



Assessing Menstrual Health Management among Adolescent Slum Dwellers in Kanpur District of U.P.

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The Menstrual Health and Hygiene (MHH) has been exfoliating as a global concern focalizing especially the low income and South Asian countries. So, the international institutions with a participative approach are directing efforts towards increasing the level of awareness among not only women but adolescent girls too. The WASH programme allied with the MHH has played a significant role in effectualizing the mission. But focussing more on the cases of slums, the adolescent slum dwellers with less resources are more prone to face challenges in their natural cycles. This paper is a case study of Idgaah Gudarh slum in Kanpur City of U.P. which is located in the heart of the city with around 200 households with major population of junk dealers in the slum area. The field setting is based on the survey of 126 adolescent girls in the slum. The study being descriptive in nature tried to bring out the socio-economic characteristics, awareness level of these girls and challenges faced by adolescent girls in the slum area. Adopting a mixed method approach both quantitative and qualitative data were collected through schedule and simultaneous interviews on these purposively selected respondents and the result shows that awareness on menstrual health management is associated with their educational status and they have socially adapted themselves towards menstrual management within the environment which does not seem to be a challenge to them.

Keywords: *Adolescent Girls, Slum area, Menstrual Health and Hygiene (MHH), Social Adaptation Model (SAM)*



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1. INTRODUCTION

Menstruation is a natural phenomenon that females experience during their reproductive age. The way it is dealt with can be considered to be

age specific. Females' opinions on menstruation too can be different like one believing it to be associated with womanhood and fertility while the other considering it to be unhygienic and

associated with moral and spiritual uncleanness (Oche, Umar, Gana, & Ango, 2012). Menstrual health management is a fundamental aspect of adolescent girls' well-being and is essential for their overall health, education, and social participation. Its management can be different among adolescent girls across the world (Su & Lindell, 2016). However, adolescent girls residing in urban slums face unique challenges related to menstrual hygiene, including limited access to sanitary products, inadequate sanitation facilities, social stigma, and lack of awareness. These challenges are often exacerbated by the socioeconomic conditions prevalent in slum areas, leading to adverse effects on the girls' health and education. Studies have also revealed that adaptation to menstrual phenomenon varies with socio-cultural and economic aspects (Oche, Umar, Gana, & Ango, 2012) which is a foremost cause of menstrual health practice.

UNICEF's study on Menstrual Health and Hygiene Management has revealed that the challenges of attaining these parameters are stronger in poor and low-income countries with more burden on poor groups, refugees, people with disabilities, etc. Still considering the importance of MHHM for empowerment of adolescents through good health and education is a must in today's scenario. Kelly Ann Naylor, UNICEF Director of Water, Sanitation, Hygiene (WASH) and Climate, Environment, Energy, and Disaster Risk Reduction emphasized that until recently, there has been limited focus on defining, tracking, and investing in menstrual health, despite its significance. But the current situation is changing with adherence to menstrual health lying on the agenda of WHO and SDG 2030 too.

2. INTENSIFYING SLUM POPULATION

It is evidently noticed that more than half of the global population is residing in urban areas and the challenge shows up with more than 4 million people living in slums or informal settlements which itself poses a greater issue. The cities in global south are showing high growth of this paradigm which is and will further culminate into infrastructure related issues (Friesen, Rausch, Pelz, & Fürnkranz, 2018) in the urban landscapes. India is also highly affected by the adverse effects of economic growth during the phase of rapid industrialisation and growth of highly productive

service sector which has led to the saga or rise in slum in urban landscapes (Sawhney, 2013). The growth of urban population in India has shown a structural change in population in India as indicative through census 2011 data (Chakravarthy, Rajagopal, & Joshi, 2019). This is based on the one-sided job creation in the urban areas as compared to the rural areas. As per census 2011 around 65 million people live in slums with improper housing facilities and inappropriate sanitation conditions (Chakravarthy, Rajagopal, & Joshi, 2019) in India. The reasons for this have been the vicious circle of rural poverty that gives rise to migration (Sawhney, 2013) which leads to more informal settlements in urban areas.

