



## Design for Sustainable Well-being and Empowerment

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### It's time to take the bull by the horns – menstrual product debris can be reduced by using *Uger* fabric washable pads

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**Abstract:** Menstruation is a body expulsion requiring management. Traditionally women have been making their own pads, harvesting cloth from old garments, washing and reusing, until end of life of the fabric. In Southern Rajasthan, India, a commercially available reusable fleece material called *Time Piece* and the branded disposable sanitary napkin, is quickly replacing traditional sustainable methods. This has given rise to huge volumes of menstrual debris. This debris is at many levels, social, environmental and health. *Uger* Sanitary Pads is a simple solution, designed in an effort to lower the levels of debris and provide a convenient healthy option. The pads of cotton fabric are washable. Our attempt has shown that each pad can be washed and reused for a minimum of 60 times. We have demonstrated that that dignity can be brought back to reuse and that the migration toward unsustainable options can be potentially slowed down.

**Keyword:** menstruation; debris; reusable; napkin, cloth

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#### 1 Introduction

We are in world inundated with use and throw commercially available products. Tissue paper has replaced handkerchiefs; paper cups are used instead of stainless steel coffee tumblers and children's diapers have edged out the traditional cloth nappy. In the same way menstruation is now commonly managed by the use of disposable sanitary napkins and other cheaper substitutes. The waste that is generated by sanitary napkins and other menstrual products after it has been thrown away, has an impact on the environment, on individual health and on a community's well being. This is proving to be no longer sustainable.

Can a reusable menstrual management product lower this impact? If so, what should the design of this system be? Many aspects to menstruation were understood. Literature review, field work, visits to homes of adolescent girls and women, observations, interviews and focused group discussions have guided this ongoing study. We followed up our learning by developing a product that was tested by users. This product could

potentially address some of the unsustainable menstruation management systems that are commonly in use.

## **2 Background**

### *2.1 Menstruation, a body expulsion*

The earth renews itself. Leaves fall off a tree to let new ones come in its place. Nature has always had its own methods to rejuvenate and regenerate, this process of rejuvenation begins with an expulsion, a removal or a release. Menstruation is no different – it is a natural phenomenon – an expulsion much like the falling leaf. Once the cycle of blood release is completed, the body begins to prepare itself once again for a potential pregnancy. The process of new replacing the old - continues.

Communities take care of expulsions such feces, urine, sweat, phlegm, saliva, dandruff or ear wax in different ways. However, menstruation is the only woman specific expulsion; physiologically different from other expulsions.

One egg is released every month and reaches the uterus after passing through the fallopian tubes. As the egg proceeds through the tubes a layer of blood coats the walls of the uterus. Gradually this layer begins to thicken. If fertilization does not take place, the inner layer starts breaking. This causes bleeding. The process is menstruation.” (Murthy, 2000)

Menstruation comes with discomfort, cramps, headaches and mood swings. In the adolescent years between 9 and 19, hormonal changes trigger the onset of menstruation or periods. A woman will experience periods for an average of 40 years in her reproductive life time. Periods stop all together after menopause. (Menopause, n.d)

### *2.2 Menstruation and society*

The physiological phenomenon is not very simple in itself; it has many social, economic and environmental dimensions. Menstrual blood was never scientifically understood, rather it was feared. Taboos, misconceptions, blind beliefs and negative attitudes, surround menstruation in all cultures. This “time” has always been seen as dirty. The dirty attitude takes on many strong negative forms that eventually affect a woman’s position within society. In some parts of Nepal, women separate themselves from the rest of the household at this time a system called *chaupadi*, (Gaestel, 2013). Women are banned from worship during periods. An extreme form is at the *Shabarimalai* Temple in Kerala, where women of reproductive age are forbidden to enter the shrine. (Krishnan, 2006).

Keeping men out of menstruation conversations is a phenomenon across many cultures. Typically boys first learn about period from their friends, from their peer group, from magazines and advertisements. Females within the family, sisters and mothers are never vocal. (Allen, Kaestle & Goldberg, 2010).

