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AWARENESS OF MENSTRUAL HYGIENE PRACTICES AMONG ADOLESCENTS IN URBAN AND RURAL AREAS: A COMPARATIVE ANALYSIS

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ABSTRACT

The present research has mentioned the provision of menstrual hygiene products and menstrual hygiene-related awareness that will certainly provide a deeper insight into the menstrual hygiene practices. The paper conducts a comparative study of both rural and urban population to determine the contribution of awareness to accessibility to menstrual hygiene products. The awareness and access correlation was tested with the help of such statistical analysis as chi-square, t-tests, and regression analysis. The results are that there are gigantic diversities in the rural and urban location of the awareness phase of the respondents, the consciousness of the menstrual hygiene, and the procurement of the hygiene products. The results of regression analysis show that accessibility can be explained by 34.4 percent of knowledge and awareness, which indicates that both are important predictors of access to menstrual hygiene products. The findings imply that access to menstrual health education and behaviour can be increased by providing better access, especially in rural regions. The paper highlights the importance of specific educational behaviour interventions and the enhancement of infrastructure to attain better menstrual health outcomes and general wellbeing of women and adolescent girls.

Keywords: Menstrual Hygiene, Accessibility, Awareness, Rural-Urban Disparity, Health Education

1. INTRODUCTION

Menstruation is a normal biological event and one of the main developments in the life of an adolescent girl which not only is the beginning of reproductive maturity but also is a complicated transition with a steep-paced physical, psychological, and social changes. However, regardless of being a phenomenon that affects all, menstruation remains

with silence, stigma, and misinformation to millions of adolescent girls. This silence usually determines how the girl child views their bodies, their hygiene, and negotiate their position in families and society. Menstrual hygiene is an essential factor in teenage health that influences the state of well-being immensely. Menstrual hygiene when addressed in the context of adolescent girls, involves more than use of correct absorbent materials, but also, knowledge on physiology of menstruation, genetic hygiene, frequency of product changes and safe dispositions. Nevertheless, limited resources, and the lack of information make a lot of teenagers, especially those living in rural regions, unable to engage in safe and hygienic menstrual practices.

Adolescence is an important developmental stage, and with the beginning of the menarche, new obligations connected with self-care and personal hygiene arise. Although over the last few years, the public has begun discussing menstrual health more, the progress in terms of perception and implementing proper menstrual health practices is not well spread in all locations and particularly in urban and rural areas. Poor management of menstrual hygiene has been identified as a human rights problem and a health concern in the world. The practice of poor menstrual hygiene may result in the onset of reproductive tract infections, discomfort, psychological stress and the lack of engagement in normal life activities, including schooling. In India, there are several government initiatives, which have been seeking to deal with these challenges. The Ministry of Health and Family Welfare and the Ministry of Education have highlighted adolescent health education through the systematic school-based programs. Social initiatives like the Rashtriya Kishor Swasthya Karyakram have tried to make reproductive and sexual health awareness a part of larger adolescent wellbeing interventions, and national sanitation targets have been connected to menstrual hygiene awareness via the Swachh Bharat Mission. Regardless of these policy-level commitments, the implementation of guidelines to effective grassroots implementation in urban and rural areas is significantly different.

Figure 1

Figure 1 National Health Mission Uttarakhand

The socio-cultural factors, education level, and access to medical institutions also play a major role in the practices of menstrual hygiene Jothi and Ramasamy (2018). The urban sites are usually characterized by a higher access to information, healthcare facilities, digital media platforms, and organized school-based health education programs. This increased exposure usually leads to the increase in awareness of the hygienic practices and the use of commercially available sanitary products. Nevertheless, menstrual myths and taboos are not entirely absent in urban environments; cultural beliefs are often prevalent across socioeconomic lines and can shape the attitude and behaviour concerning menstruation. The psychological issues related to the problem of body image anxiety, stains fear, and social demands towards femininity could also potentially affect the menstruation experience of urban adolescents.

