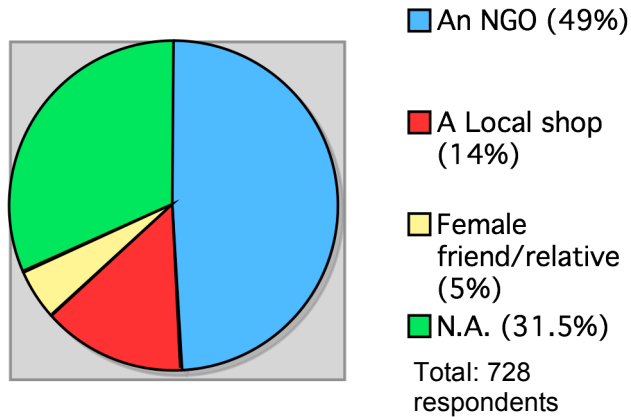
The Pilot Study's findings on an expected fair price for washable cloth pads are not conclusive; many respondents did not provide specific answers to questions of pricing. However, many respondents did report an interest in purchasing washable cloth pads if they were affordable. Whether or not an individual is earning her own income does not seem to be a major contributing factor in whether or not she would theoretically purchase washable cloth pads.

Figure 20. If you could afford to, would you buy your preferred size washable cloth pad?



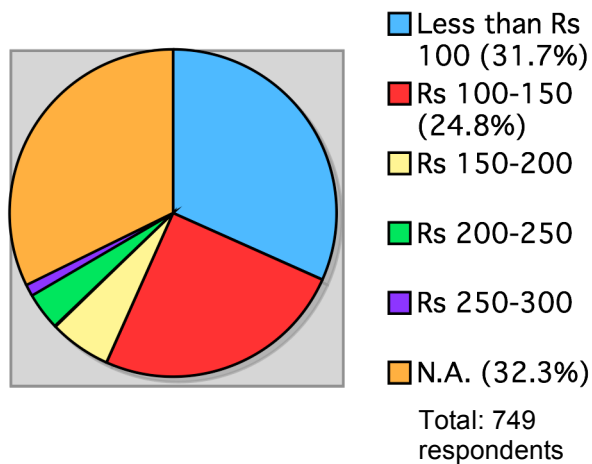
61.5% of respondents would actually buy washable cloth pads, though 82.2% reported they would continue *using* the pads. The difference can probably be attributed to spending money on the product, whereas the trial pads were given free of charge.

Figure 21. Where would you like to buy washable cloth pads in the future?



This question was asked separately from the previous question; 728 women responded and 49% of them indicated they would prefer to buy pads from an NGO with which they may be affiliated. A large number (31.5%) gave no answer; this may be because: they would not buy them (28.5% would not buy the pads if they could), they were embarrassed to give an answer, or they simply declined to answer the question.

Figure 22. What is a fair price for a 4-pack of washable cloth pads and a storage/carry pouch?



32.3% of respondents did not answer this question; they may have had difficulty pricing the theoretical package and/or been wary of stating an appropriate price they would also be willing to pay. 31.7% thought a fair price would be less than Rs 100; 24.8% indicated a fair price would be Rs 100-150, and fewer and fewer respondents thought a price above Rs 200 would be fair.

Dignity Factor:

Many participants reported that they *liked* the product; this is significant because menstruation is typically not an experience that carries positive connotations. DSN's are used and disposed of through incineration or burial and carry no personal value. The lack of anxiety around leakage offered by washable cloth pads also promotes dignity during menstruation.

Summary of Key Findings:

- Washable cloth pads are comfortable, absorb flow sufficiently, and prevent leaks for the majority of respondents
- Washable cloth pads provide as many hours of protection as disposable pads and are absorbent for the entire time they can safely be used
- The medium size pad is the most preferred size in all models
- The folding model is the most popular of the three models
- 3 washable cloth pads are sufficient for one menstrual cycle for most women and girls
- Caste Hindus, Dalits, and Muslims seem to prefer washable cloth pads more than Christians
- Women and girls are interested in buying washable cloth pads (if affordable) and the majority would like to buy them from an NGO with which they are affiliated

🌀 Analysis and Insights Gained

When given *the choice*, many respondents prefer the high quality material, intentional design, and absorption capacities of washable cloth pads to DSN and recycled old cloth. The majority of participants who used washable cloth pads and liked them also faced no difficulty in washing and drying their pads.