Isolating men has lead to insensitivity. Writer C.S Lakshmi, talks about how male insensitivity results in poor infrastructure design for women in her, article “Planning Public Spaces”. (Lakshmi, 2005). This insensitivity is evident in government schools in India. “The unavailability of sanitary pads, inadequate sanitation and absence of separate toilet for girls in schools, compounds the problem and has a huge impact on girls school attendance and is a major reason for dropouts of girls from schools. “ (Roy, 2011)

If one were to examine ways women managed menstruation over time one would find a variety of innovative and imaginative ways that were used to suit cultural and geographical contexts. The absorbent materials in the past have included spagnum (moss), cloth, coconut coir, banana fibre, water hyacinth, corn, grass, newspapers, leaves, cotton plugs. The creator of the website “Museum of Menstruation” has been documenting many of these products. (Finley, n.d). Currently there are a variety of menstrual products such as the tampon, the cup, the sponge, sanitary napkins and others.

### *2.3 Environmental impact of menstruation*

Modern mass produced methods to manage menstruation such as tampons, tampon applicators and sanitary napkins, generate huge amounts of debris. If we are to look at some garbage figures globally, United Kingdom alone generates 1000,000 tons of children’s nappies, adult incontinence products and sanitary napkins every year that go into landfills. (Knowaste Recycling Journey, 2013). According to a recent survey commissioned by the Pune Municipal Corporation, India, 250,000 thousand used sanitary napkins are being flushed down toilets or end up littering pavements each day. (Sabnis, 2013). Solid waste disposal is indeed a major challenge for many municipal corporations as landfills are choked. In a landfill, pads remain in the same state for very long. (Cadmen, n.d). The impact of disposable products on environment can no longer be ignored.

### *2.4 Objective of the study*

A number of aspects to menstruation have been previously understood by many researchers. Products to manage menstruation have also been under focus. However, understanding the product, its use and its impact from the point of sustainability is a vast area that still has potential to be explored, particularly in the context of a developing country where sanitary napkins are used by an estimated 12% of the 355 million women, who menstruate.(Sumaran, 2013). The corresponding disposed menstrual products would potentially be a staggering amount. The objective of this study was to examine and understand residue from menstrual products and its impact at three levels, on the human body, on the environment and on a community. Further there was an attempt to understand if a reusable product can lower the debris thereby creating a more sustainable menstrual management setting.

## **3. Method**

The areas selected for the study were the districts of Rajsamand and Udaipur in Southern Rajasthan. The researcher collaborated with a Non Government Organisation (NGO) in the area.

### *3.1 Study I*

The method used for information gathering:

- a. HV – Home Visits - to 5 Scheduled Caste homes

- b. Conducting group discussions (GD)
  - GD 1 - 9 women – age 25 to 50– Below Poverty Line - at a MGNREGA work site (Government of India’s job guarantee welfare scheme),
  - GD 2 - 16 women - age 16 to 33 - Schedule Caste - part time workers working with their own community through NGO
  - GD 3 - 18 men - age 21 to 36 – Other Backward Class – workers working with their own community through NGO
  - GD 4 – 43 women – age 13 to 21 - Scheduled Caste - at a reproductive health training programme at NGO
- c. Interviews - 9 women - age 17 to 32 – women having problems with branded sanitary napkins identified through word of mouth
- d. Interviews with 3 doctors – (IWD)
- e. SAQ - Self Administered Questionnaire – answered by 197 female undergraduate students, age group 17 to 21, government girls college, peri urban location
- f. Studying menstrual products

We discuss the findings of Study 1 in Section 4.

### 3.2 *Product design*

After analyzing the findings from Study 1, a reusable menstrual product was developed to understand if menstrual debris could be lowered. The details of the design of this product are discussed in section 5.

### 3.3 *Study 2*

Once the product was developed it was tested.

- a. 45 users in the age group of 16 to 45 years, used the product over 12 to 13 menstrual cycles. Selection was random, given to those willing to try the new product. The group was mixed, rural, urban, high and low income.
- b. No time frame was allotted, no record keeping was requested, there was no binding as the product was new and we were exploring many aspects. We only requested for feedback and for all the used products to be returned.
- c. We took back used items at different times, to cover over 12 cycles, that is one year
- d. As they returned or as we took back products we spoke to individuals
- e. The returned used products were examined closely.
- f. Insights from this exploratory user testing pointed to ways a menstrual product can reduce negative impact on health, environment and communities.

