**Menstrual wastage disposal System in Tamil Nadu**

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**Abstract**

The present research work attempted to study about the ‘Menstrual wastage disposal system in Tamil Nadu’. This study aimed to know the women behavior of dispose the menstrual wastage like cloth or commercial pad etc. The study was conducted in urban and sub-urban places in Tamil Nadu like Perambalur, Ariyalur, Nilgiris Municipalities and Town panchayats like Arumbavur, Udaiyarpalayam, Ketti etc. Data was collected by focus group discussion within the reproductive age group women from 10-45. What is known from this study? Most of the women were used the single use commercial, few women like the old cloths, but rare women using reusable commercial pad. Those women after used the pad did not dispose properly. That is majority of the women put that within the household wastage, and given with the sanitary workers, some women fired, and some women throw in the open places as well as in water bodies. So, by this behavior or disposal system affect the whole city environment cleanliness, and make many problems. Menstrual wastage disposal system is major causes for environment pollution in Tamil Nadu cities.

Key words: Menstrual Hygiene, Menstrual pad, Menstrual wastage dispose, Method of menstrual wastage dispose, Environment affected by Menstrual wastage.

**Introduction:**

Current solid waste management laws in India require the waste generator to securely wrap sanitary waste prior to disposal and require the product manufacturer to provide a wrapper for disposal. To address these requirements, manufacturers have started providing plastic wrappers for product disposal, but an unintended consequence of this is the increased burden on the environment and waste management systems from the additional menstrual waste wrapping (Chaturvedi R, 2017). The Government of India is promoting incineration of menstrual waste as a disposal method, which would help to reduce environmental burden of menstrual waste if incinerators meet design and emission standards. However, the lack of standards for small-scale appliances, the lack of oversight or enforcement of emission regulations on incinerators, the potential risks resulting from inadequate emission control measures or poor thermal treatment performance are concerning (Ecofemme, 2015, Batterman S, 2004).

A woman menstruates between puberty (age 11–24) and menopause (age 45–55) for an estimated 459 cycles during her lifetime. With rapid urbanization, rising incomes, expanded product availability and distribution, and increased mobility, the use of disposable sanitary napkins is increasing rapidly. A PATH study estimated that the annual solid waste load of disposable sanitary napkins was higher than any other menstrual hygiene product—i.e., 44,254 cm3/female/year. Shared and public facility maintenance is frequently a source of environmental health risks due to poor hygiene. In countries where there are many stigmas and taboos around menstruation, poor waste management on-site creates anxiety and stress. This facility maintenance concern combined with the fact that urban waste collection systems are problematic in many low- and middle-income countries (LMICs) creates exposure risks and environmental pollution in dense urban areas (Myles F.Elledge et al., 2018). Women using a communal toilet in Tamil Nadu were reluctant to leave menstrual waste in communal bins as it was unclear when the waste would be burned (PATH, 2013). The majority of participants were comfortable with communal incinerators, but the Tamil Nadu study found that incinerators installed in a communal toilet were not in use due to a lack of signage (PATH, 2013). In some communities, the burning of menstrual blood is taboo, drawing on the belief that such actions will compromise a woman’s reproductive capacity. A few studies noted that poor water, sanitation and hygiene infrastructure, including disposal, made it difficult for girls to manage their menses in school, yet few explicitly recognized the need for disposal facilities a part of WASH or sanitation facilities in schools

# This paper addresses topics of menstrual wastage disposal system, and brings a unique focus on disposal practices, and consequences of menstrual wastage disposal. The focus on urban populations is prioritized given the higher public and environmental risks associated with poor waste management in heavily used shared spaces in densely populated areas.

**Objectives:** To study the women behavior of dispose the menstrual wastage and its effects

**Methodology:**

Above study was conducted in two district (1) Ariyalur and (2) Peramablur, both districts has different geographical nature. The data base of this paper is the Author’s RUSA 2.0 Social Science, Work titled “Access to Water, Sanitation, Hygiene (WASH) in Urban, Peri-Urban Areas in TN- Challenges & Concerns of Gender Environment & Marginalized Communities”. This is a qualitative study, data collect through focus group discussion, which aims to analyze women behavior of dispose their menstrual wastage in Perambalur Municipality and Arumbavur Town Panchayat. The information collect through focus group discussion about their experiences of using menstrual absorbents like cloth, sanitary commercial pads, disposing method, and the effects of its disposing methods. The study ran from May - June 2022. The venue was chosen to ensure accessibility for all, absolute neutrality, and a relaxed and quiet atmosphere. The date and time of the meeting considered the personal constraints of most participants. Each participant was contacted the day before the meeting date to ensure their presence and to answer any questions. Arrangements were also made to record all discussions.