MHP usage prior to pilot study was almost evenly split between DSN and recycled old cloth (39% of population used cloth and 43% used DSN). But the data also demonstrates that DSN are becoming the primary form of MHM for adolescents; the number of DSN users increases in each 'generation' as DSN become more widely and intensively marketed by companies and financially accessible through the government's subsidy scheme.

Washable cloth pads were well received among all age cohorts; 20-30 and 31-40 year olds reported the highest rate of preference for washable cloth pads (81%). These cohorts also indicated a higher rate of exclusive recycled old cloth use for MHM prior to the pilot study. The higher preference for washable cloth pads associated with prior cloth use demonstrates that those who already use cloth may be more inclined to use a washable cloth pad than someone who previously used DSN. This observation echoes a conclusion from the initial AVAG study on menstrual hygiene experience: that MHP choice arises out of the complex inter-linkages of cost, *habit*, and comfort. MHM is a habitual experience; the products used and patterns made immediately following menarche are likely to stay with the individual for a long time and become an integral part of her experience.

Switching from one type of MHP to another may take multiple menstrual cycles and a little bit of adjustment; some women and girls may use washable cloth pads only when there are no weather related challenges to drying pads or in combination with their original product.

From the fact that some participants commented disapprovingly on the brown colored pads, we

learned that appearance of menstrual hygiene products is important to women, and that they value attractive ones. Women and girls may be more motivated to properly and proudly care for their pads when they are using a product designed for them as opposed to a recycled piece of cloth. We also learned that washable cloth pads are not a suitable option for a small number (~8%) of Pilot Study participants who were unhappy with the product, had difficulty washing/drying, and/or were averse to washing the used pads.

The pilot study ran concurrently with the international launch of a premium line of washable cloth pads. This line, featuring an ‘all-in-one’ pad that resembles a DSN became popular with international and domestic retail customers, and we wondered if rural women and girls would like it as well. We had the opportunity to conduct a smaller, separate study with women and girls in Uttar Pradesh;¹⁰ this study tested the three models from the Tamil Nadu pilot study as well as an all-in-one model. The Uttar Pradesh study reaffirmed the popularity of the folding model (in the medium size) and indicated strong acceptance of the all-in-one-model (in the medium size) as well. It also provided data on washing and drying that correlated with responses from Tamil Nadu (no significant issues were faced).

After initial analysis of the pilot program data and the results of the UP study, Eco Femme decided to make a few product design changes:

- Phase out the belt model (available upon request rather than as a standard product)
- Produce and distribute an all-in-one pad for a rural user
- Standardize and distribute the most popular folding model

The final all-in-one and folding models are made from the same brushed cotton flannel as the pilot products; they also feature a layer of PUL leak-proof protection. These pads will be available in packs of 3 (for women), packs of 4 (for adolescents), and as single pieces.



Figure 23. All-in-one Model



Figure 24. Foldable Model



Figure 25. Storage/Carry Pouch

These models are ready for launch. We remain curious about the most effective way to distribute washable cloth pads for sale to a rural audience. Our next step of testing is distribution; we have begun to thoroughly explore the pricing and distribution models for these products through research and the development of a distribution trial with a partner organization in Chennai.¹¹ We are aware that the upfront cost for washable cloth pads, even at a subsidized rate, will be

¹⁰ Data from this study is available upon request

¹¹ Details of this distribution trial are available upon request.

greater than what the average woman in rural Tamil Nadu would spend per month on DSN; however they last for many cycles over at least 3 years. The cost of 3 washable cloth pads, ~Rs 250, spread out over the course of 12 months (assuming one menstrual cycle per month), ~Rs 21, is about the same as or cheaper than what most respondents spend on DSN per month (see data above). However, it is not yet clear what women and girls would actually be willing to pay for washable cloth pads.