These findings are discussed in section 6.

## 4. Findings from study 1

### 4.1 Isolation and silence

We found that isolation at this time of the month still exists. The kitchen is out of bounds. The area or alter where gods idols rest, cannot be touched. “*Baarney hu*” (I am outside) in *Mewadi* the local language of South Rajasthan to mean menstruation, aptly describes the isolation. (GD 4)

“I light the lamps and say prayers when my mother has her period.”

“I was told not to touch my mother during certain times in month.”

“My father would be the one cooking, with my mother instructing him from the side.”

“The pickle jar is not touched at this time, as the pickle will spoil.” (GD 3)

We found that silence around menstruation is prevalent everywhere.

“When I asked my mother questions about periods, the subject was always changed. I only understood later.”

“The school teacher always skipped the reproductive health chapter, telling us to read it at home.” (GD 3)

Silence is not just restricted to conversation; it translates into insensitivity of infrastructure. Most homes do not have latrines; women have no privacy. Many houses demarcate a small area in the corner where water is stored in drums and cement tanks. A sheet draped on a string is tied across this area to temporarily cordon it off when women need to bathe or wash their menstrual cloth. (HV)



**Figure 1** Space in corner of a house for bathing and washing menstrual cloth, taken during home visit Source Jatan Sansthan Author Generated

## 4.2 Products to manage menstruation

Three types of products are commonly used, cloth harvested from used garments, Time Piece or *falanil* and more recent commercially available sanitary napkin or CSN. (GD 1,2,4, SAQ)

### 4.2.1 Cloth harvested from old garments

Cloth is harvested and recycled from old garments and old bed linen. The cloth is referred to as “*gaba*” or “*ghar ka kapda*”. Women save cloth for use during this time of the month, these are from petticoats, turbans, veils, towels, bed sheets, pants, saris, loin cloth and pajamas. Many superstitions are associated with the menstrual cloth.

“It will shorten my husband’s life if I let him see my cloth.”

“Men will go blind when they see or step on the cloth” (GD 1,2,4)

The consequence of these beliefs – the menstrual cloth is hung in the darkest corners, hidden amongst roof tiles or under other clothes on a clothes line. Women select dark colored cloth to camouflage blood stains. The colored fabric poses a health risk as abnormal discharges never get identified on dark backgrounds. (IWD)



**Figure 1** Used cloth from an old garment handed over to researcher Source Author Generated

### 4.2.2 Time Piece – TP

Costing around Rs 15 – Rs 20 and also easily available at the local market, the *Time Piece* is very popular. Also known as *falanil*, it is available in cherry red, navy blue, black, olive green or chocolate. Washing are similar to cloth. Girls and women have this to say –

“Easy to wash, it can be dried anywhere, I do not feel embarrassed at all when I hang out the cloth.”

“It does not show stains.”

“I gave up petticoat cloth, it is old fashioned.”

“It is affordable; and lasts for 4 to 6 months.” (GD 1,2,4)

TP is not just restricted to the state of Rajasthan, it is available in the neighboring state of Gujarat and has been noted by other researchers. (Shah, et al, 2013).



**Figure 3** *Time Piece*, dimension 20'X15'' purchased by researcher from the local market Source Author Generated

Two TP samples were tested at the textile laboratory at Banasthali University, Tonk Rajasthan. The tests used were for identification of fiber as per the ASTM D276 standards and identification of dyes as per AATCC 161-2012 standards. The report showed it was made of poly acrylic fibre – non woven, fleece material using dispersed dye.