3. ADOLESCENCE GIRLS AND MENSTRUAL MANAGEMENT

The word 'adolescere' in Latin derives the word adolescence which means 'to grow up' (Vandana, Simarjeet, & Amandeep, 2016). Adolescence is defined as the period of life between childhood and adulthood, typically between the ages of 10 and 19. It is considered as a crucial age of development including rapid physical, cognitive and emotional changes (World Health Organisation). The Adolescent Girls experience a wide range of changes not only physically but also mentally. The physical changes in terms of attaining puberty, menstruation is accompanied by emotional, social and reproductive changes too.

The previous literature reveals that in India the onset of menarche has been a bit challenging as it is deeply associated to cultural beliefs and disgrace (Gold-Watts, et al., 2020) but with the change in time and global action towards Menstrual Health and Hygiene has brought about great changes. Global data has revealed that 32 percent girls in Bangladesh and 66 percent in Egypt were aware about periods before menarche (UNICEF, 2022) and out of these too more than 69 percent felt shocked and scared in this situation.

The perception of adolescent towards Menstrual Health and Hygiene depends on their level of awareness towards it (Oche, Umar, Gana, & Ango, 2012). And not only this the socio-economic variables play a crucial role in adapting adolescent girls for their menstrual management out of which education level plays the most prominent role.

4. RESEARCH PROBLEM

As per the global data it is seen that especially poverty and unavailability of basic amenities creates great concern for the masses. Similarly, considering the Menstrual Health Management in case of Adolescent Slum Dwellers pose a deep concern as it cannot only cause a physical challenge but also adversely affect their mental well-being. Considering this aspect, the study focussed on ascertaining the MHM of adolescent slum dwellers in Idgaah Gudarh Slum of Kanpur City.

5. OBJECTIVE

The present study is based on assessing the MHM among adolescent slum dwellers of Kanpur district of U.P. and for this purpose the following objectives were decided:

- 1. To identify the awareness level of adolescent girls of Idgaah Gudarh slum of Kanpur district related to menstrual health management.
- 2. To identify the adaptation of Menstrual Health and Hygiene practice among adolescent slum dwellers in Kanpur city of U.P.

6. METHODOLOGY USED

6.1. Field Setting

This study is set in India which as per census 2011 denotes high percentage of population residing in slum areas (Angeli, Jaiswal, & Shrivastava, 2022). The study is a part of a survey related to a project proposal which was conducted in Idgaah Gudaarh Slum (purposely selected) located in Brahmanand locality, Benajhabar colony, Idgaah Chouraha, Kanpur. The slum consists of about 200-220 households usually living in poverty conditions.

Data collection has been done underpinning purposive sampling of Slum in the metropolitan city of Kanpur while adopting a mixed method approach where quantitative as well as qualitative data was collected through responses from adolescent girls comprising of a structured schedule for identifying the socio-economic status, awareness and challenges they face in managing their Menstrual Hygiene instantly followed by qualitative data collection through interviews/discussions to test their social adaption towards their management of Menstrual Hygiene.

6.2. Construct

The construct comprised of various questions (items) related to (1) the socio-economic status the respondents like educational status of girls and their family members, income, family size, assets acquired, house type and rooms availability. (2) Toilet facility available in their locality including questions like houses having toilet facility, public toilets available, distance and sanitation facility in public toilets. (3) Awareness level of adolescents towards MHH (4) Menstrual Practiced Adopted (5) Challenges they face during Menstruation.

7. HYPOTHESIS

H₀: There is no significant association between the educational status and awareness level of adolescent girls related to their menstrual health management.

8. ANALYSIS

The table 1 below shows the descriptive statistics worked for adolescent girls in Idgaah Gudarh slum of Kanpur.