☉Implementation Challenges

Every effort was made to ensure consistency among the field workers administering the surveys. However, 17 individuals, with their own styles, approaches, and demeanors gathered information resulting in participants having slightly different interview experiences. This may have influenced the nature of responses provided.

Participants were encouraged to answer each question, however they did not always comply. There are a few questions in particular that elicited only a few direct responses. Possible reasons for lack of answers to certain questions include: assuming that the field worker/interviewer knew the answer without it having to be stated; impatience with completing the entire survey; simply not having an answer to provide; shyness around answering questions in general; and embarrassment connected to admitting that the product may not have been used. Further, the sensitive nature of the topic may have kept some women from answering each question fully and frankly. Though we feel the positive reception of cloth washable pads is an accurate representation of most participant's experience, some individuals may have been embarrassed or hesitant to critique the product in a one-on-one, personal interview. One limitation in asking the question 'what would be a 'fair' price for washable cloth pads is that 'fair price' may have been understood as 'state a price we will expect you to pay for this product', and respondents may have wanted to keep the price low.

The Pilot Study encountered structural challenges due to a discrepancy between the rigor and requirements expected by the product testing company (SEDC) and what was actually manageable by NGO field staff. It was very difficult to keep all partners operating on a parallel track with the implementation timeline; consequently the project ran over time by about 1 year. Issues also arose between Eco Femme and the main project co-coordinator from SEDC who became increasingly unavailable to meet deadlines and communicate. In the end Eco Femme felt the only way to move forward was to continue the study independently. So much had been invested in terms of money, time, and energies that Eco Femme had to consider how to ensure it would be possible to harvest useful feedback from participants under the demanding conditions. Furthermore, AVAG, the NGO who was the first to collect final product feedback, found that women and girls were expressing resentment at having to spend so much time (more than 1 hour) completing the main survey. Eco Femme decided to simplify the main survey and eliminate the control group testing the disposable pads (in order to reduce the number of participants who needed visiting and data collection; further many women expressed that they did not like the quality of these pads and were not prepared to use them).

☉ Conclusion and Implications for the Future

Our initial motivation for conducting the pilot study was to determine if washable cloth pads would be practically accepted and function among women and adolescent girls in rural Tamil Nadu.

Overall we found that:

- 77% of participants prefer washable cloth pads to DSN and recycled old cloth
- 84% of participants faced no issue washing pads
- 83% of participants had no issue drying pads
- 85% of participants had no issue storing pads

For a little over 3/4ths of the study population washable cloth pads are a viable and preferred method of MHM. For the remaining 1/4th or so they are not a viable option due to: preference for another form of MHM, aversion to or difficulty with washing/drying, or dislike of product design. We would not encourage use of washable cloth pads (or cloth at all) among women and girls who are averse to the concept or who face practical or personal challenges properly caring for the product. However, for the majority of participants, of all ages, religious, and socio-economic backgrounds, washable cloth pads are a viable and accepted form of MHM.

When cared for properly, cloth specifically intended for MHM is highly effective, hygienic, and environmentally friendly. In fact, using clean, cotton cloth pads may offer an improvement in menstrual hygiene for many women. Though DSN are convenient, the chlorine bleaching process that turns pads white produces a by-product called dioxin, a substance linked to cancer, endometriosis, and immune system suppression. Some women also experience irritation when using DSN from the chemicals in the product and this might be eliminated through the use of cloth.¹² Many menstruating women and girls in India, especially those in rural or impoverished areas currently use recycled old cloth for MHM; while there is nothing inherently wrong with using old cloth, the material is often sourced from a discarded garment and not fully efficient at absorbing menstrual flow. The unique advantage of washable cloth pads is that they are a hybrid of traditional, environmentally friendly cloth and the modern sanitary pad: they feature wings to hold the pad in place, a shape designed for a female body, and a layer of PUL leak proof protection.