#### 4.2.3 Commercial Sanitary Napkin - CSN

Commercial Sanitary Napkins or CSNs – one time use and throw, available in the study area are Whisper, Kotex, Stayfree and Don't Worry. Most users cannot recall brand names, as the text on the packaging is in English an unfamiliar language. All branded napkins are called medical *wallah* napkin and bought at a pharmacy or a grocery store. Since money is spent on this product, it is used sparingly. Changing is done only twice a day, to allow the same pad to stretch for as long as possible. Ultra thin gel based pads allow for long periods of wear, giving stain protection. (GD 1,2,4 and SAQ)



**Figure 4** Napkins (marker pen to show scale) Source Author Generated

We opened up sanitary napkins from 5 brands to see what was inside - Whisper (Proctor and Gamble), Sofy (Unicharm), Stayfree, Carefree (Johnson and Johnson), Don't Worry (Mankindpharma). They are composed of derivatives of plastics and polymers and are less than 1 mm in thickness. (YouTube 2013, Sanitary Napkin Properties. n.d.) The layers in a pad may differ depending on the brand. But what is common for these materials is that it appears to make the vaginal area very warm as there is no aeration. (From Interviews)



**Figure 6** Layers in a pad Source Author Generated

We examined the outer packaging of these 5 brands, none had any information on raw materials. We also realized that consumers themselves are poorly informed. Only 29.9% of respondents in the survey knew that the pads were made of non degradable material. (SAQ)

#### 4.3. *Changing attitudes, aspiration and migration toward disposable*

Increasingly, recycled cloth is being perceived as old fashioned, not with the times.

“A reusable cloth pad? That will be disgusting, who is going wash?”

“One can get cheap disposable pads now so why not use disposable?”

“Cloth shifts, pad is fixed nicely to the underwear.”

“Where is the time to wash?” (GD 1,2,4 , SAQ)

There is clearly a migration from lower end menstrual products to higher ones. Women have made the move from cloth to TP, then others from TP to CSNs. TP is inexpensive, looks modern, is socially acceptable, is pre cut, takes half the time to wash and dry and does not show any blood stains. The migration is perceived as an upward social move and this moment has been rapid.

There is also clear shift toward CSN. Many studies point out that girls are opting for disposal options. (Shitole, Patnaik, Pandey & Patil 2012, Juyal, Kandpal, Semwal & Negi 2012). There is more willingness to buy products requiring less effort to manage, so disposable menstrual products are an attractive option. However along with disposable, comes a range of debris – this is hard to wish away.





**Figure 5** Migration from cloth to TP to CSN Source Author Generated

#### *4.4 Menstrual Product Debris – the residue, remains and scars*

Dictionaries define “debris” as the scattered remains of something or the fragmented remains of dead or damaged cells or tissue. (Debris, n.d) Menstrual debris in medical terms is understood to be tissue shed from the uterine walls. (Menstrual Disorders,n.d). We defined menstrual product debris to mean residue, remains or scars caused by the use of a menstrual product. We categorized this in 3 ways.

- Debris on body - health problems to the user caused as a result of using menstrual products
- Debris on environment and surroundings – caused by volumes of menstrual product waste placed on earth that do not bio degrade
- Debris on society – scars caused by erosion of values

##### *4.4.1 Debris on body*

We examined how products affect the human body. TP users said:

“It is a very warm product but it’s okay for me - it has to be used only for 4 days.”

“I have very severe itching followed by burning with this item.”

“I don’t mind the discomfort; I use this with “tube” if I have any problem. This is far better than the old cloth method.” (GD 1,2, 4 and SAQ)

“Tube” refers to an over the counter anti fungal cream which is used when there is itching and swelling. Clearly the product suits the family budget even though it is of inferior quality. There is social acceptance of the cloth (does not show stains), and overrides health as using the product along with medication appears to be acceptable.

We asked CSN users their experiences. Some users are very happy, other not.

“I get a reddish type rash from the CSN – it hurts me, there is irritation and severe scratching sensation. I suffered for many months and after that I started using cloth.”

“I get boils in the vaginal region and between buttocks. It starts as a red kind of rash then becomes like a pimple and then turns into a boil. I once had abscess. I feel helpless; I have no other product option. “

“I have got habitual to rash and boil. When I am in the flow, I accept that I will suffer. I use CSNs and cannot bear the thought of using reusable.”

“I use CSNs with a cream that my gynecologist prescribed.” (From Interviews and IWD)

“Yes we get many patients with problems due to their menstrual products” (IWD)

Cost to our body due to menstrual product debris cannot be taken lightly.

