



Original Article

Effect of Educational Program on Awareness and Practices Regarding Menstrual Hygiene among Adolescent Girls

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ABSTRACT

Menstrual hygiene maintenance is very low cost and reliable in Pakistan for adolescents' girls to prevent any dangerous future consequences. Adolescent girl's good awareness and practices is very important in smooth handling and maintain menstrual hygiene. **Objective:** To assess the effect of educational program on awareness and practices regarding menstrual hygiene among adolescents' girls. **Methods:** This was a quasi-experimental study carried out at high school, named Government Girls High School Kahna Nau, Tehsil Model Town Lahore. Data were collected from overall 110 adolescents' girls were studying at Government Girls High School Kahna Nau Tehsil Model Town Lahore about awareness and practices regarding menstrual hygiene. Data were collected using awareness and practices questionnaire regarding menstrual hygiene. Pre and Post-interventional awareness and practices was assessed using the same questionnaire. SPSS 25.0 was used for data analysis. **Results:** Overall 73.6% of the adolescent's girls had reported poor pre-interventional awareness, which enhanced to excellent awareness (100%) after interventions. Similarly, 79.1% of the adolescent girls were reported unsafe practices in pre-intervention phase while 94.5% of the adolescent girls reported safe practices after interventions. There was significant difference among pre and post-interventional awareness ($P < 0.001$) and practices ($P < 0.001$) of adolescent girls regarding menstrual hygiene. **Conclusions:** Adolescent girls reported poor awareness and unsafe practices regarding menstrual hygiene. The findings of the study showed that educational interventions are the key for enhancing the awareness and practices of adolescents regarding menstrual hygiene.

INTRODUCTION

Adolescent girls make one-fifth of the global female population. Adolescent girls have been recognized as a particular stage of their lives that requires the particular and special care [1]. Adolescent girls who reached puberty are menstruating, naturally shedding blood for 1 to 7 days each month from uterus till menopause [2]. Pakistani girls, the average age at menarche is 11 years [3]. Adolescents need to be aware of the many physical and psychological changes that occur. The body begins to grow and develop into physical maturity throughout this time. The dissemination of knowledge about the physical changes that occur during puberty, family planning, conception, and

contraception could give the young women an opportunity to make their own decisions about the reproductive health status [4]. On the other hand, menstrual hygienic practices during menstrual period are essential for reproductive health; lack of awareness results in poor performance, which increases sensitivity to infections of the reproductive tract [5]. Due to taboos and other societal and cultural restrictions, menstruation and menstrual practices are kept hidden, which prevents adolescents from having sufficient understanding of the facts about menstruation and good menstrual hygiene practices [2]. Poor menstrual hygiene awareness and practices cause

about 10% of women worldwide to annually be exposed to genital infections, such as urinary tract infections (UTI) and bacterial vaginosis [6]. Lack of awareness about menstruation hygiene creates the possibility of developing infections like candidiasis, reproductive tract infections, and urinary tract infections (UTI). Menstrual hygiene among adolescents must prioritize maintaining the structural health of the reproductive system [7]. The female population in Pakistan, which is 21.9% of the total, encounters Secondary infertility, is recognized as a woman's inability to conceive a child due to unsanitary practices during the menstrual or postpartum periods [8]. A research in Pakistan's three distinct provinces found that traditional menstrual hygiene management techniques and ideas regarding menstruation are extremely sensitive and deeply embedded in daily life. As a result, our adolescent respondents are frequently hesitant and reluctant to express their opinions on these issues. Similar to younger females, older women were not used to discussing these issues and, in many cases, had come to accept these practices as the standard [9]. A substantial portion of the global population engages in inadequate menstrual hygiene practices. Addressing this issue requires tailored education that aligns with specific needs and imparts standardized guidelines. The aim is to enhance awareness and promote proper practices among adolescent girls for their well-being and future reproductive health. So that the present study was conducted to evaluate the effect of educational program on awareness and practices regarding menstrual hygiene among adolescent girls in high school setting.

METHODS

This was a quasi-experimental study carried out at high school, named Government Girls High School Kahna Nau, Tehsil Model Town Lahore after the approval from Research Ethics Committee of university of Lahore (REC-UOL-478). Data were collected from overall 110 adolescents' girls were studying at Government Girls High School Kahna Nau Tehsil Model Town Lahore about awareness and practices regarding menstrual hygiene. Consents were taken from all participants. In pre-interventional phase the schedule of sessions was provided to the participants. The participants were educated (intervene) in (08) sessions. Different strategies such as Power Point presentation, lectures, discussion, videos presentation and charts, booklets were used. Post interventional data were collected using the same questionnaire about the awareness and practices of adolescents' girls regarding menstrual hygiene at the last week of intervention from each group with two weeks gap. Data were collected using awareness and practices questionnaire regarding menstrual hygiene. Pre-

interventional data were collected and 08-week interventions were applied. Post-interventional awareness and practices was assessed using the same questionnaire. All the adolescent girls studying in high school, who have at least 6-month experience of menses, were enrolled in the study.