Our primary concern at Eco Femme is that women and adolescent girls are armed with the information they need to make their own choices in regards to MHM. As rural women are recently being bombarded for the first time with multi-million dollar advertisements and government programs promoting DSN, we believe it is important that they are able to decide which menstrual products or methods really are best for themselves and their environment. Washable cloth pads offer an additional option of MHM to individuals who may feel forced to chose between less effective, free recycled cloth and costly DSN.

In a time where India is facing potential abandonment of cloth as a form of MHM in favor of DSN, Eco Femme hopes to remind individuals of the health and environmental benefits of using

¹² Natracare, *Chlorine Bleaching*, <http://natracare.com/p113/en-GB/Your-Health/Chlorine-bleaching.aspx> (Nov. 8, 2103).

cloth for MHM in the form of a modern washable cloth pad. The looming issue of massive amounts of waste produced by national acceptance of DSN cannot be ignored or burned away. The acceptance of washable cloth pads among the pilot study population suggests that national conversion to DSN is not the only way to improve MHM and that washable cloth pads could and should be an *option* for rural Indian women and girls of the 21st century.

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engagement and serious commitment to do justice to the whole process and therefore honoring the work and engagement of all who made it possible.

With heartfelt gratitude from the Eco Femme team,
Kathy and Jessamijn

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Appendix:

Eco Femme Product Evaluation Form for DATA network NGO's in T. N.

Date of interview: _____

Name of interviewer: _____

Name of NGO, block and district _____

Kindly complete the form in one to one interview after woman/girl has used sample pack of Eco Femme cloth washable pads for at least 1 month by **circling** answers to each question. **All personal identifying information will be kept confidential.** This evaluation form is to help us understand product attributes, and to improve the product. Please note that text in *italics* indicates instructions or guidelines for person conducting interview.

Personal data

1. Name _____

2. Age:

a) up to 19 b) 20 to 30 c) 31 to 40 d) 40+

3. Religion and caste:

a) Caste Hindu b) Dalit c) Muslim d) Christian e) Other (specify) _____

4. Are you earning your own income:

a) yes b) no

5. You have recently been given a sample pack of cloth washable pads to try out during your last period(s). Have you used at least one of the pads at least one time?

a) yes (go to question 7) b) no

If no product has been used, complete the next question 6 and end interview.

6. Please explain why you did not use the pads? (*probe for their reasons e.g. lack of space to dry discreetly, social factors e.g. not allowed by family, factors related to the product etc*) _____

Menstruation experience and products

7. Was an *introductory seminar on menstruation held and attended by this woman or girl prior to product distribution? The field staff should know if their NGO conducted a seminar therefore it is not necessary to ask only to circle correct answer*

a) yes b) no c) don't know

8. Which of the following best describes your flow?

a) Light b) Medium c) Heavy

9. Is your period coming regularly

a) yes b) no

10. What product(s) do you normally use to manage your menstruation?

a) Cloth only (*go to question 14*) b) Disposable Sanitary Napkin (SN)(*continue to next question*) c) Combination of cloth and disposable SN (*continue to next question*) d) Other _____ (*go to question 14*)

11. If you use disposable sanitary napkins, how many do you use per month, on average?

a) 0-3 b) 4 -5 c) 6-7 d) 8+

12. How much per month do you spend on sanitary napkins?

a) < Rs10 b) 11 – 20rs c) 21 – 25rs e) 26 – 30rs, f) more than 30rs

13. How do you dispose of your sanitary napkin after use

a) throw it away b) burn in incinerator c) burn in open pit d) other (please specify)_____

Eco Femme Product experience:

State: You have been provided with a 3 pack of Eco Femme cloth washable pads to try out.

