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Laxmipriya Mishra
Tutor, ANM Training Center,
Bhubaneswar, Odisha, India

Impact of health education on menstrual hygiene: An intervention study among adolescent school girls

Laxmipriya Mishra

Abstract

Background: The expression "feminine cycle" makes a social disgrace even today and this is because of misguided judgments coming about in unfortunate wellbeing results. Studies have demonstrated that regenerative tract contaminations are because of poor menstrual cleanliness. This can be amended by giving legitimate wellbeing training to the teenagers. This examination was intended to evaluate the impact of wellbeing instruction about menstrual cleanliness to the immature young ladies. Destinations: The point of this examination is to survey information and works on with respect to monthly cycle among immature school young ladies and its improvement after wellbeing instruction.

Materials and Methods: The interventional think about was led from June to September 2016, at Girls, Govt. Schools, Berhampur. Subsequent to getting educated assent, every one of the young ladies who have accomplished menarche and who were eager to take an interest were incorporated into the examination. Standard information was gathered utilizing self-managed surveys. multi week after benchmark evaluation, wellbeing instruction on menstrual cleanliness was conveyed utilizing power point and video introductions for length of 1 h. Follow-up information were gathered following 3 months utilizing a similar self-directed survey.

Results: The young ladies had improvement (91%) in learning with respect to the reason for period. The recurrence of changing cushions was essentially higher (86%) at the development. A huge extent of young ladies dried their underpants in daylight (82%) contrasted with (75%) at the pattern. Almost 74% of the young ladies washed their hands with cleanser in the wake of changing the sterile napkin contrasted with 41% before the mediation. There was a noteworthy improvement in various understudies washing their private parts each time utilizing the latrine (30% at pattern to 66% amid development).

Conclusions: The wellbeing instruction program brought about progress of learning and menstrual cleanliness rehearses among juvenile school young ladies. In this manner, including menstrual cleanliness as a major aspect of the educational programs may end this culture of quiet.

Keywords: Menstrual hygiene, adolescence, health education

Introduction

How can it be that monthly cycle in spite of the fact that a characteristic procedure "basic to the generation of life", makes overpowering apprehension and appall among young ladies and ladies, even today? Indeed, it is a consequence of the around the world "social disgrace" mentally demonstrated to exist in all young ladies and women ^[1]. Menstruation marks imperative changes in a young ladies' life amid the youthful years. Pre-adulthood, as per the world wellbeing association is a basic period in human development and improvement that happens after youth and before adulthood, from ages ten to nineteen ^[2]. Although monthly cycle is a characteristic procedure, its relationship with a few misguided judgments and practices, results in deplorable wellbeing results. Poor menstrual cleanliness is a noteworthy determinant of dreariness and different confusions in this age group ^[3]. Studies have announced conceptive tract contaminations, vaginal scabies diseases, anomalous vaginal release in youthful young ladies because of the absence of cleanliness amid menstruation ^[4]. India bears an incredible disgrace alluded to as the "way of life of quietness" or the "menstrual forbidden" and in like manner, monthly cycle is once in a while or at times never talked about at home and in schools. Young ladies, ladies, and even educators are uninformed of the previously mentioned sick wellbeing impacts because of "obliviousness to find out about the physiologic procedure" of feminine cycle. Studies have appeared most pre-adult young ladies have deficient and erroneous data about menstrual physiology and hygiene ^[5,6].

Correspondence
Laxmipriya Mishra
Tutor, ANM Training Center,
Bhubaneswar, Odisha, India

Infections because of absence of cleanliness amid monthly cycle has been accounted for in numerous studies [7, 8]. Most young ladies are not educated about menarche or how to oversee menstrual dying.

It is fitting to show young ladies clean menstrual practices. Doing as such will be gainful to the young ladies and in light of this, an interventional contemplate was planned. Studies are going on and have surveyed information levels with respect to menstrual cleanliness rehearses. Despite the fact that surveying learning levels are basic, it is similarly essential to offer a wellbeing instruction to the young ladies for the most advantage. Not many interventional thinks about were done in the province of Odisha [9]. The investigation was done at an administration school among 500 immature young ladies. Concentrate announced as far as practices, the first mean score was 6.99 and after the mediation was 9.18. This epitomizes a critical improvement in learning and practices after wellbeing instruction. Giving a wellbeing training does in certainty assume a key job in young ladies' learning on menstrual wellbeing and sanitation. There is unquestionably a lacuna in interventional thinks about as there are less contrasted with the tremendous number of cross-sectional examinations accessible. Thus, we arranged this interventional concentrate to survey the effect of wellbeing instruction on menstrual cleanliness