RESULTS

The mean age of the participants was 14.75 ± 1.05 years. The majority (38.2%) of the girls of 15 years. This study was conducted on adolescent girls, so from grade 9 we included 50% girls and in the same way from grade 10 we included 50% girls. The majority of the girls were Muslim 99.1%, and only 0.9% from Christianity. 69.1% of the participants had a nuclear family system, 24.5% had a joint family system, and 4.5% were living with single parents. The overall pre-medial awareness score among study participants was 07 and the mean awareness score was 13. The post median awareness score was increased from 07 to 13 and the mean awareness score also increased from 6.38 to 12.46. The results revealed that there was a significant difference between pre and post-awareness scores among adolescent girls regarding menstrual hygiene care as evidenced by (p -value < 0.05). The overall pre-medial practice score among girls was 05 and the mean practice score was 5.52 with an SD of 1.19. While the post median practice scores were increased to 08 and the mean practice score also increased to 8.37. So, the difference between pre and post-practice scores after the educational intervention was 03. The results revealed that there was a significant difference between pre and post-educational intervention, and practice among adolescent girls regarding menstrual hygiene, as evidenced by (p -value < 0.05) (Table 1).

Table 1: Comparison of pre and post-awareness and Practices regarding menstrual hygiene

Variables	Pre	Post	p-value	z-value
	(Median) Mean \pm SD	(Median) Mean \pm SD	p-value	z-value
Awareness Score	(07) 6.38 \pm 1.73	(13) 12.46 \pm 0.62	<0.001	-9.098
Practice Scores	(05) 5.52 \pm 1.19	(08) 8.37 \pm 1.00	<0.001	-9.024

Table 2 indicates that the majority of girls (73.6%) had poor knowledge about menstrual hygiene, and 26.4% had awareness about menstrual hygiene before educational intervention. There was a significant increase in awareness knowledge seen in post-intervention, the awareness knowledge was improved in 100% of girls. The practices among adolescent girls regarding menstrual hygiene in pre-interventional were unsatisfactory in 79.1% of girls. On the contrary, in the post-intervention phase, there was a remarkable difference in girls' practices

towards menstrual hygiene. Majority of the adolescent girls had satisfied practice (94.5%), and only one 5.5% had unsatisfied practice after intervention.

Table 2: Comparison of pre and post-awareness categories (n=110)

Awareness Knowledge Categories	Pre-intervention f (%)	Post-intervention f (%)
Aware	29(26.4)	110(100)
Unaware	81(73.6)	0(0)
Practice Categories		
Unsatisfactory	87(79.1)	06(5.5)
Satisfactory	23(20.9)	104(94.5)

DISCUSSION

Menstruation represents a significant pubertal milestone occurring in adolescent females, characterized by a cyclical process of physiological development and maturation [10]. Menstruation holds significant importance in the realm of a young girl's reproductive well-being. Therefore, it is imperative to provide health education on menstrual hygiene to adolescent girls to effectively manage menstruation and uphold proper menstrual hygiene practices. The present study shows that the average age was 14.75 ± 1.051 years, this is comparable with the study reported by Dixit, 2018 [11], where the majority of the girls between the ages 14 to 16 years, and in another study participants age ranges from 10-19 years [12]. The present study revealed that the initial awareness score of 26.4% of adolescent girls was poor before the implementation of the menstrual health education program. However, the program played a significant role in enhancing their knowledge level after its introduction. The participants' awareness has been greatly improved during the post-intervention phase. The findings exhibited consistency with previous research conducted in India, Egypt, and Saudi Arabia [13, 14]. A study conducted in Manipal, India conducted a sample of 550 adolescent school girls, revealing that a mere 34% of them possessed prior awareness [15]. A study conducted in Nigeria reported that poor awareness knowledge before the educational program was 53.3% in their study which is higher than our study [16]. In our study, the level of awareness increased from 26.4% to 100% after educational intervention. In other studies, it was, 44%-60% [17] and in Bangladesh 51%-82.5% [13]. In the current study, the pretest mean \pm SD of baseline knowledge was 5.52 ± 1.19 , and the median score was 05 which is poor according to El-Mowafy et al., [5]. Similarly, a study conducted on the perception of menstruation and menstrual practices among adolescent girls in high school within a low-resource setting near Bangalore, Karnataka, the average knowledge score was determined 4.04 ± 1.32

[18]. In a study carried out in Ethiopia, a total of 791 adolescent schoolgirls were investigated. The findings revealed that 68.3% of the participants revealed inadequate knowledge regarding menstruation, while 60.3% of the girls displayed substandard menstrual hygiene practices [19]. In the present study, overall practices about menstrual hygiene were unsatisfactory among 79.1% of adolescent girls. After the educational program, it was improved from 79.1% to 94.5%. A study revealed that the practice of using sanitary pads disposal, wrapping pads in either paper (42.8%), or plastic (39.8%), and subsequently discarding it in a designated receptacle, such as a dustbin (77.0%), is a common practice. Concerning personal hygiene practices, it was found that approximately 4.5% of the respondents do not engage in genital hygiene during menstruation, while others solely rely on water for cleansing purposes [20]. This particular approach to hygiene may contribute to the proliferation of bacteria in the genital region, thereby increasing the susceptibility to infections.

CONCLUSIONS

The study revealed that significant differences in awareness levels in pre and post-intervention education programs. Based on the findings of the study, it was determined that adolescent girls indicated a deficiency in adequate understanding regarding menstruation and menstrual hygiene during the pre-program phase. There were substantial improvements in the knowledge and practice of teenagers following the program's implementation. Hence, the educational program demonstrated efficacy in achieving its objectives of effectively altering the understanding and behavior surrounding menstruation.

Authors Contribution

Conceptualization: NR

Methodology: MM

Formal analysis: SM

Writing-review and editing: NR, MMSM

All authors have read and agreed to the published version of the manuscript.

Conflicts of Interest

The authors declare no conflict of interest.

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