14. Which model pack were you given?

a) Insert model b) Folding model c) Belt model

15. The kit contained 3 different sizes – small (blue) medium (pink) and large (brown).

Which was your **preferred** size?

a) small b) medium c) large

The next questions all relate to feedback on use of this preferred size. State : “Based on your experience of using preferred size, please answer the following”

16. What did you like about this pad?(*probe for details on what the women liked and why e.g comfort, appearance e.g. colour, shape, texture, effectiveness to absorb flow, quality etc*)
record responses below in detail

17. Could you suggest any improvement? (*probe for anything they did not like about the product e.g. lack of comfort, unappealing appearance e.g. colour, shape, texture, ineffective to absorb flow, poor quality etc*) *record responses*

18. Was there any size you did not use?
a) yes (*specify which*) _____ b) no – I tried all 3 sizes
19. How many monthly cycles have you used these *cloth pads* for?
a) 1 b) 2 c) 3 d) >4
20. How many times did you use the preferred size during 1 monthly cycle?
a) 1 b) 2 c) 3 d) more than 3 times
21. How many hours at a time did it provide protection during the heaviest day of your cycle (*usually 2nd day*)?
a) < 4 hours b) 4-6 hours c) 6-8 hours d) 8-10 hours e) 10 or more hours
22. How many cloth pads in preferred size would be necessary for you to use for a full month to fully cover your cycle?
a) 3 or less b) 4 c) 5 d) 6 e) 7 or more
23. How often did you change this pad (preferred size) compared to the product you used to use?
a) More frequently b) Less Frequently c) Same
24. How did you wash your cloth pads? (*multiple responses possible*)
a) Water only b) With detergent powder c) Detergent bar d) With a scrubber
e) With disinfectants (like dettol, savlon etc.) f) Other _____
25. Where did you dry your pad?
a) In the sun b) Somewhere else (*Please specify: _____*)
26. Did you use the ziplock storage pouch?
a) yes b) no
27. Did you use the drawstring storage pouch
a) yes b) no
28. For what purpose did you use the storage pouches ?
a) Storing clean pad b) Storing soiled pad c) both d) some other use (*specify*) _____
29. Were there any special issues you faced in regard to **washing your pads**
a) Yes b) No (go to *question 31*)
30. If yes, please explain (*probe for issues e.g. difficulty to get clean water, no place to wash, too busy to wash etc*), _____
31. Were there any special issues you faced in regard to **drying your pads**
a) Yes b) No (go to *question 33*)

32. If yes, please explain (*probe for issues e.g. embarrassed to dry outside, difficulties because of rain etc*), _____

33. Were there any special issues you faced in regard to **storing your pads**
a) Yes b) No (go to question 35)

34. If yes, please explain (*probe for issues e.g. hard to find a place that no-one would see it etc*), _____

Future intention for use of Eco Femme

35. Will you continue to use the preferred size cloth pads again?
a) yes b) no

36. Do you prefer Eco Femme products to what you previously used?
a) yes b) no

37. Would you recommend these products to another woman or girl
a) yes b) no

38. If you could afford to, would you be prepared to buy cloth pads in preferred size again?
a) yes b) no

39. If you would buy the pads where would you like to buy them:
a) in a local shop b) from NGO c) from woman friend or relative
d) somewhere else (please specify)_____

40. If purchasing, how would you like to buy them?
a) as single products b) in packs of 3 d) in packs of 4
e) in packs of 5 or more

41. What do you feel would be a fair maximum retail price for a **single pad**
a) <Rs20 b) 20 – 30rs c) 30 – 40rs d) 40 – 50rs e) 50 – 60rs
f) 60 – 70rs g) 70 – 80rs, h) 80 – 90 rs i) 90 - 100rs

42. What do you feel would be a fair maximum retail price for a **4 pack plus pouch**
a) less than 100 rs b) 100 – 150rs c) 150 – 200rs d) 200 – 250rs e) 250 – 300rs f) 300 – 350rs g) 350 – 400rs h) more than 400 rs

Thank you for your time and participation in this study

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