 In addition to handwritten notes in local language (Tamil) during the focus groups, the discussions were recorded and later transcribed and translated into English. All questions were open questions. The privacy and confidentiality of the interviewees, and positive interactions between the individuals and the interviewer, were maintained during data collection. Additionally, 85 participants were selected for five (5) focus groups. Women and adolescent girls participated. The number of participants in each focus group ranged from eight to twelve.

**Result:**

**Types of Menstrual Absorbed Materials:**

 Majority of the women who participated in the group discussion prefer store sold sanitary napkin pads. Because, it is easy to use and it is said to be safe while doing any job like going to work, travelling, walking, driving etc. But only a few women claim to use old clothes due to financial constraints. School going adolescent girls gets free napkins under the Menstrual Hygiene Scheme a pack of six sanitary napkins is provided to adolescent girls by the Accredited Social Health Activist (ASHA) through door-to-door visits and also through platforms of schools and Anganwadi centres. Nowadays, many deodorized and non-deodorized sanitary products are available in the market made of synthetic fiber rayon. These deodorized products contain chemicals like organ chlorines which have antibacterial activity. Chlorine-bleached Kraft or Sulphate pulp is used by manufacturers to produce fluff pulp as absorbent used to make disposable sanitary products. Due to their chemical composition, these products when buried in the soil they kill the soils micro flora and delay the process of decomposition (Rajanbir Kaur, 2018). But, details of napkins those were did not known, they using for easily available at many stores, chemist shops.

**Experiences of changing the Pad/cloths during menstruation:**

 Most of the women changed their menstrual pad/cloth two times in a day. Some bodies, changing their pad/cloths 3-4 times, few women were did not change their pad/cloth or whole day using the same pad/cloths, for the reason, ‘no need to change the pad/cloth because of no more bleeding’. School going adolescent and working women experiences were different, Schools and working places no proper place for change their pad/cloths and no privacy to change their pad. In Arumbavur Middle school adolescent shared their experiences as below:

*“Our school toilet has no changing facilities, no running water, no privacy area, but some people leave their clothes on the toilet window, that is being as abomination and filthiness”*. A girl told, *‘our teacher ordered to us to clean the toilets, while clean the toilet I had vomiting, and get head ache’*.

A woman told said *“that it is difficult to go to work during menstruation because there is no changing facility in the office toilets, no necessary water, so she feels irritable throughout the day and cannot work happily”*.

**Menstrual waste disposal system:**

In disposing of menses waste, people follow the same practice in both the places like Arumbavur Town Panchayat and Perambalur Municipality. Menstrual pads are not safely disposed. They throw the used ones into water bodies.They are thrown into rivers, lakes, ponds, drainage. Apart from that, they also put it in garbage bins in the municipality.When the cleaners come to the houses and collect the garbage, they put it along with the household garbage.

Appropriate disposal of used menstrual material is still lacking in many countries of the world. Most of the countries have developed techniques to manage their fecal and urinary wastes but, because of lack of menstrual management practices in the world, most of the women dispose of their sanitary pads or other menstrual articles into domestic solid wastes or garbage bins that ultimately become a part of solid wastes. Toilet facilities in India lack bins for the disposal of sanitary pads and hand washing facilities for menstruating women to handle menstrual hygiene. In urban areas, where modern disposable menstrual products are used they dispose of them by flushing in toilets and throwing in dustbins or through solid waste management (R.Ashley et al., 2005)

In the Municipality women dispose their menstrual waste into near water bodies like Thoraimangalam lake, (in that water sources motor having) and somebodies burning and burial were difficult due to limited privacy space. In schools, due to lack of sanitary facilities, girls throw their pads in toilets. In some cases, girls threw away their used menstrual clothes without washing them. Also many were reported being absent from school due to lack of disposal system, broken lock/doors of toilets, lack of water tap, bucket, and poor water supply in the Arunbavur Middle school.

At home, they dispose the waste by wrapping and throwing in the dustbin along with other domestic waste. As mentioned above, the disposing habits change according to the place. In public places, prior to having knowledge about the consequences of flushing the pads, they flush them in the toilets or wrap and throw them in the dustbins. Where dustbins are not placed they leave the soiled pads wrapped or unwrapped in the toilet corners. This makes the toilets dirty, breeding place for flies and mosquitoes, and also unhygienic for other toilet users and cleaners.