Materials and methods

An intervention study was conducted to find out the effectiveness of health education in improving knowledge and hygienic practices followed during menstruation among adolescent school girls. After obtaining Institutional Ethical Committee clearance, informed consent was obtained from students and their parents. All the girls who have attained menarche and who were willing to participate were included. Baseline data were collected using self-administered questionnaires. The questionnaire included general demographic details, questions for assessing knowledge (cause for menstruation, origin of menstrual blood, frequency and duration of menstrual periods, awareness of menopause) and questions pertaining to practices during menstruation (absorbent used for menstruation, frequency of changing sanitary napkin, sun drying of undergarments, cleaning of external genitals and material used for cleaning the external genitalia). 1 week after baseline assessment, health education was delivered in five sessions (forty students per session) using power point and video presentations for a duration of 1 h. The study participants were educated regarding the physiology of menstruation and menstrual hygiene. In particular, the cause of menstruation, importance of using sanitary pads, proper hand washing, bathing, washing and drying the undergarments under the sun, proper genital area washing and methods to relieve pain during menstruation. Follow-up data were collected after 3 months using the same self-administered questionnaire.

Data Analysis and Interpretation

Data were entered into Excel and analyzed using SPSS software version 17. Pre- and post-intervention data were compared using Chi-square test for proportions. Level of significance was considered with a $P < 0.05$.

Results

The study took place at girls high school, berhampur among 200 girls who reached menarche, from standards seven through nine. Demographically [Table 1], more than half the girls were 13 or 14 years of age. The rest of the students (46%) were 11 or 12 years old. More than three-fourths of the population (84.5%) was Hindus. The majority (96%) of students' parents were Graduates.

After analyzing pre-intervention and post-intervention assessment responses, proportions and P values for significance were calculated and tabulated [Tables 2 and 3]. Knowledge and practices were analyzed separately. Few (39%) of the students knew about menstruation before menarche, and 86% of the girls first came to know about the menstrual process from their mother. Regarding knowledge, about 63% of the students thought that menstruation was a good process originally, and this rose to 91% after the intervention [Table 2]. This was considered as a significant increase in responses from the baseline as the $P < 0.001$. Regarding what the students thought about the social misnomer that menstrual blood is impure blood, only 31.5% disagreed and after the teaching, almost 3–4 (73.5%) disagreed, and this was again considered as significant improvement with a $P < 0.001$. Regarding the cause of menstruation, about 88% knew that it was due to physiological reasons and this was increased to 94.5% post education, with a $P = 0.04$, which is significant. Most students knew the organ responsible for menstruation as the uterus. The pre-test was 92.5% and post-test was 96.5%, with a $P = 0.06$ which is not significant. Not many understood the idea that menstruation is an indicator of fertility as only 11% correctly chose yes during the baseline and this increased to 51.5% after the intervention, with a significant $P < 0.001$.

Most of the girls, 93%, correctly knew the frequency of menstruation as once a month before the intervention, and post-teaching was 96% with an insignificant $P = 0.18$. Girls were aware that the normal duration of a menstrual period lasts for more than 3 days. Pre-intervention was 93.5% which was 96.5% post-intervention, with an insignificant $P = 0.14$. Regarding knowledge about menopause, less than half, 42.5% were aware of menopause, and this number increased to 71.5% after the health education with a $P < 0.001$, which is statistically significant.

Regarding hygienic practices, all the 200 students (100%) use sanitary napkins. Thus, there was no change in answers after the teaching [Table 3]. Originally, many students, 61.5% believed, quite wrongly, that the sanitary napkin should be changed 2–3 times a day. After the teaching, 86% of the girls understood that changing sanitary napkins more than 4 times a day is essential and the improvement was significant with a $P < 0.001$. About three-fourths of the girls, 73%, originally sun-dried their inner garments, and after the intervention, the number rose to 82.5%, with a significant $P = 0.01$. Only about 41.5% washed their hands with soap and water before the education, and this increased to 74.5%, with a significant $P < 0.001$. Originally, only 30.5% of the students practiced washing their genitals every time while using the toilet and this improved to 66% after the teaching with a significant $P < 0.001$. Finally, when the students were questioned about how they washed their genitals, 7%, used just soap and water, at the baseline, and this slightly

increased to 10.5% after the teaching with a $P = 0.16$, being statistically insignificant. Among girls, 52% thought that they had enough knowledge about menstruation, and this significantly increased to 76% after the intervention.