Table-1: Descriptive Statistics

Variable	Statistics		
Adolescent Girls	N=126		
<i>Socio Economic Status</i>	<i>Classification</i>	<i>Frequency</i>	<i>Percentage (%)</i>
Age (10-19 Yrs.)	10-12 yrs.	18	14.3
	12-14 yrs.	28	22.2
	14-16 yrs.	27	21.4
	16-19 yrs.	53	42.1
Religion	Hindu	126	100

Category	SC	126	100
Type of Family	Nuclear	120	95.2
	Joint	2	1.6
	Extended	4	3.2
No. of Dependents in the Family	1	11	8.7
	2	56	44.4
	3	40	31.7
	4	19	15.1
Type of House	Hut	2	1.6
	Kuccha	17	13.5
	Semi-Pakka	33	26.2
	Pakka	74	58.7
Number of Rooms	Single	96	76.2
	Two	29	23
	Three	1	0.8
Toilet Facility in the house	Yes	34	27
	No	92	73
Adolescent Education	Illiterate	50	39.7
	Studying	76	60.3
Family Monthly Income (Rs.)	Less than 5000	3	2.4
	5000-10000	35	27.8
	10000-20000	83	65.9
	20000-30000	5	4.0

Source: (Descriptive Statistics developed through Field Survey)

As per the responses worked out quantitatively, it was noticed that majorly the respondents were of the age group of 16-19 years (42.1) who were of Hindu religion and belonged to SC category and fitting in nuclear family setup (95.2) with maximum having 2 dependents (44.4).

Enumeration of their living condition reveals that maximum respondents live in pukka houses (58.7) with a single room set up (76.2). The unavailability of toilets in the house (73) was also a major concern but the ones who had the facility also forbids using it and prefers public toilets.

"We have toilet facility at home but we still use public toilets as everyone over here use it. Our toilet will remain clean and can be used at the time when some relatives visit us"

Respondent A

It was also observed that these adolescent girls though battling up with poverty were taking education (60.3) and surviving with a family monthly income of 10-20K (65.9). Thus, revealing their socio-economic conditions.

9. ADOLESCENT EDUCATION

The adolescent girls residing in the slums educational status revealed that 39.7 percent (50) of the girls were illiterate or not studying whereas 60.3 (76) were pursuing their education from government institutions.

Also, through interview it was found that these girls were just taking education for namesake and around 40 percent of them either could not afford taking education or were participating as helpers in the family work.

Considering education as an important parameter for increasing awareness level on menstrual health management and further hypothesis testing was done on these grounds.

"I help my parents in the rag sorting work at home or either help my mother in her household chores."

Respondent B

9.1. Factors on Awareness Level of Adolescents

In order to consider the awareness level of adolescents related to Menstrual Health Management 8 items were identified based on review of existing literature. The reliability test with Cronbach alpha value of standardised items as 0.742 assured the items considered were aptly reliable for the study.

Table-2: Awareness Level of Adolescent Girls in Slum on Menstrual Health Management

Awareness Factors	Very Well Aware	Well Aware	Don't Know	Unaware	Totally Unaware	Total (N)
Aware about menstruation before menarche	11 (8.7)	3 (2.4)	5 (4)	19 (15.1)	88 (69.8)	126
Aware about different sanitary products in the market	19 (15.1)	20 (15.9)	8 (6.3)	25 (19.8)	54 (42.9)	126
Aware about changing pad in every 4-5 hours	32 (25.4)	32 (25.4)	21 (16.7)	25 (19.8)	16 (12.7)	126
Aware about not using soap for washing your genitals	18 (14.3)	7 (5.6)	36 (28.6)	44 (34.9)	21 (16.7)	126

