Assessment of knowledge, attitude and practice about the menstruation among secondary school girls in Herat, Afghanistan - A cross sectional study

Ahmad Neyazi

Afghanistan Medical Students Association <https://orcid.org/0000-0002-6181-6164>

Gulalai Faizi

Kabul University of Medical Science

Habibah Afzali (✉ habibahamidi1399@gmail.com)

Ghalib University

Mozhgan Ahmadi

Ghalib University

Nosaibah Razaqi

Khyber Girls Medical College

Zahra Frough

Herat University

Sudip Bhattacharya

Independent Public Health Researcher

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Abstract

Background: The experience of menarche is often horrifying for adolescent girls due to their lack of information on menstruation cycle and menstrual vaginal bleeding. The aim of this study was to assess the knowledge and practice about menstruation and menstruation hygiene among secondary school girls in Herat, Afghanistan.

Methods: This cross-sectional study was conducted on 10th March 2021 to 15th April 2021 among secondary schools' girls in Herat, Afghanistan to evaluate the secondary school girls' knowledge on menstruation and menstruation hygiene. Sample size was calculated as 768 girls. Data were evaluated in IBM SPSS program.

Results: In this study 53.3% of girls a good knowledge on menstruation and menstruation hygiene. Only 15.9% of girls who did not experienced menarche at the time of this study, has a good knowledge score on menstruation and menstruation hygiene. 32.9% of the participants took rest and may missed their school during menstrual bleeding. Only 2.1% of the participants' first source of information on menstruation and menstruation hygiene was their teachers. The findings of the study show significant association between the fathers' educational level and girls' knowledge of menstruation and menstruation hygiene.

Conclusion: Girls knowledge on menstruations and menstruation hygiene was found to be lower than other countries. Awareness campaigns regarding the menstruation and menstruation hygiene are recommended to be conducted. However, it would be better to add a subject for secondary school girls so they can learn more and openly on this matter.

Introduction

With almost 1.2 billion people aged between 10 to 19 years old, adolescents form a large segment of the population across the world which is equivalent to 16% of the world's population (1). During adolescence, hormone activities which dawn with the hypothalamus secreting growth hormone and gonadotropin, cause changes both physically and emotionally and initiates pubertal changes in girls (2–3). This is why adolescence is marked as the onset of the first menstruation cycle which is called menarche (4).

During the menstruation cycle, the vaginal bleeding process happens periodically and continues a minimum of 2 days and a maximum of 7 days each month until menopause (5–6). In developing countries, the menstruation cycle is considered unclean, dirty, shameful, and embarrassing and this causes adolescent girls to become a vulnerable group across the world particularly in Afghanistan where a female child is a neglected child (7–9). Menstruation and menstruation hygiene has not been taken seriously in most of the developing countries (10). Poverty and low educational level on reproductive

health are two of the major causes that affect the girls' knowledge and practice on menstruation and menstruation hygiene and her preparedness before experiencing the menarche (11).

The experience of menarche is often horrifying for adolescent girls due to their lack of information on the menstruation cycle and menstrual vaginal bleeding (12). Unfortunately, the lack of knowledge on practicing good menstruation hygiene is the other major problem that exists even among adolescent girls who passed the menarche which puts the girls' health at risk (13). In developing countries, many of the girls miss their classes due to poor menstrual hygiene management tools in schools during their menstrual bleeding (14).

One of the ways that help Afghanistan achieve the sustainable development goals (SDG) 3 – Good health and well-being (ensure healthy lives and well-being for all at all ages), SDG 4 – Quality education (ensure inclusive and equitable quality education and promote lifelong learning opportunities for all), SDG 5 – Gender equality (promote gender equality and empower all women and girls) and SDG 6 – Clean water and sanitation (ensure the availability and sustainable management of water and sanitation for all) is to improve the girls' awareness on menstruation and menstruation hygiene (15).

The aim of this study was to assess the knowledge, attitude, and practice about menstruation and menstruation hygiene among secondary school girls in Herat, Afghanistan.

Materials And Methods

This cross-sectional study was conducted from 10th March 2021 to 15th April 2021 among secondary school girls in Herat, Afghanistan.

Participants in this study were students of seventh to ninth-class schoolgirls living in Herat city of Afghanistan. Totally 768 secondary school girls participated in this research.

The questionnaire used for this study was developed based on a literature review. The questionnaire was designed and prepared in the Dari language. After conducting a pilot study among 30 school girls to check the readability and understanding of the questionnaire, minor changes in the format and design of the choices for questions were applied.

The final questionnaire consisted of three parts: The socio-demographic part which was designed to collect the participants' age, class, mother's educational level, father's educational level, mother's occupation, father's occupation, age at the time of menarche, and the first source of information on menstruation and menstruation hygiene. The second part consisted of seven questions to evaluate the participants' knowledge of menstruation and menstrual hygiene. Each question was scored 1 for the correct answer (total 7 scores). The ones with 4 scores or higher were considered to have a good knowledge level as it is the median score of the whole participants. The third section consisted of six questions to represent the participants' practice or attitude towards their menstruation and menstruation hygiene.

The recorded data was entered into the IBM SPSS version 24.0 and the statistical analysis was done using this software. The simple random sampling method was used to determine the participants. A total of 768 participants studying in seventh to ninth class in different schools of Herat city participated in this study and filled the questionnaire. Variables of each part were presented in category form with their frequency in number and percentage.

