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An assessment of knowledge and practices relating to the usage of sanitary pads

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ABSTRACT

Background: The knowledge of the proper use, disposal of sanitary pads, and its related side effects during menstruation is a vital aspect of a woman's well-being. Use of sanitary pads appropriately and replacing them on time are essential practices needed to maintain menstrual hygiene. Failure to do so may lead to detrimental consequences that could affect the health of women and make them susceptible to reproductive tract infections. Objectives were to assess a range of factors considered by female about the usage of sanitary pads and the various methods employed regarding its disposal.

Methods: A cross sectional study was conducted from March to June 2018, in the city of Karachi, by students of Jinnah Sindh Medical University. A sampling technique was used to select 391 females. Data collection was carried out using a structured questionnaire, by convenience sampling. Response of the participants was acquired using a 5-point Likert scale.

Results: In total, 391 females from the city took part in this study; their ages ranging between 15-45 years. 95.7% of these females preferred sanitary pads over cloth, tampons, menstrual cups and toilet paper. Many women using sanitary pads believed, pads should be replaced often while menstruating and failure to do so may increase the risk of contracting infections ($p \le 0.01$).

Conclusions: The findings showed that a significant number of women are aware of the risks associated with sanitary napkins and have adequate knowledge related to its proper usage. The study also presented no significant risk of adverse effects associated with the use of sanitary pads.

Keywords: Sanitary pads, Sanitary napkin, Menstrual napkins, Menstruation, Menorrhea, Menses, Menstrual hygiene, Menstrual health, Menstrual habits, Reproductive tract infections

INTRODUCTION

A sanitary napkin is a disposable article donned by females, to absorb catamenia, recuperating from genital surgery, following a miscarriage, or in any other scenario in which it is essential to absorb uterine blood flow. It is, however, most often used globally for menorrhea. In 2017 alone, 60.18 million female residents of USA were using menstrual napkins. At present, no data is available for the quantitative usage of menstrual napkins amongst

pre-menopausal females living in Karachi, Pakistan. A study conducted in 2010, however, showed that unsanitary practices are observed with respect to menorrhea among female adolescents in urban Karachi. Investigation also needs to be carried out with respect to insanitary practices being followed by those using sanitary pads.

Considering the on-going usage of menstrual napkins, it is imperative to assess the knowledge of its proper use

among females. A study carried out amongst teenage school girls in Mansoura, Egypt showed that the girls did not change their pads regularly, or at night.³ Improper utilization coupled with limited comprehension of detrimental effects may be harmful for the users. Research has shown a brand of sanitary pads to be a direct cause of contact dermatitis.⁴ Moreover, sanitary napkins have been associated with a greater risk of contracting human papilloma virus.⁵ The cross-sectional study conducted assessed various adverse effects experienced by females, in addition to those already mentioned, in addition to its association to its method of application.

Along with the above-mentioned assessment, it is also vital to examine the methods of disposal of sanitary napkins being utilized in Karachi. In various parts of the world, we still have inappropriate disposal systems for menstrual refuse. In urban areas worldwide, sanitary pads are discarded by flushing in toilets, throwing in dustbins, and through solid refuse management. However, these methods may be insufficient, and potentially dangerous for the environment. In the absence of a proper disposal system in Karachi, it is imperative to know where this type of menorrheal refuse is accumulating, and which method of disposal is the most employed.

METHODS

A cross-sectional study was conducted from March to June 2018, by students of Jinnah Sindh Medical University.

The study was conducted via convenience sampling on a total of 400 participants, after informed consent was taken. It targeted females within the age group of 15-45 years, in Karachi, Pakistan. All males, as well as all females not included within our age margin, and all those females who do not use sanitary pads, were excluded.

The study instrument employed was a structured questionnaire having 24 questions, to assess the degree of knowledge the respondents have with regards to the proper use and disposal of sanitary pads, problems faced with disposal and usage, and side effects faced due to said issues.