Aware about washing your hands with soap before and after changing the pad	41 (32.5)	79 (62.7)	4 (3.2)	1 (0.8)	1 (0.8)	126
Aware about using soap to wash your hands	42 (33.3)	79 (62.7)	2 (1.6)	1 (0.8)	2 (1.6)	126
Aware about covering the pad with paper before throwing it	20 (15.9)	77 (61.1)	24 (19)	2 (1.6)	1 (0.8)	124*
Aware about throwing the pad in garbage or open area can cause a negative impact on environment	27 (21.4)	41 (32.5)	45 (35.7)	11 (8.7)	0 (0)	124*

Source: (Statistics generated through responses with frequency and percentage mentioned in parenthesis. *Missing data (2 responses))

As per the responses quotes in Table 2 it was observed that majorly the adolescent girls were unaware about menarche (69.8) and were also unaware about different sanitary products available in the market (42.9) but their awareness on changing the pad in 4-5 hrs (25.4) using soap to wash hands (62.7) and washing hands before and after changing the pad (62.7) was high followed by the knowledge on covering the pad with paper before throwing it (61.1). but majorly the neutral response towards the negative environment effect on pad disposal in garbage and open area (35.7) was also recorded.

The prime response regarding not washing their genitals with soap which is the basic personal hygiene showed the unawareness (34.9) and don't know (28.6) answers which were really concerning.

To test the set hypothesis whether a significant association occurs between Adolescent Educational Status and their awareness level on MHM a chi-square statistic was worked out and the results are mentioned in table 3 hereunder:

Table-3: Adolescents Educational Status and Awareness level on MHM

Awareness Factors*Education Status	Chi-square value	H0 Accepted/Rejected
Aware about menstruation before menarche	0.000	H ₀ Rejected
Aware about different sanitary products in the market	0.007	H ₀ Rejected
Aware about changing pad in every 4-5 hours	0.012	H ₀ Rejected
Aware about not using soap for washing your genitals	0.001	H ₀ Rejected
Aware about washing your hands with soap before and after changing the pad	0.015	H ₀ Rejected
Aware about using soap to wash your hands	0.279	H ₀ Accepted

Aware about covering the pad with paper before throwing it	0.030	H ₀ Rejected
Aware about throwing the pad in garbage or open area can cause a negative impact on environment	0.001	H ₀ Rejected

Source: (Test statistics generated through SPSS)

The results show that there was a significant association between educational status and awareness on menstrual before menarche, the availability of different sanitary products, changing pad in every 4-5 hours, not using soap to wash genitals, and washing hands before and after changing pad and also covering the pad with paper before throwing it. Also, education showed an association with environmental effect of throwing the pad in open area. But there was no association seen between using soap to wash hands and education level as it is a basic practice which everyone knows and follows.

10. SOCIAL ADAPTATION MODEL RELATED TO MHM AMONG ADOLESCENT SLUM DWELLERS

The study concentrated on the challenges faced by the adolescent slum dwellers in their menstrual health management and noticed through the qualitative responses collected (interviews/discussion) that these girls were habitual towards the availability and practices that they are seeing since their birth.

They do not find it difficult to manage as they have adapted themselves to this environment.

Based on these responses Social Adaptation was noticed and the indicators for each domain were identified accordingly being in the inception part of the study.

10.1. Social Adaptation Model

Management (MHM) among adolescent slum dwellers focuses on understanding how social factors influence the ability of girls living in slums to manage their menstruation effectively. This model recognizes that MHM is not just a biological process but is deeply influenced by social, cultural, economic, and environmental factors. The 4 domains of the Social Adaptation Model related to MHM among adolescent slum dwellers are:

- ❖ Individual
- ❖ Environment
- ❖ Family
- ❖ Sanitation



Certainly, incorporating the domains of individual, environment, family, and sanitation into the Social Adaptation Model provides a comprehensive framework for understanding and addressing

Menstrual Hygiene Management (MHM) among adolescent slum dwellers. The expanded version of the Social Adaptation Model (SAM) is specifically tailored to MHM in the context of adolescent slum dwellers based on their responses:

❖ Individual Domain

- Knowledge and Awareness: Understanding of menstrual hygiene, including the biological processes, hygiene practices, and the importance of proper MHM.
- Attitudes and Beliefs: Personal beliefs and attitudes towards menstruation, which can be influenced by cultural, social, and religious factors.
- Self-Esteem and Confidence: The impact of MHM practices on an individual's self-esteem and confidence, especially in social and academic contexts.
- Access to Resources: Ability to acquire menstrual products, clean water, and necessary hygiene items for managing menstruation effectively.

