

An Interventional Study on Sanitary Pads Usages Promotion Programme among Adolescent Girls in Urban and Rural Areas of Vadodara DistrictNilesh G Patel¹, Bhargav Rana², Patel Kaushik S.³, Patel Krima S.⁴, Patel Dharmik M.⁵, Patel Drashti B.⁶, Patel Falshruti V.⁷, Patel Gaurav⁸¹Associate Professor, Department of Community Medicine, Smt. B. K. Shah Medical Institute and Research Centre, Sumandeep Vidyapeeth Deemed to be University, Vadodara, Gujarat²Third Year post graduate resident, Smt. B. K. Shah Medical Institute and Research Centre, Sumandeep Vidyapeeth Deemed to be University, Vadodara, Gujarat^{3,4,5,6,7,8}Third year MBBS Student, Smt. B. K. Shah Medical Institute and Research Centre, Sumandeep Vidyapeeth Deemed to be University, Vadodara, Gujarat

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Abstract:

Introduction: Adolescent is a time of quick progress from girlhood to womanhood. This is the period when first feminine cycle (Menarche) happens. Lack of Menstrual hygiene can lead to morbidity and other complication such as UTI, Scabies in vaginal area, abnormal abdominal pain, etc. A sanitary napkin is a permeable thing worn in the under clothing by ladies and young ladies - girls who are menstruating or bleeding due to birth, encountering an unsuccessful labor or premature birth, after any gynecologic medical procedure, or in whatever other circumstance where it is important to retain a progression of blood from the vagina. The objectives of this study are to evaluate the knowledge, beliefs, and attitudes regarding menstruation among school-going adolescent girls.

Methods: In this Interventional study was 11-19 years of school going adolescent girls in rural and urban areas. One school from each area was selected for the study purpose. After obtaining the permission from ethical committee, we had start data collection. One school from rural area named Gujrat village and one school from the urban named Shree Ambe School, Waghodia road, Vadodara were selected for the study purpose. Informed assent form from the adolescent girls and consent from their parents were taken. Then gave them the questionnaires which comprised of personal data, the Knowledge, belief, attitude regarding menstruation, the Disorders or problems faced or experience by school going adolescent girls during menstruation and the usage of sanitary pad usage among school going adolescent girls. Questionnaire one on personal data i.e. – name, age, education, religion, etc. and during first visit, we have collected baseline knowledge and other information as per our questionnaire and then we did interventions like poster presentations, small lectures, counseling regarding knowledge attitude and use of sanitary pad. We also have distributed a sanitary napkin among all the recruited participants. After 15 days, we have collected post interventional data on same questionnaire again to assess the effect of interventions.

Results: Regarding Current MP Status of the study participants having most of the participants have started MP. (92.5%) Symptoms / Difficulties, Study participants have experience during their last MP, which shows Embarrassment and irritability are the most common difficulties faced. Pre-test and Post-test improvement in knowledge and attitude towards use of Sanitary Pad among study participants.

Conclusion: At the end of the study, we were able to find out major improvement in knowledge and attitude towards use of sanitary pad among study participants which is higher than other studies conducted in India. Sanitary pad distributed among study participants can encourage them to use in future also.

Keywords: Sanitary pad, school going adolescent girls, menstruation.

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Introduction

Adolescent is a time of quick progress from girlhood to womanhood. This is the period when first feminine cycle (Menarche) happens. Menstrual cycle is a regular natural procedure for ladies and young adult - girls. The management of it has changing time to time based on available resources,

advancement in medical science, social tendencies, traditions and customs. There is expanding acknowledgment that different elements in light of which ladies battle to oversee period in suitable and clean manners which is connected to negative effects on health, education and wellbeing. [1]

Lack of Menstrual hygiene leads to morbidity and other complication such as UTI, Scabies in vaginal area, abnormal abdominal pain, etc. [2] Adolescent girls mostly acquire menstrual information primary through Mother, television, friends, teacher and relatives.

Because of different fantasies, confusion myths, misconception and limitations on working during feminine cycle adolescent girls often develop negative disposition and attitude towards this natural physiological phenomenon. [3] Most of young ladies need logical and scientific information about menstruation and pubescence. Most young ladies are not informed about menarche or how to oversee menstrual bleeding. [4]

A sanitary napkin is a permeable thing worn in the under clothing by ladies and young ladies - girls who are menstruating or bleeding due to birth, encountering an unsuccessful labor or premature birth, after any gynecologic medical procedure, or in whatever other circumstance where it is important to retain a progression of blood from the vagina.

The present study was intended to evaluate the adequacy and effectiveness of school based menstrual awareness program with respect to menstrual knowledge, attitude, beliefs of the study participants and promotion for usage of sanitary napkin, sanitary towel, sanitary pad, menstrual pad, or pad among school going adolescent girls.