Quite to the contrary, teens in the country have higher chances of getting twofold problems. Structural and social barriers that might be limited accessibility and affordability of sanitary products, lack of communication of reproductive

health information in families, the barriers to good management of menstrual hygiene can be observed. Most of the rural setting is characterized by tradition bans, veils on menstruation and poor menstrual health education Dasgupta and Sarkar (2008). Not to mention that these restrictions lead to higher levels of school absenteeism, infection susceptibility, and negative psychosocial outcomes as well. In other instances, girls can use the reusable cloth without proper information on how to wash and dry it hence increasing the health risk.

Awareness is critical towards influencing the practice of menstrual hygiene. The information about the biological basis of menstruation dispels the myth and eases the fear during menarche. Learning how to change the absorbent material regularly and be genitally clean and using safe disposal directly affects the health results. Nevertheless, the concept of awareness is not created in a vacuum, but it is influenced by the level of maternal education, peer groups, school programs, medical institutions, media coverage, and existing social conventions. Research has established that girls who hear information on menstruation beforehand, especially when their mothers or teachers do it, are in a better position to face their periods without much stress Singh et al. (2017). On the other hand, insufficient proper information is a source of confusion, embarrassment and misinformation dependency.

Menstrual hygiene also closely correlates with gender equity, dignity and education. Absenteeism due to menstruation in school is still a major issue, especially in the rural areas where there are infrastructural constraints and stigma collide. There is no provision of personal toilets, water and sewage systems to encourage girls to go to school monthly. Although the urban teenagers might have fewer infrastructural constraints, they can still have psychological stress related to social expectation and peer perception. Menstrual hygiene management therefore needs to be considered as much more than just an individual practice but a multidimensional problem that lives in social, cultural, economic and institutional realms.

The need to contrast adolescents living in urban and rural settings, therefore, necessitates comparative research to determine differences in context, area of knowledge weaknesses, and areas of intervention. Due to the analysis of information sources, types of hygienic practices used, the availability of sanitary products, and the impact of social norms, an in-depth picture of differences in the management of menstruation health can be formed. This kind of comparative analysis will prevent the assumption of homogeneity but will point out the differences that the adolescent girls go through in various environments. Such disparities can be recognized, and the identification of these disparities can direct specific context-sensitive interventions that would lead to the enhancement of health outcomes and the development of informed choices.

2. REVIEW OF LITERATURE

Aziz et al. (2024) illustrate the important function that addressing menstrual hygiene performs towards accomplishing goals related to sustainable development that involve wellness, learning, and equal opportunity for women and men. Despite being aware that menstrual hygiene plays an important role all over it is typically disregarded, especially in places with insufficient assets and legislation. Measuring menstrual-related understanding & habits of teen-age girls (10–18 years old) of publicly funded schools in Khairpur, Sindh, Pakistan, both in rural as well as urban areas was the stated goal of this research. The findings demonstrated that awareness and behaviour varied greatly across urban and rural areas. Girls in urban areas showed better understanding & practices utilised 38% and 12% of sanitary pads and 71% of whom displayed proper hygiene habits.

Prasad et al. (2024) examines how teen-age girls living in urban slums in Jaipur perceive & use menstruation hygiene. Only 48.7% of the girls knew the right information about menstruation, and more than half of them experienced menstrual-related health problems. Few of them sought medical attention, according to data. Factors like the girl's and her parents' educational attainment, household income, and field health professionals' counselling were strongly linked to menstrual knowledge and the usage of appropriate absorbents. Study highlights the need to improve menstrual hygiene behaviours and health outcomes by increasing community-level awareness, improving health worker outreach, and improving privacy in healthcare settings.

