

Original Research Article

Impact of health education on menstrual hygiene practices among school-going adolescent girls in an urban area of Lucknow: a quasi-experimental study

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Received: 25 July 2026

Revised: 07 September 2026

Accepted: 10 September 2026

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ABSTRACT

Background: The issue of menstrual hygiene is inefficiently accepted and has not received appropriate consideration. Numerous studies have confirmed that scientific health education can bring about an affirmative change in knowledge and practice among adolescent girls concerning menstrual hygiene management.

Methods: A quasi-experimental study was conducted among 473 adolescent girls in schools offering classes from 9th to 12th standards. Multistage stratified random sampling technique was applied to select adolescent girl students. After completion of data collection all girls were given health education talk on menstrual health and hygiene practices with help of Flipbook provided by Menstrual Hygiene Management Scheme under National Rural Health Mission. A pamphlet prepared in vernacular language (Hindi) from this flipbook was given to each girl. After 3 months effect of health education talk was assessed by post-test questionnaire.

Results: The hygienic practices of adolescent girls during menstruation before and after health education intervention were compared. Notable improvements include increased use of sanitary pads (65.1% to 75.6%), higher frequency of changing absorbents daily (>2 times: 40.4% to 52%), and better hand washing with soap and water (42.1% to 55.8%) was observed. The proportion of participants with good practice scores increased significantly from 35.3% to 61.3% after the intervention ($p < 0.001$).

Conclusions: This study provides comprehensive insights into menstrual hygiene among adolescent girls, highlighting the effectiveness of a health educational intervention in improving knowledge and practices surrounding menstruation.

Keywords: Menstrual hygiene, Adolescent girls, Educational intervention, Menstrual hygiene practices

INTRODUCTION

Menstruation is a natural, normal biological process experienced by all adolescent girls and women, yet it is not discussed about frankly causing unnecessary embarrassment and shame. Common people in India still consider menstruation as taboo and feel uncomfortable about the subject.¹ WHO and UNICEF have defined

menstrual hygiene management as “Women and girls are using clean menstrual hygiene management material to absorb or collect blood, that can be changed in privacy as and when necessary for the duration of the menstrual period, using soap and water for washing the body as required and having access to facilities to dispose of used menstrual management materials.”² Poor menstrual hygiene found to be associated with reproductive tract

and urinary tract infections.³ Menstrual hygiene management practices are dependent on various factors such as information about the process, socioeconomic characteristics, cultural acceptability, personal preferences, perception of risks, and access to funds and WASH facilities.⁴

Menstrual hygiene management (MHM) scheme was launched by Ministry of Health and Family welfare in 2011. Its objectives were improving knowledge, information about menstrual hygiene, use of sanitary napkins.⁵ Disposable sanitary products contain up to 90 % plastic as raw material. They contribute to large amounts of global waste, which are expected to decompose in 500 and 800 years. Which will affect ecosystem.^{6,7} The Department of Pharmaceuticals introduced the "Janaushadhi Suvidha Oxy-Biodegradable Sanitary Napkin" at Rs 1.00 per pad to address this problem. They are sold in Janaushadhi Kendras all around the nation.⁸ In order to maintain health, wellbeing, and equitable learning opportunities for boys and girls, adequate menstrual hygiene facilities with free hygiene products and timely instruction on period health for both sexes are essential school interventions.⁹

A study from India found that after the health educational intervention, there was a statistically significant change in knowledge of menstruation, perceived attitude, and practice of good menstrual hygiene among participants. They also noted that menstrual hygiene practice scores were significantly associated with educational status, age, mother's education, and socio-economic status.¹⁰ The issue of menstrual hygiene is inefficiently accepted and has not received appropriate consideration. India's adolescent girls are predominantly susceptible at the onset of menarche. They currently require a secure environment that provides protection and direction in order to ensure that their right to basic health, wellbeing, and educational opportunities is realized.

Numerous studies have confirmed that scientific health education can bring about an affirmative change in knowledge and practice among adolescent girls concerning menstrual hygiene management. There is paucity of health education intervention studies in urban area of Lucknow. Consequently, the present study aimed to assess the impact of health education on menstrual hygiene practices among school going adolescent girls.