#### *4.4.2 Debris on environment and surroundings*

The preference for and use of disposable sanitary napkins has given rise to huge volumes of waste. This includes: packing material, plastic wrappers, covers, boxes, release papers and used pads. We found pads disposed into dry river beds, empty plots, into a river, on the roadside, into a latrine and in a drain.



**Figure 7** Sanitary napkin packet thrown by the wayside and napkin choking a water outlet  
Source Author Generated

We found stray animals, cows, dogs and pigs foraging through the menstrual debris looking for food.



**Figure 8** Cows ingesting garbage including menstrual waste, close up of garbage  
Source Author Generated

We spoke to the coordinator of *Suchi Abhiyan* , a garbage campaign at Udaipur City started in 1998. At that time 30% of total garbage used to be plastic material. Now, 16 years later, 80% of garbage is empty snack food packing, used adult and children’s diapers, used toilet paper and sanitary napkins.

We tried to find out what happens to a disposed pad. We understood that it breaks down eventually, it photodegrades into small polymer pellets. This process is estimated to take 10 to 20 years. The pelletized material goes back into the earth into ground water. (Cadmen, n.d). However if a pad is burned or incinerated, the toxic fumes are harmful. (Incinerators harmful to health, n.d.)

The volume and burden of menstrual waste on the environment is enormous and removing it even more complex.

#### 4.4.3 *Debris on society*

While health and environment factors are easy to quantify, what remains unaccounted is the debris on society. There has been a steady erosion of older sustainable systems. Not wasting anything used to be a value, it was a form of respect to resources. This practice was no longer visible from our observations. This came through in an interview.

“Madam, I use homemade cloth as CSNs don’t suit me. But I tell my friends I use CSNs, I don’t want people to think I am old fashioned or cannot afford it.” There is so much

anxiety to conform to, belong to what everyone else is doing, that truth is hidden at any cost. Buying a throw away is perceived as a signal that “we can afford this”, recycling and reusing is only if you are poor. There is no dignity in reuse.

Multinational companies through their advertisements seem to compound the erosion by making the viewer believe that “throw away” is hygienic and best. An example is the “Whisper Ultra Clean, New Rule Vs Old Rule” commercial. (YouTube 2013) It tells you to bring in the new and not stick to old methods. Nowhere is the advertisement openly saying that cloth is out, it is only subtly suggests it. The convincing attractive packaging triggers migration toward the product.

In the study area, loans get routinely taken by families for purchase of a motor bike. However no loans get taken for building bathrooms. Kesibai’s story (name changed) illustrates this further. Her husband built a 4 room house. No bathroom was constructed citing that there was an empty plot next to the house which would suffice for their bathroom needs.

Society’s well being gets compromised by notions of what is better or what fashionable. Communities become value blind and not seeing the larger picture.

#### 4.4.4 Summary of costs and felt needs

We compared health, environment and economics of the three products.

Product	Health costs	Environment costs	Social Costs	Economic
Cloth from home	Cotton - cool to skin, provides aeration. Fungal infections when they occur are not from the cloth itself but more from lack of personal hygiene or the cloth not being washed properly.	None – used cotton cloth will biodegrade in 4 to 5 months  The cloth will have lead two lives - first as a garment and next as a menstrual cloth	No erosion of values, no waste, respect to resources  Superstition results in improper care of cloth.  Silence no facilities for women	No Cost
TP	Warm fibres create raised temperature in vaginal area, causes health problems  Dark colored fabric-blood not washed out completely.  Fibers trap trace detergent may also become the cause of skin allergies such as contact dermatitis	Materials go through photo-degradation – getting pelletized , entering water ways  Materials remain intact in land fill for an estimated many hundred years  If burned, harmful gases are released into atmosphere	Erosion of values, market products preferred over home made  Silence perpetuated, use of inferior dark colored material	Rs 160 per year  Approximately 320 to 400 TPs in a life time

CSN	<p>Polymer based material makes the product very warm. Health problems as above</p> <p>Gel technology -. infrequent changing causes causing itching and other infections</p>	As above	Convenience placed over values or concerns for the larger environment.	<p>Rs 700 – Rs 800 per year</p> <p>Approximately 3000 to 6000 pads in a life time</p>
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**Figure 9** Impact of products on community Source Author Generated