Table 1: Demographic characteristics of study participants

Characteristic	n (%)
Age in years	
11–12	92 (46)
13–14	104 (52)
>15	4 (2)
Education of Mother	
Secondary	4 (2)
Higher secondary	3 (1.5)
Graduates	193 (96.5)

Discussion

The young ladies incorporated into the present examination have all achieved menarche. In this way, the majority of them had some fundamental learning about feminine cycle. Given that their moms were the significant wellspring of finding out about period and that their families were knowledgeable with advanced educations. In the present examination, 52% of young ladies were in 13-14 years old and 46% in 11– 12 years. The greater part (69%) of young ladies thought about menstrual blood as unclean anyway in development, huge extent (73%) referenced menstrual blood as not debased. At development, juvenile young ladies had noteworthy improvement in learning in regards to the reason for period (91%), feminine cycle as a sign of fruitfulness (51%), and knew about menopause (71%). Dominant part of understudies thought about the beginning of menstrual blood, term, and recurrence of menstrual periods (96%, 93% and 93%) at the gauge evaluation. All the 200 members (100%) utilized sterile napkin as sponges. The recurrence of changing cushions was essentially higher at the development (86%) contrasted with the gauge. A huge extent of young ladies dried their underpants in daylight at development (82%) contrasted with (75%) at the standard. At the development, a noteworthy extent (74%) of youthful young ladies washed their hands with cleanser subsequent to changing the sterile napkin contrasted with (41%) at the standard. There was a huge improvement in number of understudies washing their private parts each time utilizing the can (30% at gauge to 66% amid development).

At the point when examined concerning menstrual blood being debased and the inception of menstrual blood, in the present examination, 31.5% and 92.5%, individually, accurately addressed at first which expanded to 73.5% and 96.5% (separately) in the post-intercession. In an investigation directed at a provincial zone in Haryana by Arora *et al.* be that as it may, the standard was 1.5% and 5%, individually which later expanded to 9% and 97%, separately. The present investigation had a greatly improved benchmark score. This was because of the low financial class, and training dimension of the families as the investigation in Haryana was led in a country area [4]. An examination led in Andhra Pradesh just 24.5% understudies were about monthly cycle before menarche [10]. In the present investigation, 88% of the young ladies at first knew the right purpose of period, and this expanded to 94.5%

after intercession. There were comparable discoveries in an examination by Haque *et al.* [10] directed in a urban territory in Bangladesh. In that review, the benchmark was 5% and this expanded to 97%. As the examination was additionally done in a urban region like the current investigation, the outcomes were similar [11]. In the present examination, feminine cycle as a marker of ripeness was inadequately comprehended by the understudies amid benchmark (11%), and altogether improved to 51.5%. The wellbeing instruction was extremely viable in encouraging this specific idea as this yielded a substantial contrast between pre-test and post-test. 40.5% of the understudies improved their reactions in the wake of instructing. Dominant part of the understudies thought about the recurrence of monthly cycle even before the instructing and in this way, after the wellbeing training, the reactions scarcely improved (from 93% to 96%) with an immaterial $P = 0.18$. The explanation behind this could be that the young ladies have just achieved menarche, and henceforth, they can without much of a stretch reason from their very own experience that period happens once every month. Just 42.5% knew about menopause at gauge, and the showing improved their insight as 71.5% knew amid post-test. In the present investigation, 100% utilized clean cushions. In the examination by Arora [4] led in a rustic piece of Haryana, the gauge was 35% which expanded to 55% post-mediation. The pattern esteems are much lower than the present examination as the financial status is lower. At the point when interrogated regarding sun drying inners, 73% rehearsed this at first, and amid post-mediation, this expanded to 82.5%. An investigation led in Uttarakhand by Singh *et al.* [12] just 36.3% rehearsed sun drying. The young ladies dried their inners toward the edge of their homes as they felt bashful and awkward in light of the fact that they didn't need others to see. Truth be told, they left their inners in a specific spot until their next period. A similar report in Uttarakhand by Singh *et al.* [12] reported that just 17.1% changed their cushions morethan 4 times each day. The present examination demonstrated huge improvement by and by from 38.5% changing napkins multiple times each day to 86% changing multiple times each day. Essentially, in Arora's investigation, at pattern, 60% changed their napkins two times per day, and after the training, 72% comprehended to change their napkins 3– 4 times each day. In the present examination, 66% of the young ladies rehearsed legitimate hand washing with cleanser and water when utilizing the latrine amid period. In an investigation by Yasmin *et al.* [13] directed in West Bengal, 83.7% pursued this training. The investigation from West Bengal yielded higher outcomes since it is a urban territory and the times of the young ladies were a lot higher running from 13 to 18 years. Accordingly, the young ladies would be progressively educated on this training. Generally speaking, the understudies felt that they increased valuable learning from these sessions. To survey this, the understudies were inquired as to whether they believed they had enough information about period. At gauge, just 52% reacted yes and after the session, it expanded to 76% recommending an advantage to the understudies.

