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Research Article

A study to assess the effectiveness of structured teaching programme on knowledge and reported practice regarding Menstrual Hygiene among adolescent girls in selected schools in Bangalore.

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Abstract:

Introduction: Menstrual hygiene is an important component of adolescent reproductive health. Inadequate information, misconceptions and socio-cultural restrictions may influence menstrual hygiene knowledge and practices among adolescent girls. **Aim:** To determine the effectiveness of a structured teaching programme on knowledge and reported practice regarding menstrual hygiene among adolescent girls. **Methods:** A quantitative descriptive research design was employed. The study included 50 antenatal mothers diagnosed with hypertension, gestational diabetes mellitus, or thyroid disorders who were recruited through purposive sampling at a Government Urban Primary Health Centre, Sakthi Nagar, Chennai. Data were gathered using a structured tool. Descriptive and inferential statistical techniques were applied for analysis. **Results:** At pre-test, 27% of girls had poor knowledge, 40% had moderate knowledge and 33% had adequate knowledge. At post-test, all participants (100%) had adequate knowledge. The mean knowledge score increased from 13.47 ± 3.95 to 24.28 ± 0.67 , with a paired t-value of 21.73 (df=59, p=0.001). Reported practice improved from 33% adequate, 50% moderate and 17% poor at pre-test to 81.7% adequate, 16.7% moderate and 1.7% poor at post-test. The mean practice score increased from 13.78 ± 1.76 to 15.25 ± 1.002 , with a paired t-value of 6.04 (df=59, p=0.001). A significant association was identified between pre-test knowledge and age ($\chi^2=11.89$, p=0.003). **Conclusion:** The structured teaching programme was effective in improving knowledge and reported menstrual hygiene practice among adolescent girls. School-based menstrual health education may support the development of healthier menstrual hygiene practices.

Keywords: Menstrual hygiene; adolescent girls; structured teaching programme; knowledge; reported practice; school health.

INTRODUCTION

Adolescence is a transitional phase between childhood and adulthood characterized by rapid physical, cognitive and psychosocial development. For girls, menarche is a major developmental milestone and the beginning of menstruation. The first menstrual experience may be associated with fear, anxiety, embarrassment and uncertainty when girls have limited prior information.

Menstruation is a normal physiological process, but it is frequently surrounded by cultural beliefs, taboos and restrictions. Lack of accurate information may contribute to misconceptions and inappropriate practices. Restrictions related to bathing, changing clothes, entering religious places and other daily activities have been reported among adolescent girls in different settings.

Schools provide an important setting for menstrual health education because adolescent girls can be reached before and during the early years of menstruation. Structured teaching using organized content and audiovisual materials can provide accurate information about the reproductive system, menarche, menstruation, hygiene, disposal and complications of poor hygiene.

AIM

To determine the effectiveness of a structured teaching programme on knowledge and reported practice regarding menstrual hygiene among adolescent girls.

METHODOLOGY

A quantitative pre-experimental one-group pre-test-post-test design (O_1-X-O_2) was adopted at St. Francis School, Bagalur, Bangalore, among 60 adolescent girls aged 13–16 years from classes VIII–X, selected through purposive sampling. Eligible participants had attained menarche, could read and write English, and consented to participate; girls who were absent, ill, or had previously received menstrual hygiene education were excluded.

Data were collected using a structured tool comprising socio-demographic and menstrual-health variables, a 25-item knowledge questionnaire, and a 20-item reported practice checklist. The tools were validated by seven experts and tested for reliability. A structured teaching programme on menstruation and menstrual hygiene was delivered using lecture-cum-discussion, PPT and charts. Pre-test assessment was conducted on 2 August 2023 and post-test assessment after seven days, on 9 August 2023. A pilot study with six girls established feasibility. Data were analysed using frequency, percentage, mean, standard deviation, paired t-test and Chi-square test.