A total of 391 relevant responses were generated and assessed, using a Likert scale. Data analysis was performed via the usage of Microsoft Excel and SPSS (statistical package for social sciences) through which the frequency of responses was generated. The chi-square test was used to compare the results, with responses with a p<0.05 considered a significant.

RESULTS

In total, 391 females participated in this study. Their ages ranged from 15 to 45 years, with an average age of 30 years.

This study showed that almost all (95.7%) of women preferred sanitary pads over cloth, tampons, menstrual cups, and toilet paper, and around 77.7% of women had tried 1-2 brands of pads before settling for a specific type. This research also takes into account the different kinds of pads women used. When asked, about 78.8% of the respondents stated that they did not use different types of pads for day and night ($p \le 0.01$). Furthermore, about half (50.1%) of the women claimed to use thick pads whereas the other half (49.9%), used thin pads. Half (49.4%) of the respondents also showed a preference for using scented pads.

Regarding menstrual flow periods, a significant number of women stated that they experience bleeding for around 4-7 days, with 86.5% of them adding that they had access to water during this period (p \leq 0.01). Less than half (43.8%) of the women showered regularly while menstruating (p=0.05). Around three quarters (75.4%) of the population washed their genitals while menstruating, and a similar number (75.2%) of them only used water to do so.

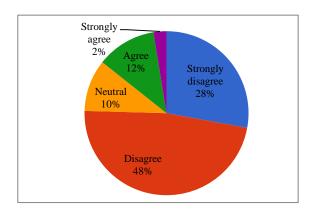


Figure 1: Response when asked had they discontinue the use of sanitary napkins due to discomfort/infections/allergies.

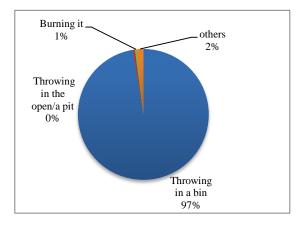


Figure 2: Means of disposal of sanitary pads.

A vast majority of the respondents recognized that infrequent changing of pads could directly lead to infections, discomfort or allergies. Less than half (40.9%)

of the women changed their pads within a time lapse of 5 hours, whereas 40.2% changed it with an interval of 8 hours. Around 86.7% women agreed to the fact that sanitary pads should be changed frequently (p \leq 0.01) and 85.7% believed that an infection is attributable to infrequent changing of sanitary napkins (p \leq 0.01) (Table 1). Despite this realization, less than fifty percent (36.1%) of the respondents confessed to having consciously delayed the changing of their pad (p=0.416). A significant percentage (80.1%) of women did not encounter any allergy or infection due to the use of sanitary pads (p \leq 0.01) and three fourth (75.5%) of them had never had to discontinue the use of sanitary pads due to any infection (p \leq 0.01).

This study, while assessing means of disposal of sanitary pads, discovered that almost all (97.4%) of the participants preferred throwing their pad in a bin. 86.7% believed that their method is the most convenient one in their grasp, and less than a fourth (21.5%) of them believed that it is environmentally friendly (p \leq 0.01) (Figure 2). Around 63.7% women had experienced embarrassment due to the lack of facilities to dispose sanitary pads (p \leq 0.01), while 72.6% found it problematic to find bins for disposal (p \leq 0.01), and 80.1% claimed that their bins carrying waste were emptied on a regular basis (p \leq 0.01). A majority of 84.6% women attempted to conceal the sanitary napkin while throwing it in a bin (p \leq 0.01).

Table 1: Response of the study participants to the questionnaires.