METHODS

A quasi-experimental study was conducted from January 2023 to January 2025 in schools offering classes from 9th to 12th standards, located within the field practice area of the Urban Health Training Centre at Integral Institute of Medical Sciences and Research in Sarvodaya Nagar, Lucknow. The optimum sample size for the study was 473. Out of total 15 schools in field practice area 3 private and 3 government schools were selected by simple random sampling method. Multistage stratified

random sampling technique was applied to select adolescent girl students. Permission was sought from school principals after briefing about the study. Adolescent girls (14-19 years) present on the day of interview, who had reached menarche and whose guardians consented, were included. Data was collected by a pretested, predesigned, semi-structured questionnaire. The questionnaire encompassed sections on socio-demographic factors, menstrual hygiene practices and Suvidha napkin. After taking assent adolescent girls were personally interviewed. The girls were contacted during recess or free period without disturbing their academics. Each girl was interviewed for 20 minutes.

After completion of data collection all girls were given health education talk on menstrual hygiene practices with help of Flipbook provided by Menstrual Hygiene Management Scheme under National Rural Health Mission. One page information regarding Suvidha napkin was added to this flipbook. A pamphlet prepared in vernacular language (Hindi) from this flipbook was given to each girl. The copy of flipbook was given to school teachers. After 3 months effect of health education talk was assessed by post-test questionnaire. Menstrual hygiene practices related 10 questions were given score 1 for each correct response and 0 for incorrect response. Depending upon the score participants were categorized into three groups: Good (7-10), Satisfactory (4-6), and Poor (<3). SPSS (version 25) and Open Epi (version 3.11) were used to analyse the data after it was entered into a Microsoft Excel sheet. Frequencies and percentages were used to describe the qualitative factors. Chi-square test, McNemar's test & Wilcoxon signed rank test were applied for categorical variables. A p value of less than 0.05 was considered significant with a 95% confidence interval. On December 30, 2022, our institute's Institutional Research Committee and Institutional Ethics Committee accepted the study protocol. (IEC/IIMSR/2023/02).

RESULTS

In our study 45.9% of the adolescent girls were having age 16-18 years. 227(48%) girls were studying in government school. 318(67.2%) girls were from nuclear family. The hygienic practices of adolescent girls during menstruation before and after health education intervention were compared. Notable improvements include increased use of sanitary pads (65.1% to 75.6%), higher frequency of changing absorbents daily (>2 times: 40.4% to 52%), and better hand washing with soap and water (42.1% to 55.8%) (Table 1).

Being in private school, education of mother above primary school, upper socioeconomic status and prior awareness about menstruation before menarche are associated with good menstrual hygiene practices (Table 2).

Table 1: Distribution of school going adolescent girls according to their hygienic practices during menstruation.

S. no.	Hygienic practices during menstruation	Pre-test (%)	Post-test (%)
1.	Type of absorbent		
	Sanitary Pad	308 (65.1)	357 (75.6)
	Old cloth	50 (10.6)	36 (7.6)
	New cloth	24 (5.1)	18 (3.8)
	Cotton and cloth	2 (0.4)	2 (0.4)
	Cloth and sanitary pads	83 (17.6)	54 (11.4)
	Tampon	2 (0.4)	2 (0.4)
	Menstrual cups	4 (0.8)	4 (0.8)
2.	Frequency of changing absorbent daily		
	≤2 times	282 (59.6)	227 (48)
	>2 times	191 (40.4)	246 (52)
3.	Disposal of used absorbent		
	Dispose off	409 (86.5)	412 (87.1)
	Reuse	64 (13.5)	61 (12.9)
4.	Method of disposal (Multiple response)		
	Burn it	82 (17.3)	82 (17.3)
	Throw in routine waste	302 (63.8)	300 (63.5)
	Bury it	38 (7.8)	39 (8.2)
	Other	63 (13.3)	52 (11)
5.	Toilet facility at home	443 (93.7)	445 (94.1)
6.	Practice of changing pads in school	173 (36.6)	247 (52.2)
7.	Hand washing with soap and water after changing pads	199 (42.1)	264 (55.8)
8.	Frequency of washing external genitals during menstruation		
	≥3 times	89 (18.8)	178 (37.6)
	<3 times	384 (81.2)	295 (62.4)
9.	Material used for washing external genitals		
	Water and soap	219 (46.3)	164 (34.7)
	Water	195 (41.2)	258 (54.5)
	Water and antiseptic	45 (9.5)	39 (8.2)
10.	Bathing during menstruation	344 (72.7)	388 (82)
	Total	473 (100)	473 (100)

Table 2: Association between socio-demographic factors in relation to menstrual hygiene practices among the study participants.