RESULT

Table 1 shows that most girls were aged 13–14 years (65%), Hindu (83.3%), from nuclear families (70%), and had mothers who were homemakers (81.7%). About 68.3% had a family income above ₹15,000, while 50% lived in rural areas. Most attained menarche at 12 years (36.7%) and received menstrual information from their mothers (71.7%).

Table 2 shows that pre-test knowledge was poor in 26.7%, moderate in 40%, and adequate in 33.3%, whereas post-test knowledge was adequate among all participants (100%). Figure 1 shows that adequate reported practice increased from 33.3% at pre-test to 81.7% at post-test, with corresponding reductions in moderate and poor practice levels. Table 3 indicates a significant improvement in knowledge, with mean scores increasing from 13.47 ± 3.95 to 24.28 ± 0.67 ($t=21.73$, $df=59$, $p=0.001$), representing an 80.25% improvement. Table 4 demonstrates a significant improvement in reported practice, with mean scores increasing from 13.78 ± 1.76 to 15.25 ± 1.00 ($t=6.04$, $df=59$, $p=0.001$), representing a 10.67% improvement. Table 5 shows a significant association between pre-test knowledge and age ($\chi^2=11.89$, $df=2$, $p=0.003$), while no significant association was found with other selected demographic variables.

DISCUSSION

The present study demonstrated that adolescent girls had varying levels of knowledge and reported practice regarding menstrual hygiene before the intervention. At pre-test, 40% had moderate knowledge, 33.3% had adequate knowledge and 26.7% had poor knowledge. Reported practice was moderate in 50%, adequate in 33.3% and poor in 16.7%. These findings indicate the need for structured menstrual health education among school-going adolescent girls.

After the structured teaching programme, all participants achieved an adequate knowledge level, with the mean knowledge score increasing from 13.47 ± 3.95 to 24.28 ± 0.67 . The paired t-value of 21.73 ($p=0.001$) indicates a statistically significant improvement. The study discussion relates this finding to previous intervention studies in which structured teaching improved menstrual hygiene knowledge among adolescent girls. Reported practice also improved after the intervention.

The proportion with adequate practice increased from 33.3% to 81.7%, while poor practice decreased from 16.7% to 1.7%. The mean practice score increased from 13.78 ± 1.76 to 15.25 ± 1.002 , and the paired t-value of 6.04 ($p=0.001$) demonstrated a statistically significant improvement. Similar improvements were described in the literature reviewed in the source study, including studies from Palpa and other school settings.

The significant association between pre-test knowledge and age ($\chi^2=11.89$, $p=0.003$) suggests that age was related to baseline knowledge in the study population. Other demographic variables did not demonstrate significant associations with pre-test knowledge. The source discussion notes that this finding differs from a study conducted in Lalitpur, where no significant association between pre-test knowledge and socio-demographic variables was reported. Overall, the findings support the use of structured, school-based menstrual hygiene education to improve knowledge and reported practice among adolescent girls.

CONCLUSION

The study concluded that the structured teaching programme was effective in improving knowledge and reported menstrual hygiene practice among adolescent girls. Knowledge increased from mixed poor, moderate and adequate levels at pre-test to 100% adequate knowledge at post-test. Reported practice also improved substantially, with the majority achieving an adequate practice level after the intervention. The structured programme was therefore instructionally effective and feasible for promoting healthy menstrual hygiene practices among adolescent girls.

RECOMMENDATION

Similar studies may be conducted with larger samples to improve generalizability. Menstrual hygiene education programmes may be implemented in different urban and rural schools. Comparative studies may be conducted between adolescent girls in rural and urban settings. The effectiveness of structured teaching may be compared with other methods such as short films, videos and other multimedia approaches. Structured menstrual hygiene teaching programmes should be periodically reviewed and updated according to current evidence and educational needs.