The objectives of this study are to evaluate the knowledge, beliefs, and attitudes regarding menstruation among school-going adolescent girls. Additionally, the study aims to identify the disorders or problems these girls face or experience during menstruation, and to assess and promote the usage of sanitary pads among them.

Methods

Study Design and Population: This interventional study targeted school-going adolescent girls aged 11-19 years in both rural and urban areas of Vadodara district. To facilitate a comparative analysis, one school from each area was chosen: Gujarat village school represented the rural population, and Shree Ambe School on Waghodia Road represented the urban population.

Sample Size and Inclusion Criteria: All adolescent girls present on the day of data collection at the selected schools were included in the study.

The inclusion criteria were simple: girls aged 11-19 years who were students of the selected schools and provided informed consent to participate were included. Exclusion criteria included any girls who were unwilling to participate or did not provide consent.

Ethical Considerations and Data Collection:

Prior to the commencement of the study, ethical approval was obtained from the relevant committee. On the day of data collection, the purpose and procedures of the study were thoroughly explained to all participating girls. General instructions were provided, ensuring that participation was entirely voluntary. Informed assent was obtained from the girls, and consent forms were signed by their parents.

Data Collection Instruments: The data collection process involved two structured questionnaires. The first questionnaire gathered personal data, including name, age, education, and religion. The second questionnaire assessed the participants' awareness and practices regarding menstrual hygiene. It included questions on knowledge, beliefs, and attitudes towards menstruation, as well as the disorders or problems experienced during menstruation and the usage of sanitary pads. Additional questions addressed issues like low school attendance, homework engagement during menstruation, and psychosocial problems such as shame, insecurity, embarrassment, lack of confidence, or fear of staining.

Baseline Data Collection and Interventions:

During the initial visit, baseline data were collected using the questionnaires. This initial phase helped in understanding the existing knowledge and practices related to menstrual hygiene among the participants. Following the baseline data collection, several interventions were implemented. These included poster presentations, small lectures, and counseling sessions aimed at improving knowledge, attitudes, and the use of sanitary pads. Each participant was provided with sanitary napkins as part of the intervention.

Post-Interventional Data Collection: After the initial intervention, post-interventional data were collected using the same set of questionnaires. This second round of data collection aimed to assess the effectiveness of the interventions in enhancing the participants' knowledge, attitudes, and practices regarding menstrual hygiene.

Analysis: The data collected from both pre- and post-interventional phases were analyzed to measure changes and improvements. The results indicated a significant improvement in knowledge and attitudes towards the use of sanitary pads among the study participants, underscoring the impact of the educational interventions.

This methodological approach ensured a thorough assessment of menstrual hygiene management among adolescent girls in different socio-economic settings, providing valuable insights for future health promotion programs.

Results

The mean average age of the study population was 15.39 years. The majority of the participants were in the 10th grade (57.9%), followed by the 11th grade (23.1%), 12th grade (14.9%), and 9th grade (4.1%). Religiously, the overwhelming majority of the participants were Hindu (97.5%), with a small minority being Muslim (2.5%). When considering the menstrual status of the participants, a significant majority (92.5%) had already started menstruating. The age at which participants experienced their first menstrual period (menarche) varied, with the mean age being 13.55 years. The

most common ages for menarche were 13 years (36.6%) and 14 years (45.5%), with fewer participants starting their menstrual periods at 11 years (1.8%), 12 years (8.0%), and 15 years (8.0%). Regarding knowledge about menstruation before menarche, 52.9% of participants were aware, while 47.1% were not. The primary source of knowledge about menstruation for most participants was their mothers (79.5%), followed by school friends or peers (9.8%), aunts or other relatives (3.6%), and some did not remember (7.1%).

Table 1: Demographic and Menstrual Health Characteristics

Characteristic	Category	Frequency (n)	Percentage (%)
Education	Std 9	5	4.1 %
	Std 10	70	57.9 %
	Std 11	28	23.1 %
	Std 12	18	14.9 %
Religion	Hindu	118	97.5 %
	Muslim	3	2.5 %
Current Menstrual Status	Yes	112	92.5 %
	No	9	7.5 %
Age at First Menstrual Period	11 yrs	2	1.79 %
	12 yrs	9	8.04 %
	13 yrs	41	36.61 %
	14 yrs	51	45.54 %
	15 yrs	9	8.04 %
Knowledge About Menstruation Before Menarche	Yes	64	52.9 %
	No	57	47.2 %
Source of Knowledge About Menstruation	Mother	89	79.46 %
	School friend or peer	11	9.82 %
	Aunt or other relative	4	3.57 %
	Do not remember	8	7.14 %
Protective Method Used in Last Menstrual Period	Cloth	29	25.89 %
	Cloth/Sanitary Pad	2	1.79 %
	Sanitary Pad	81	72.32 %
Symptoms/Difficulties During Last Menstrual Period	Skin Irritation	20	16.5 %
	Fear	31	25.6 %
	Odor	10	8.3 %
	Soiling	15	12.4 %
	Embarrassment	31	25.6 %
	Irritability	27	22.3 %
	Insecurity	8	6.6 %
	Fear of Fall	11	9.1 %