From all the learning what emerged is that there is need for a product that can bring down the three types of debris, a product that would be sustainable. Other researchers point to this. (Connett, 2010). Ideally the product would have to be reusable cotton fabric and positioned between *TP* and the CSN, to include best of both systems. We found more than 20 options for reusable cloth pads already on the internet. Some of these companies are Gladrags, Party in my Pants, Luna pads and Pink Robin. We studied their designs after which we closely consulted with *Ecofemme* at Auroville, Tamil Nadu, the pioneers of cloth pad making in India. (ecofemme, n.d) We took inspiration from their product, both the design and the philosophy of reuse. The table above guided the brief for the design was put together from using understanding from the table below.

## 5. Product design

### 5.1 Findings from Study 1, guided the design brief for the product

The product was to:

- not create waste after final disposal - hence cotton fabric was selected
- have dignity, and not look like any piece of cloth – therefore styled
- be a comfortable shape and size, be fixed well and not shift when moving
- not cause discomfort like itching or scratching – therefore select raw material cool to skin
- manage different volumes of discharges throughout the cycle – hence provide adequate layers
- be socially acceptable and be easy to maintain - compromise had to be made here - the colour of fabric that would touch the skin had to be white so user could identify abnormal discharges

### 5.2 The product

Two pads were developed - *Uger* Insert pad and *Uger* light pad. The word *Uger* means a new beginning in *Mewadi* – the language of Southern Rajasthan. The pad was mass produced by a women's Self Help Group associated with the NGO supporting the researchers work.

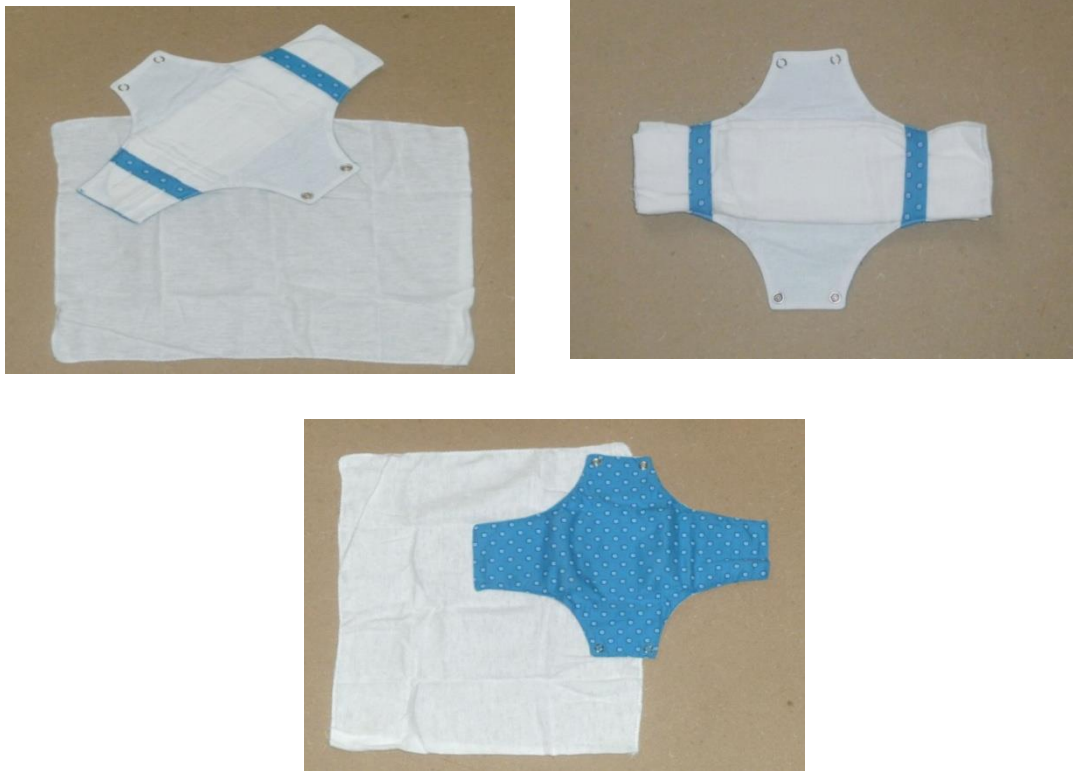


**Figure 10** Light pad for light flow, fabric close to skin is always kept white  
Source Author Generated



**Figure 11** Folded pads in a stack Source Author Generated





**Figure 12** Insert pad with towel for heavy flow, fabric close to skin is always kept white  
Source Author Generated

## 6. Findings from Study 2 - Product testing

*Uger* pads were tested for design, comfort and acceptability.