Table 2: Impact of health education on knowledge regarding menstruation (n=200)

Variable	Pre-test (%)	Post-test (%)	P value
Is menstruation a good thing			
Yes	126 (63)	182 (91)	<0.001
No	74 (37)	18 (9)	
Is menstrual blood impure			
Yes	137 (68.5)	53 (26.5)	<0.001
No	63 (31.5)	147 (73.5)	
Cause for menstruation			
Physiological	176 (88)	189 (94.5)	0.04
Don't know	24 (12)	11 (5.5)	
Origin of menstrual blood			
Uterus	185 (92.5)	193 (96.5)	0.06
Don't know/others	15 (7.5)	7 (3.5)	
Is menstruation an indication of fertility			
Yes	22 (11)	103 (51.5)	<0.001
No	178 (89)	97 (48.5)	
Frequency of menstrual period			
Once a month	186 (93)	192 (96)	0.18
Once in 2 months	14 (7)	8 (4)	
Normal duration of menstrual period			
<3 days	13 (6.5)	7 (3.5)	0.14
≥3 days	187 (93.5)	193 (96.5)	
Awareness of menopause			
Yes	85 (42.5)	143 (71.5)	<0.001
No	115 (57.5)	57 (28.5)	

Table 3: Impact of health education on menstrual hygiene practices(n=200)

Variable	Pre-test (%)	Post-test (%)	P value
Absorbent used during menstruation			
Sanitary pad	200 (100)	200 (100)	NA
Cloth	-	-	
Frequency of changing sanitary pad			
2-3 times a day	123 (61.5)	28 (14)	<0.001
≥4 times a day	77 (38.5)	172 (86)	
Sundry your undergarments			
Yes	146 (73)	165 (82.5)	0.01
No	54 (27)	35 (17.5)	
Washing hand with soap after changing sanitary napkin			
Yes	83 (41.5)	149 (74.5)	<0.001
No	117 (58.5)	51 (25.5)	
Material used for cleaning genitals			
Only water	186 (93)	179 (89.5)	0.16
Soap and water	14 (7)	21 (10.5)	
Cleaning of genitals			
Every time using toilet	61 (30.5)	132 (66)	<0.001
During bathing	139 (69.5)	68 (34)	

Strength and Limitations

Health education delivered by a well-trained person using structured material along with video, followed by discussions on some of the concerns that the girls had regarding their menstrual cycles. Health education imparted to adolescent girls resulted in improved knowledge and hygienic practices during menstruation. One limitation of this study is change in practice was assessed using self-administered questionnaire; hence, the possibility of social desirability bias could not be eliminated.

Conclusion

The present study has revealed that it is practically feasible to implement a health education programme about menstrual hygiene in schools. A health education program resulted in significant improvement in knowledge and menstrual hygiene practices among adolescent school girls. In our study, the majority of girls were not aware of

menstruation before menarche. Hence, it is important to implement a structured education program regarding menstruation for early adolescents. Information on menstruation and menstrual hygiene should be included in the curriculum which, in turn, will improve the discussion between students and teachers and break this culture of silence intercession. There were comparable discoveries in an examination by Haque *et al.* [10] directed in a urban territory in Bangladesh. In that review, the benchmark was 5% and this expanded to 97%. As the examination was additionally done in a urban region like the current investigation, the outcomes were similar [11]. In the present examination, feminine cycle as a marker of ripeness was inadequately comprehended by the understudies amid benchmark (11%), and altogether improved to 51.5%. The wellbeing instruction was extremely viable in encouraging this specific idea as this yielded a substantial contrast between pre-test and post-test. 40.5% of the understudies

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