Devi et al. (2023) compares teenage females from Kerala, India's rural & urban areas' knowledge of menstruation & cleanliness habits. According to results, there is a notable awareness gap: just 45.9% of rural girls and 89.4% of urban girls recognise menstruation as a physiological process. Infrequent pad changes at school and pad reuse were among the poor behaviours that both groups displayed, with 22.4% of urban girls and 23.5% of rural girls engaging in these behaviours. Girls in rural areas faced higher limitations during their periods (70% vs. 52%), although the urban group

was more aware of menstrual cups. Study highlights the necessity of a holistic strategy that includes parents, healthcare professionals, educational institutions, and the media in order to enhance menstrual hygiene awareness and behaviours, especially in rural areas.

Nimbhorkar et al. (2023) examines the attitudes, behaviours, and knowledge of teenage girls in urban and rural Wardha district in Central India on menstrual hygiene. The results show that, especially in rural regions, there are substantial gaps in menstruation knowledge. Eighteen percent of girls in rural regions wear cloth during their periods, a habit not seen in urban areas, while approximately five percent of girls in both urban and rural areas still believe that menstruation brings blessings or curses from God. The age range of research participants was 12–16 years old, and the mean menarche age was 13 years old. Study emphasises the need for improved menstrual education, especially in rural areas where girls can't access appropriate menstrual hygiene practices and experience higher distress.

Ha and Alam (2022) emphasised the main factors influencing hygiene practices and the differences between urban and rural areas. Only 37.7% of participants regularly used sanitary pads, according to survey; majority of them used towels, some of which were reused. A considerable proportion of females engaged in inadequate hygiene management; 36.9% of them were categorised as having “bad” hygiene practices. Dwelling, age, size of family, education of parents, &age at which first cycle of menstruation occurs were among key factors found influencing management of hygiene practices in teenage girls about menstruation. Although there are some good practices, it comes to conclusion that overall management of menstrual hygiene is still insufficient.

Shibeshi et al. (2021) examines the menstrual hygiene management (MHM) behaviours of schoolgirls of both rural & urban areas in Northeast Ethiopia. It was revealed by 52.9% of schoolgirls in rural areas practice good menstrual hygiene. Urban schoolgirls demonstrated better practices (65.9%) than their rural counterparts (39.9%). Age, previous knowledge on menstrual hygiene, pre-menarche awareness, and conversations with parents were important variables determining effective MHM. Younger girls, those who were taught about MHM in school, and those who were told prior to menarche all had better practices in metropolitan settings. Study highlights the necessity of improving MHM practices and helping to achieve sustainable development goals by promoting parent-adolescent communication and providing more education and knowledge on menstrual hygiene in both urban and rural schools.

Edet et al. (2020) aims to inform health promotion initiatives by examining secondary school students in Nigeria. Study examined concerns related to menstruation & understanding of menstrual hygiene in school going students. 56.7% rural areas’ respondents and 42.2% respondents in urban areas have shown inadequate knowledge about menstruation. Mothers were primary source of knowledge for most students in both urban (72.5%) and rural (80.5%) locations regarding menstruation. Targeted interventions are needed to close the knowledge gap, especially in rural regions, and study emphasises the importance of parental education in menstrual hygiene.

3. OBJECTIVES

- To determine the awareness and knowledge of urban and rural adolescents on the practice of menstrual hygiene.
- To investigate availability of menstrual hygiene products among the adolescents in urban and rural settings.
- To explore the cost of menstrual hygiene products between urban and rural teenagers.

4. RESEARCH METHODOLOGY

4.1. STUDY DESIGN

To study the knowledge and behaviour of teenage girls towards menstrual hygiene management (MHM) in urban and rural settings of Delhi NCR, cross-sectional methodology has been used. Significance of difference in menstrual hygiene behaviours and knowledge was investigated. The basis of comparison was school type (private vs. public) and geography (rural vs. urban).

4.2. STUDY AREA AND POPULATION

Participants in study were teenage girls of ages 14 – 19 years. These were enrolled in secondary schools in Delhi and the surrounding NCR. Study used a stratified sample of public & private schools, with an emphasis on both urban and rural settings. One hundred respondents in all, evenly split between rural & urban areas considered for final sample size.