### 6.1 Feedback from users

Number of Users	Their previous menstrual product
18	TP
13	CSN
9	Old Cloth
3	Old Cloth + TP
1	Menstrual Cup
1	Other (Reusable stitched cloth pad)
<b>Total 45</b> : We had initially approached 25 CSN users to try <i>Uger</i> pads, of these only 13 had agreed, this respondent number is reflected above.	

- It takes half a bucket to one bucket of water to wash out pads depending on discharge
- All 18 TP users found *Uger* pads “*bahuth badiya*” (far superior) to their existing product, “*It is cool and very comfortable*”. One user returned *Uger* Pads after 60 washes and estimates that will last 5 washes more
- 13 respondents used reusable for the first time. In this group, 2 users reluctantly tried *Uger* but abandoned almost immediately, saying “*It is too much trouble to wash.*” 8 users claim they have given up CSNs for good and are now using *Uger* pads. 3 claim that they are using *Uger* in combination with CSNs.  
 “What a god send this has been, what choice did I have up to now? I am finally free from all the torture of itching and boils.”  
 “I want a pad white each time. There will always be a light brown stain on *Uger* pads. I know I have washed it well but still it makes me uncomfortable.”
- Of the 9 respondents using cloth, all felt that the design was better than just putting cloth into underwear
- The cup user said “*I'll use the pads mainly for light flow and additionally as precaution with my Cup.*”

## 6.2 Learning from the user trial

The pads work for what it was intended, absorb menstrual flow. There were other insights. 12 users who did not even make the attempt to participate in the trial were disposable product users. They had this to say

“I cannot touch blood.”

“Cloth is not hygienic.”

“I cannot take this to work. How can I bring home a bloodied cloth in my handbag”

CSNs are white in colour. So users who have only used CSN in the past expected *Uger* pads to remain white after washing. This is an unrealistic expectation as there will be dull residual stains from proteins in blood after washing. Users who have experience with cloth have no such expectation. Residual stains on a well washed out fabric, has previously not been known to cause any particular or specific infection. (IWD)



**Figure 13** Pad new, pad after 2 washes, Source Author Generated





**Figure 14** Pad after 60 washes, still fit for use Source Author Generated

## 7. Discussion and conclusion

In terms of convenience to the user, there is no doubt that a low maintenance disposable pads scores over a high maintenance reusable product like *Uger* Pads. It has already been observed that disposable pad consumers may not easily make the switch to reusable.

*Uger* pads are made of cotton. Cotton crop cultivation is highly water intensive, processing fibre into fabric is also water intensive and finally maintaining an *Uger* Pad requires water. Significantly lower amounts of water are required for manufacturing a disposable sanitary napkin. Additionally for disposing a CSN, the end user requires no water for the action. Thus more research would be required to accurately assess the actual environmental impact of all three products TPs, CSNs and *Uger* pads.

It has been indicated in the user testing that cool cotton fabric next to skin feels more comfortable than artificial material such as TP and CSN. However there are so many factors that will determine what a user will finally select for their menstruation needs.

If we are to reduce menstrual debris we have to actively advocate at many levels

- Break silence on shame, taboos and superstitions, to create conducive environments for women to manage menstruation openly and healthily and express their problems.
- Include men in menstruation conversations. This will help to put forward women's needs and will influence decision making in a home – example building a bathroom
- Through dialogue with communities re-examine values like reuse and recycling
- Help future “menstruators” to make informed choices about available products.
- Work along with teachers and trainers who teach reproductive health.

Finally as another strategy we can also play on guilt, making users feel guilty about what they are not doing for the environment. It is well documented that guilt can also motivate people to change. (Mallett, R.K, 2012). Potentially we now have a menstrual product that can reduce menstrual debris however more assessment is required.

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