Socio-demographic factors	Menstrual hygiene practices			P value*
	Good	Satisfactory	Poor	
Age (in years)				
14-16	37 (36.6)	49 (48.5)	15 (14.9)	0.366
16-18	69 (31.8)	114 (52.5)	34 (15.7)	
18 & above	61 (39.4)	79 (50.9)	15 (9.7)	
Type of school				
Government	62 (27.3)	117 (51.5)	48 (21.1)	< 0.001
Private	105 (42.7)	125 (50.8)	16 (6.5)	
Religion				
Hindu	128 (34.7)	186 (50.4)	55 (14.9)	0.594
Muslim	34 (37.8)	48 (53.3)	8 (8.9)	
Christian	5 (35.8)	8 (57.1)	1 (7.1)	
Type of family				
Joint	112 (35.2)	169 (53.1)	37 (11.7)	0.140
Nuclear	24 (29.3)	41 (50)	17 (20.7)	
Three generation	31 (42.5)	32 (43.8)	10 (13.7)	
Education of mother				

Continued.

Socio-demographic	Menstrual hygiene practices			P value*
Illiterate	16 (15.1)	61 (57.5)	29 (27.4)	< 0.001
Up to primary Level	39 (41.9)	41 (44.1)	13 (14)	
Above primary level	112 (40.9)	140 (51.1)	22 (8)	
Mother's occupation				
Employed	34 (46.6)	32 (43.8)	7 (9.6)	0.082
Housewife	133 (33.2)	210 (52.5)	57 (14.2)	
Socioeconomic status (Modified Kuppuswamy scale)				
Upper	56 (48.3)	57 (49.1)	3 (2.6)	< 0.001
Middle	69 (39.4)	85 (48.6)	21 (12)	
Lower	42 (23.1)	100 (54.9)	40 (22)	
Awareness about menstruation before menarche	127 (43.9)	126 (43.6)	36 (12.5)	< 0.001
Total =473 (100%)	167 (35.3%)	242 (51.2%)	64 (13.5)	

*Chi-square test.

The most frequently cited reason for the non-use of sanitary methods of absorbents among the study participants was the high cost, reported by 57.3% of participants. This was followed by two equally common reasons: restrictions imposed by mothers and shyness in disposing of or buying sanitary products, each accounting for 18.5%. Other reasons included unavailability (12.7%) and problems related to disposal (10.2%). A smaller percentage of participants mentioned lack of knowledge (3.2%) or cited other unspecified reasons (3.2%). These findings underline the multifaceted barriers that prevent the adoption of sanitary absorbents.

Knowledge about Janaushadhi Suvidha napkins increased substantially, from 35.3% (167 participants) in the pre-

test to 85.4% (404 participants) in the post-test. Knowledge about the price of Suvidha napkins showed a remarkable rise, from 19.9% (94 participants) in the pre-test to 85.4% (404 participants) in the post-test. The use of Suvidha napkins also improved, with 26.4% (125 participants) reporting usage in the pre-test compared to 58.8% (278 participants) in the post-test. A comparison of pre- and post-intervention knowledge and use of Janaushadhi Suvidha napkins among participants reveals a significant improvement across all assessed variables after the intervention, as determined by the McNemar test ($p < 0.001$). Overall; these findings indicate the intervention was effective in enhancing both awareness and adoption of Suvidha napkins among the participants.

Table 3: Comparison of pre- and post-intervention practice score and total hygiene score among the study participants.

Practice score	Pre-test	Post-test	P value*
Good (7-10)	167 (35.3)	290 (61.31)	<0.001
Satisfactory (4-6)	242 (51.2)	163 (34.46)	
Poor (≤ 3)	64 (13.5)	20 (4.23)	
Total	473 (100)	473 (100)	

* (Wilcoxon signed rank test)

The proportion of participants with good practice scores increased significantly from 35.3% to 61.3% after the intervention ($p < 0.001$). This indicates a notable improvement in menstrual hygiene practices, highlighting the positive impact of the intervention or educational program. (Table 3)