Statement	Positive response (%)	Negative response (%)	P value
1. Usage of sanitary pads is preferred over cloth.	374 (95.7)	17 (4.3)	-
2. Most women menstruate for 4-7 days.	325 (83.1)	66 (16.9)	-
3. Majority of adolescents/ women try 1-2 brands of pads before settling to a specific one.	304 (77.7)	87 (22.3)	-
4. Utilization of thick pads is preferred over thin ones.	196 (50.1)	195 (49.9)	-
5. Utilization of different type pads for day and night.	83 (21.2)	308 (78.8)	<0.01
6. Use of scented pads.	193 (49.9)	198 (50.6)	0.8
7. Easy access to water while menstruating.	338 (86.5)	22 (5.6)	< 0.01
8. Adolescents/women shower regularly while menstruating.	168 (42.9)	135 (34.5)	-
9. Wash genitals when menstruating.	295 (75.4)	4 (1)	-
10. Employment of just water to clean private regions during menstruation.	294 (75.2)	97 (24.8)	-
11. Experience of redness/discomfort or rashes after the use of a sanitary pad.	159 (40.6)	141 (36.0)	0.299
12. Experience any infection/allergy due to the use of sanitary pads.	78 (19.9)	313 (80.1)	-
13. Discontinue the use of sanitary pads due to discomfort.	56 (14.4)	295 (75.5)	<0.01
14. Sanitary Pads should be changed frequently.	339 (86.7)	20 (5.1)	< 0.01
15. Most Adolescents/ women change their pads after 5-8 hours.	317 (18)	74 (18.9)	-
16. Infection spreads due to infrequent change of pad.	335 (85.7)	19 (4.8)	< 0.01
17. Conscious delay in changing of pad.	141 (36.1)	155 (39.6)	0.416
18. Throwing sanitary pads in bins is the most preferred method of disposal.	381 (97.4)	10 (2.6)	-
19. Majority thinks that throwing the pad in a bin is the most convenient method.	339 (86.7)	52 (13.3)	-
20. My method of disposal is environmental friendly.	84 (21.5)	118 (30.2)	<0.01
21. The bins get emptied regularly.	313 (80.1)	40 (10.2)	< 0.01
22. Experience of embarrassment due to lack of facilities to dispose sanitary pads.	249 (63.7)	142 (36.3)	<0.01
23. It is problematic to find bins to dispose sanitary pads.	36 (9.2)	71 (18.2)	<0.01
24. I attempt to conceal the pad when I put it in a bin.	331 (84.6)	21 (5.4)	<0.01

These results explain the exceeding preference and use and disposal of sanitary pads. It promotes the frequent changing of pads and shows the need to set up more disposal options to reduce frustration and embarrassment due to lack of facilities (Table 1).

DISCUSSION

This study found that a significant number of women using sanitary pads in Karachi believed pads should be replaced frequently while menstruating, and a failure to do so may increase the risk of contracting infections (p<0.01). This indicates that these women recognize the risks associated with the usage of sanitary napkins, and have sufficient knowledge related to its proper usage. Results also show that a significant number of women never had to discontinue the use of sanitary pads due to discomfort, allergies, and/or infections, in their lifetimes (p≤0.01). This finding is in agreement with that of KE Woeller and AE Hochwalt in 2015, which presented with the revelation that no significant risk of adverse effects was found with the use of sanitary pads, as only one health complaint was reported per two million products shipped to the market. However, case reports have been recorded, in which the usage of sanitary pads has been associated with allergic contact dermatitis.^{4,8-11} Hence, while it is important to recognize that sanitary pads can and may have caused cutaneous irritation in some participants, it is also worth remembering that these cases only consist of a minute percentage of the total.