REFERENCE

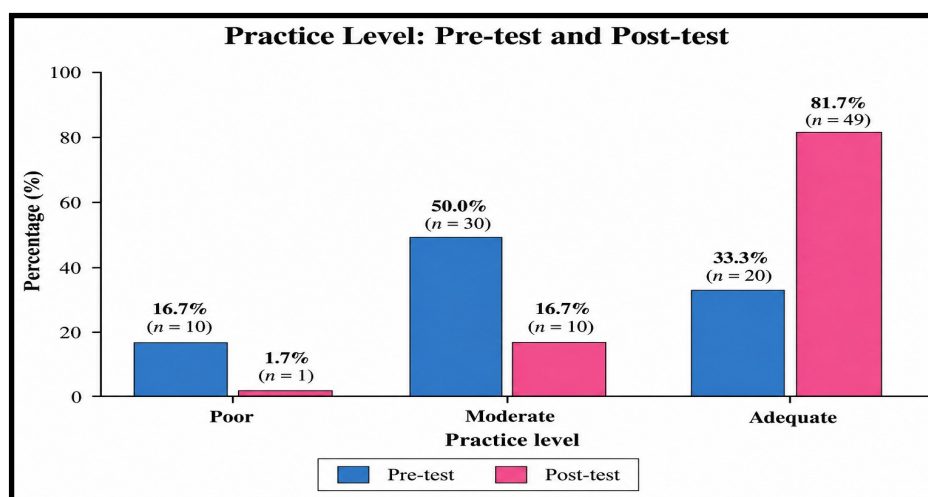
1. World Health Organization. (2015). Global standards for quality health care-services for adolescents.
2. Kar SK, Choudhary A, Singh AP. Understanding normal development of adolescent sexuality: A bumpy ride. *Journal of Human Reproductive Sciences*. 2015;8(2):70.
3. Sonowal P, Talukdar K. Menstrual hygiene knowledge and practices amongst adolescent girls in urban slums of Dibrugarh town: A cross-sectional study. *Galore International Journal of Health Sciences Research*. 2019;4:44–51.
4. Sharma S, Mehra D, Brusselaers N, Mehra S. Menstrual hygiene preparedness among schools in India: A systematic review and meta-analysis of system and policy-level actions. *International Journal of Environmental Research and Public Health*. 2020;17:E647.
5. Dasgupta A, Sarkar M. Menstrual hygiene: How hygienic is the adolescent girl? *Indian Journal of Community Medicine*. 2008;33(2):77–80.
6. Rastogi S, Khanna A, Mathur P. Educational interventions to improve menstrual health: approaches and challenges. *International Journal of Adolescent Medicine and Health*. 2019.
7. Dhingra R, Kumar A, Kour M. Knowledge and practices related to menstruation among tribal (Gujjar) adolescent girls. *Studies on Ethno-Medicine*. 2009;3:43.
8. Bajracharya S, Bam P, Bajracharya P. Effectiveness of structured teaching program on menstrual hygiene among adolescent school girls. *Journal of Lumbini Medical College*. 2020;8(1):7.
9. Mukherjee D. Impact of structured teaching programme to enhance the knowledge regarding menstruation and menstrual hygiene among adolescent girls. *Journal of Education Society and Behavioural Science*. 2022;34(12):99–103.
10. Surekha SJ, Punitha M. Effectiveness of structured teaching programme on menstrual hygiene among adolescent girls. *Journal of Clinical and Biomedical Sciences*. 2016;6(3):96–99.
11. Savita, Grewal, Ranjitha, D'Souza. Effectiveness of planned teaching programme on knowledge and practices regarding menstrual hygiene among adolescent girls in a selected government school of Delhi. *International Journal of Nursing Education*. 2017;9(3):132–137.
12. Thakre BS, Thakre SS, Reddy M, Rathi N, Pathak K, Ughad S. Menstrual hygiene: knowledge and practice among adolescent school girls. *Journal of Clinical and Diagnostic Research*. 2011;5(5):1027–1033.
13. Sarkar I, Dobe M, Dasgupta A, Basu R, Shahbabu B. Determinants of menstrual hygiene among school-going adolescent girls in a rural area of West Bengal. *Journal of Family Medicine and Primary Care*. 2017;6(3):583–588.
14. Shah V, Nabwera HM, Sosseh F, Jallow Y, Comma E, Keita O, et al. A rite of passage: a mixed methodology study about knowledge, perceptions and practices of menstrual hygiene management in rural Gambia. *BMC Public Health*. 2019;19:277.
15. Chandra-Mouli V, Patel SV. Mapping the knowledge and understanding of menarche, menstrual hygiene and menstrual health among adolescent girls in low- and middle-income countries. *Reproductive Health*. 2017;14(1):30.