Table 2: Menstrual Hygiene Challenges and Protective Methods

Category	Details
Symptoms/Difficulties	During their last menstrual period, participants commonly reported embarrassment (25.6%) and irritability (22.3%).
Reasons for Not Using Sanitary Pad	The main reasons for not using sanitary pads included lack of trust (22.3%), cost concerns (4.1%), negative feedback (7.4%), and fear of leakage (5%).
Leakage Problems	Participants experienced varying levels of leakage problems: 40% reported it as a big issue with cloths compared to 6.98% with sanitary pads.
Activities Affected by Leakage	Leakage was a major concern during long sitting (cloths: 42.86%, pads: 16.28%), schooling (cloths: 48.57%, pads: 13.95%), and going to market/walking (cloths: 22.86%, pads: 18.60%).

Table 3: Pre-test and Post-test improvement in knowledge and attitude towards use of Sanitary Pad

Question		Pre test		Post Test	
		Frequency	Percentage	Frequency	Percentage(%)
Knowledge	MP is a natural process not a disease	101	83.47	121	100%
	Sanitary Pad is better protective method than cloths and others	91	75.20	121	100%
	Unhygienic condition during MP can cause various health problems	72	59.50	115	95.04%
Attitude	Do you think one should use sanitary pad instead of Cloth	95	78.51	121	100%

This table 3 illustrates the effectiveness of interventions aimed at improving knowledge and attitudes regarding menstrual hygiene among adolescent girls. The pre-test results show that initially, 83.47% of participants recognized menstruation as a natural process rather than a disease, with this increasing to 100% in the post-test phase. Similarly, understanding that sanitary pads are a superior protective method compared to other alternatives improved from 75.21% to 100%. Awareness of the health risks associated with unhygienic menstrual practices also increased significantly from 59.50% to 95.04%. Regarding attitudes, the acceptance of using sanitary pads instead of cloth rose from 78.51% to 100% post-intervention indicating the effectiveness of educational interventions and distribution of sanitary pads in enhancing both knowledge and attitudes towards menstrual hygiene management among the study participants.

Discussion

The findings from this study underscore the critical importance of educational interventions in enhancing menstrual knowledge and hygiene practices among adolescent girls. The significant improvements observed post-intervention highlight the effectiveness of structured school-based menstrual awareness programs. Prior to the intervention, there was a notable lack of comprehensive menstrual knowledge among the participants, with almost half of them unaware of menstruation before experiencing menarche. This gap in knowledge is likely attributable to cultural taboos, myths, and misinformation prevalent in many communities, which often lead to negative attitudes and practices related to menstruation [5,6,7]. The results revealed that mothers were the primary source of menstrual information for the majority of the participants. However, the reliability and accuracy of this information can vary significantly, emphasizing the need for standardized educational programs in schools to provide scientifically accurate and consistent information [7]. The substantial increase in the understanding that menstruation is a natural process and the recognition of the superiority of sanitary pads post-intervention indicates that well-structured educational programs can effectively dispel myths

and promote healthier menstrual practices [8]. The improvement in attitudes towards using sanitary pads instead of cloth further supports the need for accessibility and affordability of menstrual products. Before the intervention, a considerable percentage of girls still used cloth, which can be unhygienic and uncomfortable. Post-intervention, the complete shift to sanitary pads demonstrates the effectiveness of the program in promoting better menstrual hygiene practices. Additionally, the increased awareness of the health risks associated with unhygienic practices underscores the program's success in educating participants about the potential complications of poor menstrual hygiene, such as UTIs and other infections [9]. This study thus provides strong evidence that comprehensive menstrual education and the provision of sanitary products are crucial for improving menstrual hygiene management among adolescent girls [10].

Conclusion

This study highlights the critical role of school-based menstrual awareness programs in improving menstrual knowledge and hygiene practices among adolescent girls. The significant improvements in knowledge and attitudes post-intervention demonstrate that educational initiatives can effectively address misconceptions, promote healthier practices, and enhance the overall well-being of adolescent girls. Given the substantial impact of such programs, it is recommended that schools incorporate comprehensive menstrual education into their curricula and ensure the availability of sanitary products. By doing so, we can foster a more supportive environment for adolescent girls, helping them manage menstruation with dignity and confidence, and ultimately improving their health, education, and quality of life.

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