❖ Environment Domain

- Sanitation Facilities: Availability, accessibility, and cleanliness of toilets and sanitation facilities in the slum area, including gender-segregated and private facilities.
- Water Supply: Adequate and reliable access to clean water for personal hygiene, including washing and cleaning during menstruation.
- Community Norms: Social norms and cultural attitudes within the slum community regarding menstruation and MHM practices.

- Healthcare Services: Access to healthcare facilities and services for addressing menstrual health issues and concerns.

❖ Family Domain

- Parental Support: Supportive attitudes and understanding from parents and caregivers regarding menstrual health, which can positively influence an adolescent girl's MHM practices.
- Financial Constraints: Economic factors within the family, including affordability of menstrual products and healthcare, which can impact MHM.
- Communication: Open communication within the family about menstruation, allowing for discussions and addressing concerns.

❖ Sanitation Domain

- Hygiene Products: Availability and affordability of sanitary pads or menstrual hygiene products, as well as their disposal options.
- Waste Management: Proper waste disposal mechanisms for menstrual products to maintain cleanliness and hygiene in the community.
- Infrastructure Development: Improvement in sanitation infrastructure, including the construction of safe, private, and accessible toilets for girls within the slum area.
- Maintenance: Regular maintenance of sanitation facilities to ensure their functionality and cleanliness.

By considering these four interconnected domains, interventions and programs can be designed to target specific aspects that influence MHM among adolescent slum dwellers. Addressing challenges and promoting positive practices within each domain can significantly enhance the overall well-being and educational experiences of adolescent girls in slum communities.

Table-4: Social Adaptation Model (SAM) for Adolescent Slum Dwellers related to MHM

SAM for MHM	Domain	Indicator
	Individual	1. Knowledge and Awareness 2. Attitudes and Beliefs 3. Self-Esteem and Confidence 4. Access to Resources
	Environment	1. Sanitation Facilities 2. Water Supply 3. Community Norms 4. Healthcare Services
	Family	1. Parental Support 2. Financial Constraints 3. Communication
	Sanitation	1. Hygiene Products 2. Waste Management 3. Infrastructure Development 4. Maintenance

Source: (Identified from qualitative field responses)

"I don't face any challenge related to menstruation while using public toilets. I am not new to the culture, everyone here rests on the same grounds"

Respondent C

"Whatever availability and resource we have is ok. As we have always seen this only so we are accustomed to it."

Respondent D

11. FINDINGS AND CONCLUSION

The slum saga is not new to us. The lack of resources and facilities have always questioned the basic living standards. But on the other side these slum dwellers adapt themselves in the environment with the accessible resources and manage their survival without taking it as constraints.

The findings of this study provide substantial evidence supporting the strong association between education, awareness on Menstrual Health Management (MHM), and the challenges faced by adolescent slum dwellers in managing their menstrual health effectively in Idgaah Gudarh Slum of Kanpur. The study demonstrates that education and awareness are

pivotal factors that significantly impact the menstrual health practices of adolescent girls in slum communities. So, as is already seen that educational institutions are one of the major stakeholders assigned to impart education on menstrual health for a better future.

Moreover, the study underscores the importance of social adaptation, considering the environment, individual factors, family dynamics, and sanitation conditions, all of which play critical roles in shaping the challenges related to MHM among adolescent slum dwellers as was evidently noticed that these girls were highly adapted towards the social environment and take challenges at ease as they become prone to the accessible facilities and resources.

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