Table 1. Frequency and Percentage Distribution of Socio-Demographic and Menstrual-Health Variables (N=60)

Variable	Category	f	%
Age	13–14 years	39	65.0
	15–16 years	21	35.0
Religion	Christian	9	15.0
	Hindu	50	83.3
	Muslim	1	1.7
Type of family	Nuclear family	42	70.0
	Joint family	18	30.0
Mother's education	Primary	25	41.7
	Secondary	15	25.0
	Graduate	20	33.3
Father's education	Illiterate	4	6.7
	Primary	21	35.0
	Secondary	14	23.3
	Graduate	21	35.0
Mother's occupation	Private job	9	15.0
	Government job	2	3.3
	Housewife	49	81.7
Father's occupation	Private job	23	38.3
	Government job	3	5.0
	Business	17	28.3
	Farmer	17	28.3
Family income/month	< ₹8,000	2	3.3
	₹8,000–15,000	17	28.3
	> ₹15,000	41	68.3
Residential locality	Urban	6	10.0
	Semi-urban	24	40.0
	Rural	30	50.0
Age at menarche	11 years	15	25.0
	12 years	22	36.7
	13 years	19	31.7
	14 years	4	6.7
Source of information	Mother	43	71.7
	Relatives	8	13.3
	Friends	7	11.7
	Social media	2	3.3
Reaction to first menstruation	Anxious	13	21.7
	Happy	8	13.3
	Shyness	5	8.3
	Discomfort	34	56.7
Duration of menstrual period	Irregular	15	25.0
	Once in 28–30 days	29	48.3
	Once in <25 days	16	26.6
Premenstrual symptoms	Yes	32	53.3
	No	28	46.7
Dysmenorrhoea	Yes	28	46.7
	No	10	16.7
	Occasionally	22	36.7

Table 2. Pre-test and Post-test Level of Knowledge Regarding Menstrual Hygiene (N=60)

Knowledge level	Pre-test f (%)	Post-test f (%)
Poor	16 (26.7%)	0 (0%)
Moderate	24 (40.0%)	0 (0%)
Adequate	20 (33.3%)	60 (100%)
Total	60 (100%)	60 (100%)

Figure 1: Pre-test and Post-test Level of Reported Practice Regarding Menstrual Hygiene (N=60)**Table 3. Effectiveness of Structured Teaching Programme on Knowledge Regarding Menstrual Hygiene (N=60)**

Variable	Pre-test Mean $\pm$ SD	Post-test Mean $\pm$ SD	t-value	p-value	% change
Knowledge	13.47 $\pm$ 3.95	24.28 $\pm$ 0.67	21.73 (df=59)	0.001*	80.25%

Table 4. Effectiveness of Structured Teaching Programme on Reported Practice Regarding Menstrual Hygiene (N=60)

Variable	Pre-test Mean $\pm$ SD	Post-test Mean $\pm$ SD	t-value	p-value	% change
Reported practice	13.78 $\pm$ 1.76	15.25 $\pm$ 1.002	6.04 (df=59)	0.001*	10.67%

Table 5. Significant Association Between Pre-test Knowledge and Selected Demographic Variable (N=60)

Variable	χ^2	df	p-value	Interpretation
Age	11.89	2	0.003	Significant

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