DISCUSSION

In the present study Hygiene practices during menstruation demonstrated a mix of adherence to recommended guidelines and areas for improvement. Post-intervention, notable improvements were observed in key hygiene behaviours, including increased use of sanitary pads (from 65.1% to 75.6%), greater frequency of changing absorbents daily (>2 times/day from 40.4%

to 52%), and enhanced hand hygiene practices (hand washing with soap and water from 42.1% to 55.8%). These findings are in alignment with previous studies conducted across various parts of India. For instance, a study by R NV et al (2024) in Karnataka reported improved menstrual hygiene practices following health education, particularly in terms of using sanitary napkins (from 79.8% to 94%) and maintaining genital hygiene during menstruation (frequency of changing absorbents 4-6 hours once, from 40.2% to 60.6%).¹¹ Similarly, Dharmalingam GP et al (2022) observed that health education significantly improved menstrual hygiene practices among adolescent girls in Tamil Nadu.¹²

The study conducted by Nakaweesi M found that age, knowledge about hygiene menstrual practice at schools

and availability of soap and water in girl's toilet is associated with hygienic menstrual practice among the study participants.¹³ Similarly, the study conducted by Daniel N et al found that urban residence, education of mother and knowledge of menstruation among the student help in safe and hygiene menstrual practices.¹⁴ The study conducted by Nimithamohan et al found that education of mother significantly associated with prior knowledge of menstruation which leads to hygiene menstrual practice among the teen aged girls.¹⁵ The study conducted by Bajracharya A et al found that 62.1% had good menstrual hygiene practice with factors associated in good hygiene practice were age, family type, grade, menstruation regularity, water availability.¹⁶

Barriers to menstrual product use, including cost and maternal restrictions, were commonly reported, emphasizing the need for initiatives to enhance accessibility and affordability of menstrual products, along with broader societal efforts to de-stigmatize menstruation. Awareness and utilization of subsidized menstrual products such as Janaushadhi Suvidha Napkins were low, indicating the need for increased promotion and accessibility of such initiatives to ensure equitable menstrual hygiene management for all individuals. The findings were similar to the previous similar studies conducted by Piyush et al, Chajhlana SPS et al and Khatuja et al where the barriers for menstrual product uses were describes as lack of awareness, lack of disposal facility, cultural restriction during menstrual period.¹⁷⁻¹⁹

There was a commendable increase in practice scores and overall menstrual hygiene scores in the post-test phase, with 35.3% of participants achieving a practice score categorized as "Good" compared to 13.5% in the pre-test phase. The importance of health education has been mentioned in previous similar studies conducted by Bajracharya S et al where 52% had knowledge about menstrual hygiene and hence, 61.3% had good practice on menstrual hygiene post educational intervention.²⁰ The study conducted by Parikh V et al found that 79% had good knowledge about menstrual hygiene and hence, 96% studied subject had good menstrual practice post educational intervention.²¹ Similarly, the study conducted by Janvekar SS et al concluded that post educational interventions, 85% girls practicing hygiene menstrual practices.²² Also the study conducted by Majeed J et al, Aulia Nastiti A et al, Rezaei M et al, Mustikarani IK et al and Sitohang NA et al found that there was significant increase in the knowledge, attitude and practice scores on menstrual health and hygiene practice among the study participants between pre and post-educational intervention on menstrual hygiene.²³⁻²⁷

Also, the need of menstrual health education was mentioned in the previous similar studies conducted by Khandaker S et al, Nawaz I et al, Rasheed T et al, Mehdi H et al and Wungtongkum P et al, where they emphasis on importance of health education for health and hygiene

menstrual practices among school going teen aged participants.²⁸⁻³²

Limitations

The study employed a quasi-experimental pre-post design without a control group; therefore, causal inferences regarding the effectiveness of the intervention should be made with caution. The study was conducted in selected schools within a single urban area of Lucknow, which may limit the generalizability of the findings to rural settings or other regions. The post-intervention assessment was conducted after three months; therefore, the long-term retention of knowledge and sustained behavioural changes could not be evaluated.

CONCLUSION

This study demonstrated a significant improvement in menstrual hygiene practices among adolescent girls following a health education intervention. It highlights that with appropriate knowledge; many harmful or inadequate practices can be corrected. Key factors associated with better practices included private school enrolment, higher maternal education, upper socioeconomic status, and prior awareness of menstruation. Awareness and use of affordable options like Janaushadhi Suvidha napkins increased markedly. Efforts should focus on addressing socio-cultural barriers through community and parental involvement. Ensuring access to affordable menstrual products, and involving family members-especially mothers-in the sensitization process. Regular health education sessions are essential to sustain improvements in menstrual hygiene practices.

