An Assessment of the Perception and Practices with Respect to the Use of Women Hygiene Products

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Abstract
The aim of this study is to assess multiple factors being considered by females about the usage of women hygiene products and the various methods employed regarding their disposal. Also, there is a need to educate and create awareness about the environmental pollution and health hazards associated with the disposal and usage of these products. For the study, a sample size of 200 women, in the age-group of 18-40 years was considered. Questionnaire was circulated through an online google-form, having both close-ended as well as open-ended questions.

Based on the data obtained, it was found that 100% of the women preferred the use of sanitary napkins during menstruation over other alternatives available. Majority of the women (56.6%) experienced discomfort, rashes or allergies during menstruation. The study also confirmed that most of the women (51.2%) had little knowledge about the chemicals used in sanitary napkins. It was found that they were not aware of the non-biodegradable materials being used in the sanitary napkins but they understood that the plastic layer being used in these napkins can lead to environment pollution-soil pollution and if the napkins are incinerated, it causes air pollution as harmful chemicals get released in the air.

Keywords: Biodegradable, Eco-friendly, Hygiene, Sanitary Napkins

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1. Introduction
Disposal of women hygiene product is a problem in India, they contain plastic chemicals [1] and high concentration of volatile organic compounds (VOCs) [2] which are non-biodegradable [3] and lead to health and environmental hazards. In urban areas a fraction of menstrual waste reaches the incineration sites, while some burn them in open, which release harmful dioxins [4] rest overburden the landfill or pollute water bodies. Objectives of the study are to find factors considered by women for selection of women hygiene products and assess need to create awareness about the environmental pollution and health hazards associated with these products.

2. Materials and Methods
To conduct this study Convenience Sampling was adopted to know the perception and usage of women hygiene products. Sample size of 200 females within the age group of 18-40 years was targeted. A questionnaire having 13 questions was structured to assess the degree of knowledge of the respondents about proper use and disposal of women hygiene products. The questions also included problems faced with disposal and usage, side effects faced due to said issues and the impact of women hygiene waste on environment. The questionnaire was created and assessed using online-google form and Likert scale.
3. Results
In total, 200 females participated in this study. This study showed that only 13.3% females had heard of tampons, 46.4% female knew about disposable sanitary pads, 20.4% knew about menstrual cups, very few 8.2% were aware about reusable sanitary napkins which can be washed and reused and there were 53.1% of females who had heard of all the women’s hygiene products (Figure 1).

![Figure 1: Participants’ awareness about Women’s hygiene products](image1)

The study revealed that almost all 96.9% of women used sanitary pads over cloth/towel, tampons, menstrual cups, and others (Figure 2). It was found that 56.6% participants were occasionally experiencing discomfort due to use of sanitary napkins, 14.3% were experiencing discomfort regularly, very few were experiencing discomfort frequently and 26.5% of participants are not experiencing any discomfort during their menstruation (Figure 3). Practices related to menstruation hygiene are of major concern as it has a health impact; if neglected, it leads to toxic shock syndrome, reproductive tract infections (RTI), and other vaginal diseases [5]. Less than half (45.9%) of the women changed their pads within recommended changing time period i.e. 3-4 hours, whereas 44.9% changed it at an interval of 8 hours even during their heavy bleeding days (Figure 4).

![Figure 2: Response when females were asked what they normally use during their periods](image2)

![Figure 3: Perceptions of women on experience discomfort, rashes, or allergies during menstruation](image3)

![Figure 4: Time interval at which hygiene products are changed on heavy bleeding days](image4)
While assessing the means of disposal of women’s hygiene products, it is discovered that 87.8% of the participants preferred throwing their pad in a bin which is collected by local garbage collectors, as part of the domestic waste disposal system (Figure 5).

**Figure 5: Response on means of disposal of women’s hygiene products**

45.4% found the price of sanitary napkins little expensive and 43.9% found the price affordable and 10.7% were not satisfied with price of sanitary napkins (Figure 6).

**Figure 6: Student’s Perception on Price**

In the study it was discovered that the comfort, quality and size factors influence most of participant’s choice of usage of women's hygiene products while few of the respondents also showed a preference for fragrance, brand and design in sanitary napkins [Figure. 7].

**Figure 7: Factors influencing the choice of usage of women's hygiene products**

Graphical representation in Figure 8 displays that 55.1% of participants have little knowledge about non-biodegradable materials used in the preparation of sanitary napkins and other women's hygiene products, 27% of participants were not at all having any idea about it and 17.9% of participants were aware about the materials.
Participants were also asked about their knowledge on reusable sanitary fabric napkins. Graphical representation [Figure 9] displays that 53.1% have knowledge about it while 46.9% were not aware of such fabric napkins.

Many participants expressed their willingness to try fabric sanitary napkins if they are available in market at affordable price. Since they are made up of environmental friendly soft and hygienic materials, it will be comfortable as well as it will not harm to the environment. According to a study, a reusable solution is most logical for eliminating waste and for enabling affordability given the tangential problem of sustainability in development. Many modern technologies turn to the propagation of menstrual cups in order to fill these requirements. In many regions however, the use of invasive absorbents is culturally inadmissible. In addition, an economically feasible solution would ideally be one that is produced locally [6].

Moreover, it is assessed through an open ended question in this study that more than 30% participants were aware that their methods for disposal of women’s hygiene products are harming environment. While around 45% of participants believe that their method for disposal of women's hygiene products is environmentally friendly because they roll their pad into paper and keep that in polybag then throw in garbage and when the garbage goes off then the things are separated and incinerated, this further proves lack of awareness about the effect of sanitary napkins on the environment in several ways as the plastic sheet used in sanitary napkins may not decompose and result in the soil pollution and if incinerate the napkins it cause air pollution/ poor quality of air as harmful chemicals mix in the air we breathe. In India, menstrual products are considered as medical products and as per law the companies are not required to disclose all the ingredients [7].

This further advocates need to create awareness among women in different sections of society about effects of women sanitary hygiene products on health and environment.

4. Conclusion
From the findings, it was concluded that maximum respondents were not aware regarding the non-biodegradable materials and chemicals used in the women hygiene products. It was found that most of
participants considered various factors like comfort, quality and size to make choice of women hygiene products. A significant number of participants were unaware that their disposal method of waste creates a negative impact on the environment in several ways as the plastic sheet used in sanitary napkins may not decompose and this result in the soil pollution. Also, if incinerated these napkins cause air pollution as harmful chemicals and toxins are released in the air.

5. Acknowledgement
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References