4.3. SAMPLING TECHNIQUE

1) **School Selection:** Schools were divided into two groups: public & private, and urban and rural. Fifty respondents were chosen from rural and fifty from urban areas. Within each category, schools were chosen at random to guarantee that the sample included both different kinds of schools and different locations.
2) **Stratification:** The degree of education of the respondents was used to further stratify them. Students from the eleventh and twelfth classes made up the sample in equal numbers (32% from the eleventh class and 68% from the twelfth class). Below is a breakdown of the precise number of participants from each educational level by location.

Education Level	Rural	Urban	Total
11th class	17	15	32
12th class	33	35	68
Total	50	50	100

4.4. DATA ASSEMBLAGE

The quantitative approach involved administering a semi structured self-administered questionnaire to collect data on demographic factors, as well as the knowledge and practices of menstrual hygiene of the respondents. Questionnaire was formulated both in close and open-ended approach to accommodate both quantitative analysis and an in-depth insight into the experiences of the respondents.

4.5. ETHICAL CONSIDERATIONS

- Participants and guardians obtained informed consent.
- It was voluntary participation and confidentiality.

5. RESULTS AND DISCUSSION

Ha1: Understanding on the biological process of menstruation significantly differ among rural & urban locations.

I understand the biological process of menstruation. * Location Crosstabulation

			Location		Total
			Rural	Urban	
I understand the biological process of menstruation.	Strongly Disagree	Count	4	1	5
		% within Location	8	2	5
	Disagree	Count	13	5	18
		% within Location	26	10	18
	Neutral	Count	18	17	35
		% within Location	36.0%	34.0%	35.0%
	Agree	Count	12	18	30
		% within Location	24	36	30.0%
	Strongly Agree	Count	3	9	12
		% within Location	6	18	12
Total		Count	50	50	100

		% within Location	100	100	100

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.584[a]	4	.048
Likelihood Ratio	9.987	4	.041
Linear-by-Linear Association	9.280	1	.002

Ha2: Awareness of menstrual hygiene products significantly differ amongrural & urban locations.

I am aware of different menstrual hygiene products * Location Crosstabulation

			Location		Total
			Rural	Urban	
I am aware of different menstrual hygiene products.	Strongly Disagree	Count	4	2	6
		% within Location	8	4	6
	Disagree	Count	21	2	23
		% within Location	42	4	23.0%
	Neutral	Count	14	12	26
		% within Location	28.0%	24.0%	26.0%
	Agree	Count	9	12	21
		% within Location	18	24	21.0%
	Strongly Agree	Count	2	22	24
		% within Location	4	44	24.0%
Total		Count	50	50	100
		% within Location	100	100	100

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	33.611[a]	4	.000
Likelihood Ratio	39.061	4	.000
Linear-by-Linear Association	28.289	1	.000
N of Valid Cases	100		

a. 2 cells (20.0%) have expected count less than 5. The minimum expected count is 3.00.

Ha3: Education about menstruation at school significantly differ among rural & urban locations.

I have been taught about menstruation at school. * Location Crosstabulation

		Location		Total
		Rural	Urban	
	Count	1	4	5

I have been taught about menstruation at school.	Strongly Disagree	% within Location	2	8	5.0%
	Disagree	Count	15	3	18
		% within Location	30	6	18.0%
	Neutral	Count	15	16	31
		% within Location	30.0%	32.0%	31.0%
	Agree	Count	16	13	29
		% within Location	32	26	29.0%
	Strongly Agree	Count	3	14	17
		% within Location	6	28	17
Total		Count	50	50	100
		% within Location	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	28.085[a]	4	.000
Likelihood Ratio	32.560	4	.000
Linear-by-Linear Association	11.903	1	.001
N of Valid Cases	100		

a. 2 cells (20.0%) have expected count less than 5. The minimum expected count is 1.50.