Recommendations

Menstrual hygiene education should be incorporated into the regular school curriculum to ensure sustained improvement in knowledge and hygienic practices among adolescent girls. Periodic health education sessions should be conducted by trained healthcare professionals, school teachers, and Accredited Social Health Activists (ASHAs) to reinforce correct menstrual hygiene practices and dispel prevalent myths and misconceptions. Awareness regarding affordable menstrual products, such as Janaushadhi Suvidha sanitary napkins, should be enhanced through schools, community outreach programmes, and mass media to improve their utilization among adolescents. Parents, particularly mothers, should be actively involved in menstrual health education programmes, as maternal education and prior awareness before menarche were significantly associated with better menstrual hygiene practices. Policymakers should strengthen programmes that improve the accessibility and affordability of menstrual hygiene products, especially for girls from lower socioeconomic backgrounds. Future research should include multicentric studies involving rural and urban populations with longer follow-up periods to evaluate the long-term sustainability of educational

interventions and their impact on menstrual hygiene practices.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Ministry of Drinking Water and Sanitation, Government of India. Menstrual Hygiene Management: National Guidelines. New Delhi: Ministry of Drinking Water and Sanitation; 2015 [cited 2026 Jun 5]. Available at: <https://healtheeducationresources.unesco.org/library/documents/menstrual-hygiene-management-national-guidelines>. Accessed on 17 May 2026.
2. United Nations Children's Fund (UNICEF). Guidance on Menstrual Health and Hygiene. New York: UNICEF; 2019 [cited 2026 Jun 7]. Available at: <https://www.unicef.org/documents/guidance-menstrual-health-and-hygiene>. Accessed on 17 May 2026.
3. Dasgupta A, Sarkar M. Menstrual hygiene: How hygienic is the adolescent girl? *Indian J Community Med*. 2008;33(2):77-80.
4. Sinha RN, Paul B. Menstrual hygiene management in India: The concerns. *Indian J Public Health*. 2018;62(2):71-4.
5. Vyas S, Deepshikha, Kakkar R. Adolescent health. In: Kadri AM, editor. *IAPSM's Textbook of Community Medicine*. 2nd ed. New Delhi: Jaypee Brothers Medical Publishers (P) Ltd; 2021;639-54.
6. PATH. Pushing the Boundaries on the MHM Dialogue in India: Disposal and Treatment Management of Menstrual Waste. Seattle (WA): PATH; 2017 [cited 2026 Jun 12]. Available from: <https://www.path.org/our-impact/resources/pushing-the-boundaries-on-the-menstrual-health-management-dialogue/>. Accessed on 17 May 2026.
7. Harrison ME, Tyson N. Menstruation: Environmental impact and need for global health equity. *Int J Gynaecol Obstet*. 2023;160(2):378-82.
8. Srivastava D, Kumari A, Lal SP. Factors influencing adoption of climate-friendly Oxo-biodegradable Jan Ausadhi Suvridha sanitary napkins among women in India. *Int J Environ Clim Change*. 2022;12(12):1754-60.
9. World Health Organization. Education and provisions for adequate menstrual hygiene management at school can prevent adverse health consequences [Internet]. 2022 May 27 [cited 2026 Jun 12]. Available at: <https://www.who.int/europe/news/item/27-05-2022-education-and-provisions-for-adequate-menstrual-hygiene-management-at-school-can-prevent-adverse-health-consequences>. Accessed on 17 May 2026.
10. Parasuraman G, Vijay V, Balaji S, Nisha B, Dutta R, Jain T, et al. Impact of health education intervention on menstruation and its hygiene among urban school-going adolescent girls in Thiruvallur, Tamil Nadu. *J Family Med Prim Care*. 2022;11(9):5271-6.
11. Vaishali RN, Mahantshetti GJ, Baliga SS, Patil AJ. Effect of health education on knowledge and attitudes toward reproductive health among pre-university girls in an urban area. *Cureus*. 2024;16(12):e76354.
12. Dharmalingam GP, Megala M, Prarthana S. Effectiveness of health education in improving menstrual hygiene knowledge and practices among adolescent girls of rural area of Tamil Nadu. *Healthline*. 2022;13(2):130-7.
13. Nakaweesi M. Factors associated with menstrual hygiene management practices among secondary school girls in Lira Subcounty, Lira City West. *Student J Health Res Afr*. 2023;4(6):12.
14. Daniel N, Kejela G, Fantahun F, Desalegn M, Guteta F. Menstrual hygiene management practice and its associated factors among in-school adolescent girls in Western Ethiopia. *Contracept Reprod Med*. 2023;8(1):1.
15. Nimithamohan K, Murthy MRN, Divya KL, Amoghashree. A cross-sectional study on menstrual hygiene and associated factors among high school girls in rural Mysuru. *Int J Community Med Public Health*. 2022;9(11):4207-12.
16. Bajracharya A, Pandey Bista A. Menstrual hygiene practice among adolescent girls in the public schools of Mahalaxmi Municipality in Lalitpur District. *JHAS*. 2022;11(2):21-7.
17. Swami PD. Prevailing menstrual hygiene practices and help-seeking behaviour among school-going adolescent girls in Gwalior Township. *J Med Sci Clin Res*. 2019;7(5):955-61.
18. Chajhlana SPS, Amaravathi SR, Mazodi SD, Kolusu VS. Determinants of menstrual hygiene among school going adolescent girls in urban areas of Hyderabad. *Int J Community Med Public Health*. 2019;6(5):2211-5.
19. Khatuja R, Mehta S, Dinani B, Chawla D, Mehta S. Menstrual health management: Knowledge and practices among adolescent girls. *Trop J Obstet Gynaecol*. 2019;36(2):283-6.
20. Bajracharya S, Baniya A. Awareness of menstrual hygiene among adolescent girls at a government school, Chitwan, Nepal. *J Chitwan Med Coll*. 2022;12(40):14-8.
21. Parikh V, Nagar S. Menstrual hygiene among adolescent girls studying in a university of Gujarat. *J Family Med Prim Care*. 2022;11(7):3607-12.
22. Janvekar SS, Doddihall CR, Pattankar TP. Impact of health education on knowledge, attitude and practices about menstrual hygiene among adolescent girls of a college in Vijayapura. *Int J Community Med Public Health*. 2022;9(5):2106-11.
23. Majeed J, Sharma P, Ajmera P, Dalal K. Menstrual hygiene practices and associated factors among