**Consequences of Menstrual waste disposal in unsafe method:**

As sanitation systems were designed with urine and feces in mind, they are unable to cope with the menstrual absorption materials. These absorption materials clog the sewer pipelines as they are unable to pass through and cause the system backflow (Beksinska M.E., et.al, 2015). Those women used the sanitary plastic coated napkin and they throw in the open places, it taken more time to decompose, or it makes environmental issues. Sanitary napkins might decompose over a period of about one year except its plastic lining in on-site sanitation (Crofts T., 2012). Garbage bins are kept in Perambalur Municipal Corporation, because the bags are not removed immediately, cows, goats, dogs, pigs, crows, rats etc. eat them. When women wrap their menstrual waste in plastic paper along with the bags, the dogs pick it up and throw it all over the street. It is a wasteful and environmentally damaging thing.

A woman said about it, *"The woman who lives in that house wraps her waste in a plastic paper and puts it in the public garbage bin, which is eaten by the dogs and flushed all over the street. During the rainy season, all the waste in that pad mixes with the water that accumulates there and the water turns red”*. She painfully mentioned how long she would have to endure this suffering.

A woman working as a cleaner in the municipality said, *"When we go door-to-door to collect garbage, along with garbage, menstrual waste is wrapped in plastic paper. When the garbage is graded for composting, it smells bad, there are maggots in it, and we can't pick it up."*

A woman worked as Thumai paniyalar when she was cleans municipal drainage meet problems and she said, *"Women put menstrual pads in the open drainage, which block the flow of water and give off a bad smell, which is very difficult to dispose of".*

The same situation occurred in the Arumbavur Town panchayat. Those women throw their menstrual pad in to the River, Lake and open drainage. Sanitary products soaked with blood of an infected women/girl may contain hepatitis and HIV viruses which retain their infectivity in soil and live up to six months in soil. The clogged drainage with napkins has to be unblocked and cleaned manually by conservancy workers with their bare hands without proper protection and tools. This exposes the workers to harmful chemicals and pathogens. Incineration is a better technique to dispose of menstrual waste but burning of pads releases harmful gasses that effects health and environment. Burning of inorganic material at low temperature releases dioxins which are toxic and carcinogenic in nature. People living alongside river banks throw menstrual waste into water bodies which contaminate them. These materials soaked with blood were breeding places for germs and pathogenic microbes (Ssewanyana D., 2017).

**Conclusion:**

 According to the study Municipality and Town panchayat women having same behavior of dispose the menstrual wastage. The disposal of used absorbents cannot be understood and carried out in isolation, requiring user-centered design thinking to consider socio-cultural norms regarding menstruation, product availability, quality and use, and existing sanitation systems. In institutional and community settings, the design of sanitation systems needs to be responsive to and plan for disposal of menstrual waste, incorporating it into both the sanitation and solid waste management parts of a WASH program, providing appropriate, discrete and sound solutions that minimize adverse health impacts on girls and women, sanitation workers, and broader environmental consequences. Thermal treatment is one option as a waste management and pathogen treatment approach, and with careful implementation may prove socially acceptable in many contexts, although care needs to be taken with design to ensure emissions are safe, particularly where absorbents contains chlorine or polyethene. Deodorised sanitary products used by women/girls contain chemicals used in bleaching such as organochlorines which when buried in the soil disturb the soil microflora and decomposition takes time (Lawan U.M., 2010).

**Suggestions:**

* They may be sustainable sanitary option but must be hygienically washed and dried in the sunlight. The sun’s heat is a natural sterilizer and drying the cloths/cloth pads under it sterilizes them for future use. These cloth pads are reusable so they are cost-effective, easily available, and eco-friendly. They also need to be stored in a clean dry place for reuse to avoid contamination.
* Nowadays, there are many manufacturers of eco-friendly menstrual pads, which include banana fiber, corn husk, and surgical cloth pads. Women should come forward to use these.
* There is unproven word-of-mouth that the use of chemical-laced nappies sold in shops leads to physical problems, which in turn hinders women from giving birth, to avoid such fears, use nappies made from natural materials.
* The government provides free nappies for adolescent girls, and those nappies should depend on nature.
* More studies should be done in this regard. In institutional and community settings, the design of sanitation systems needs to be responsive to and plan for disposal of menstrual waste, providing appropriate, discrete and safe solutions that minimize adverse health impacts on girls and women, sanitation workers, and broader environmental consequences.

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