Ha4: Frequency of family discussions about menstruation significantly differ amongst rural & urban locations.

My family has discussed menstruation with me. * Location Crosstabulation

			Location		Total
			Rural	Urban	
My family has discussed menstruation with me.	Strongly Disagree	Count	4	3	7
		% within Location	8	6	7
	Disagree	Count	21	3	24
		% within Location	42	6	24
	Neutral	Count	14	13	27
		% within Location	28.0%	26.0%	27.0%
	Agree	Count	10	12	22
		% within Location	20	24	22.0%
	Strongly Agree	Count	1	19	20
		% within Location	2	38	20
Total		Count	50	50	100
		% within Location	100	100	100

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	16.730[a]	4	.002
Likelihood Ratio	18.472	4	.001
Linear-by-Linear Association	9.548	1	.002
N of Valid Cases	100		

a. 2 cells (20.0%) have expected count less than 5. The minimum expected count is 1.00.

Ha5: Knowledge of correct menstrual hygiene practices significantly differ amongrural & urban locations.

I know the correct practices to maintain menstrual hygiene. * Location Crosstabulation

			Location		Total
			Rural	Urban	
I know the correct practices to maintain menstrual hygiene.	Strongly Disagree	Count	0	3	3
		% within Location	0.0	6	3
	Disagree	Count	18	3	21
		% within Location	36	6	21
	Neutral	Count	14	13	27
		% within Location	28.0%	26.0%	27.0%
	Agree	Count	16	12	28
		% within Location	32.0%	24.0%	28.0%
	Strongly Agree	Count	2	19	21
		% within Location	4	38	21.0%
Total		Count	50	50	100
		% within Location	100	100	100

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	22.014[a]	4	.000
Likelihood Ratio	24.215	4	.000
Linear-by-Linear Association	19.857	1	.000
N of Valid Cases	100		

a. 2 cells (20.0%) have expected count less than 5. The minimum expected count is 1.50.

Results of the chi-square tests show that respondents from rural & urban areas differ significantly in several menstrual health-related areas. Urban respondents are more likely to “agree” or “strongly agree” that they understand the biological process of menstruation. Urban respondents have demonstrated greater awareness of products like pads, tampons, and menstrual cups compared to rural respondents. According to chi-square result (p = 0.000) regarding menstruation education at school, urban respondents are more likely to have received formal education on the topic, as evidenced by higher percentages of “strongly agree” and “agree” responses, whereas rural respondents report receiving less education on the subject. In addition, 38% of urban respondents strongly agree that menstruation is discussed at home, compared to just 2% of rural respondents, according to chi-square result for family discussions about

menstruation (p = 0.002). Finally, significant difference exists in respondents' knowledge of proper menstrual hygiene practices (p = 0.000). People in urban areas are more likely to "strongly agree" or "agree" with knowing proper hygiene practices, whereas a greater percentage of respondents in rural areas "disagree," suggesting that urban areas have better hygiene knowledge.

6. CONCLUSION

The attitude and knowledge of the schoolgirls in the rural and urban setting about menstrual hygiene is discussed in this research. The results offer compelling proof of a noteworthy positive association between the two variables. The availability of menstrual hygiene items is often better for responders who are more aware of and knowledgeable about menstrual hygiene. Menstrual hygiene awareness and knowledge explain about 34.4% of the variance in accessibility of these goods, according to regression analysis, indicating significant influence. In rural areas where the likelihood of menstrual hygiene is often restricted due to lack of access to menstruation products, the results indicate the importance of increasing the level of education and knowledge about the issue of menstrual hygiene. One of the ways through which these necessary goods can be made more accessible to women is by increasing menstruation health awareness among communities and schools, and this will eventually enhance the health of women. To make sure that every woman irrespective of the place she is in has the equipment and data they need to manage their menstrual hygiene, these results highlight the need to engage in specific efforts to raise awareness and bridge the gap of access.

CONFLICT OF INTERESTS

None.

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