- Indian adolescent girls: a meta-analysis. *Reprod Health*. 2022;19(1):148.
24. Aulia Nastiti A, Triharini M, Pratiwi AH, Gouda ADK. Educational intervention to improve menstrual hygiene management in adolescent girls in Kalimantan, Indonesia. *JPMA J Pak Med Assoc*. 2023;73(2 Suppl):S13-7.
25. Rezaei M, Solaimani L, Mohammadinia N. Effect of Educational Intervention Based on PRECEDE Model on Improving Menstrual Health Behaviors Among Female Students. *Shiraz E Med J*. 2022;23(12):e123461.
26. Mustikarani IK, Wulandari Y, Widiawati A. Health education using MAGIS booklet to increasing menstrual hygiene perception of teenage girls. *J Kebidanan Kesehat Tradis*. 2021;6(1):53-8.
27. Sitohang NA, Adella CA. The influence of health education on knowledge and attitude of students of Dharma Pancasila Middle School about menstrual health management. *Abdimas Talenta J Pengabdian Kpd Masy*. 2022;7(1):170-86.
28. Khandaker S, Kabir S, Rahman MR, Toaha MM, Ferdoshi N, Islam F, et al. Menstrual hygiene practice among rural adolescent school girls: An intervention study. *Mymensingh Med J*. 2022;31(1):99-106.
29. Nawaz I, Manan MR, Rahman S. Inadequate menstrual health education - A neglected risk factor for gender-based violence. *J Family Med Prim Care*. 2022;11(10):6604-5.
30. Rasheed TO, Afolabi WA. Maternal and adolescent factors associated with menstrual hygiene of girls in senior secondary schools in Lagos, Nigeria. *J Matern Child Health*. 2021;6(1):35-45.
31. Hasan M, Hassan NM, Mita M, Zahara F, Hasib M. Menstrual hygiene practices and school absenteeism among adolescent girls in Bangladesh: A cross-sectional study. *Popul Med*. 2021;3(8):1-8.
32. Wungtungkum P. Factors associated with hygiene behavior among high school students in Chiangmai, Thailand. *Int J Res Publ*. 2022;111(1):192-8.

Cite this article as: Patavegar BN, Ahmad S, Hassan SB, Pandey A. Impact of health education on menstrual hygiene practices among school-going adolescent girls in an urban area of Lucknow: a quasi-experimental study. *Int J Community Med Public Health* 2026;13:5960-6.