We also discovered that almost all, that is, 97.4% of the participants preferred to dispose their sanitary pad off by throwing it in the bin, for it to be collected by local garbage collectors, as part of the domestic waste disposal system. However, this was somewhat contradicted by the highly significant finding which showed, that several women faced problems in locating a disposal bin for disposing their sanitary pad, in places outside of their homes ($p \le 0.01$). This is consistent with a study carried out in developing countries, which showed that there was a lack of sanitary facilities, including the lack of disposal bins.⁶ This study also stated that there was a high prevalence of flushing of sanitary pads into toilets, which eventually led to the blockage of sewage systems. Our study, however, shows a very small percentage (0.5%) of women who engage in that practice. Perhaps this difference is attributed to the fact that Karachi is a relatively urban settlement, with more women that are aware that flushing could in fact, lead to blockages in the sewage system or a blockage in the toilet itself, leading to an embarrassing situation for the person who caused it. A significant number of women in our study report having faced embarrassing or frustrating situations due to the lack of facilities to adequately dispose sanitary pads after their use. Alternately, this embarrassment may also stem from a deep cultural practice of silencing women and maintaining a 'hush-hush' policy about menstruation. A significant number of women also mentioned that they attempt to conceal their used sanitary pads when disposing them (p \leq 0.01). This is a relatively common process, also seen in previous studies. ¹² It is still, to this day, considered taboo to speak about menstruation openly, let alone allow anyone to stumble upon any evidence of it. ^{14,15}

Moreover, this study concluded that a significant number of women are aware that their disposal methods are not environmentally friendly (p \leq 0.01). Therefore, we believe, if a sustainable and more environment friendly disposal option was derived, and made easily available to the public, women would not hesitate to opt for it. Although a significant number of women reported that their disposal bins are emptied regularly (p \leq 0.01), due to a lack of proper garbage collecting systems in Karachi, this waste is either dumped on free plots or burnt openly. This creates a large risk of disease transmission. An alternate method of disposal would not only help the environment, it would also reduce the risk of transmission of disease which exists due to the lack of sanitary disposal facilities.

Through this study, we also discovered some general practices relating to menstruation by the women of Karachi. It was found that a significant number of women do not require the use of different types of sanitary pads when alternating between day and night times ($p \le 0.01$). A preference is shown to using one brand of sanitary pads throughout the day, perhaps to lessen the already existing physical and psychosocial burden associated with maintaining menstrual hygiene. 13 It was also discovered that a significant number of women do in fact have easy access to water for bathing during menstruation ($p \le 0.01$), however, the responses evaluating whether they preferred to take regular baths/showers during this period, vary. A majority of women (57%) said they did not shower regularly during menses. This was also seen in a previous study conducted in Karachi, which showed that 50% of the participants did not take baths during menstruation.² This can be attributed to the various myths surrounding menstruation, which lead women to believe that taking showers/baths while menstruating will result in a heavier flow of blood. It is superstitions like these, which deem it paramount for women to receive proper education in terms of managing their own menstrual hygiene.

Although this study presented with some interesting findings, it is important to note some of its limitations. The sample taken was convenience based, and therefore may have consisted mainly of women in their early 20s. We also strained to address issues such as common disposal methods apart from throwing sanitary pads in a bin. The question was not raised as to what methods women employ when disposal bins are not available. Future studies should include a more diverse sample of participants in terms of age, and socioeconomic background. They should also assess in detail, the methods of disposal women employ in areas outside of their homes, and whether disposal facilities are easily

accessible in their places of work/education, keeping in mind, that these areas differ from generalized public spaces.

CONCLUSION

Menstrual health is a notable aspect in the welfare of female life; hence it is vital to assess the extent of cognizance people have concerning the usage and dispatching of menstrual pads, to improve the quality of life for women. From our findings, it was concluded that females in Karachi have an adequate understanding in terms of the proper way to use menstrual napkins, as well as the most appropriate, if not the most environmentally friendly, method of disposal, currently available in Karachi.

However, there is a high acceptance of varied myths about the menstrual cycle, as well as a poor garbage disposal system within Karachi, which can lead to foreseeable complications. Hence it is recommended that public awareness sessions should be held to eradicate said superstitions. Developing the sanitation system of Karachi can also decrease the possibility of spreading blood-borne diseases due to inadequate disposal. It is also recommended that the research be carried out on a larger scale to include a more diverse population of multiple socio-economic backgrounds, as Karachi is an urban settlement with a greater degree of appreciation of menstrual sanitation.

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Institutional Ethics Committee

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