Compute variable was used to calculate the total knowledge score of the participants. Cross tabulation was applied to evaluate the association between the participant's level of knowledge on menstruation and menstrual hygiene with their parents' educational level. A-value was considered as 0.05.

Ethical approval

was obtained from the AMSA Medical Research Center Ethical Committee on 7th March 2021. Permission was secured from Herat Education Department or schools through a formal letter and orally. They were briefed on the relevance and objectives of the study. The purpose of the study was explained to each participant. Confidentiality of information was maintained by omitting any personal identifier from the questionnaire. Students were informed of their full right to continue or to ignore any question or even withdraw from their participation at any stage.

Results

The socio-demographic characteristics of the participants are presented in Table 1. Seven hundred sixty-eight participants were included in this research. 22.4% of the participants were in the seventh class, and 40.2% of the participants were in the eighth class. 52.2% of the participants' mothers were illiterate. And only 11.2% of the participants' mothers graduated high school. 17.2% of the participants' fathers were high school graduates and 24.9% of their fathers were graduated from university. 81.4% of the participants' mothers were busy with house jobs while 16.1% of the participants' fathers were unoccupied. 22.9% of the participants have not experienced menarche. 0.3% of the participants have experienced their menarche when they had 9 years old. 8.1% of the participants experienced their menarche when they had 14 years old.

Table 1
Characteristics of participants

Characteristic	Category	(%)
Age group	11–14 years old	60.7
	15–18 years old	39.3
Class	Seven	22.4
	Eight	40.2
	Nine	37.4
Mother's educational level	Illiterate	52.2
	Primary school	10.9
	Secondary school	13.8
	High school	11.2
	University	11.8
Father's educational level	Illiterate	27.3
	Primary school	13.0
	Secondary school	17.6
	High school	17.2
	University	24.9
Mother's occupation	Permanent	13.4
	Contract	1.3
	House wife	81.4
	Retired	.4
	Other	3.5
Father's occupation	Permanent	27.7
	Owner	8.5
	Contract	27.2
	Unoccupied	16.2
	Retired	1.0
	Other	19.4

Characteristic	Category	(%)
Age at the time of menarche	Did not experience	22.9
	Nine	.3
	Ten	3.1
	Eleven	7.9
	Twelve	28.0
	Thirteen	29.7
	Fourteen	8.1

Participants' knowledge of the menstrual cycle and menstrual hygiene is presented in Table 2. Of all the participants in this study, 61.2% of them did answer that menstruation is a physiological process and 5.9% of them answered that menstruation is a pathological process. 64.8% of the participants answered that the source of menstrual blood is the Uterus. 8.1% of the participants answered that the menstrual blood source is the Stomach. 64.1% of the participants answered that the normal cycle length is 21 to 35 days. And 19.4% of them answered that the menstruation cycle will continue forever. The first source of information before or after the menarche for 56.5% of the participants was their mother.

Table 2
Participants Knowledge on menstrual cycle

Variables	Category	N	(%)
What is menstruation	Physiological process	470	61.2
	Pathological process	45	5.9
	Don't know	253	32.9
Source of menstrual blood	Uterus	498	64.8
	Stomach	62	8.1
	Don't know	208	27.1
Normal cycle length	21–35 days	492	64.1
	More than 35 days	40	5.2
	Don't know	236	30.7
Normal cycle bleeding length	Less than 2 days	53	6.9
	2–7 days	421	54.8
	More than 7 days	118	15.4
	Don't know	176	22.9
Will the period continue forever	Yes	149	19.4
	No	462	60.2
	Don't know	157	20.4
Healthy diet during menstrual cycle exits	Yes	495	64.5
	No	141	18.4
	Don't know	132	17.2
Ever hear about menstruation before menarche	Yes	301	39.2
	No	467	60.8
Source of information	Mother	434	56.5
	Sister	154	20.1
	Friends	12	1.6
	Ancestors	8	1.0
	Teacher	16	2.1
	No one	144	18.8

Variables	Category	N	(%)
Knowledge score (Girls who passed menarche)	Good	381	64.4
	Poor	211	35.6
Knowledge score (girls who did not pass menarche)	Good	28	15.9
	Poor	148	84.1
Overall Knowledge score	Good	409	53.3
	Poor	359	46.7

Participants' practice during menstruation is presented in Table 3. Of all the participants, 36.7% of them mostly felt pain during their period. 9.0% of the participants used an OTC pain reliever to relieve their pain during their menstruation. 10.4% of the participants exercise to relieve the menstruation bleeding pain. 61.1% of the participants preferred to use Pads to manage and absorb the menstrual discharge. 60% of the participants preferred using the absorption materials of menstrual discharge for less than 4 hours. 53.6% of the participants mostly sanitize the absorption materials of menstrual discharge.

Table 3
Participants attitude and practice during menstruation

Variables	Category	N	(%)
Feeling pain during period	Mostly	282	36.7
	Rarely	215	27.0
	Never	123	16.0
	No response	148	19.3
Things you do during menstrual bleeding to relief period pain and its effects	Exercise	80	10.4
	Use heating pad	94	12.2
	OTC pain reliever	69	9.0
	Rest	253	32.9
	Other	108	14.1
	No response	164	21.4
Materials use for absorption of menstrual discharge	Pads	469	61.1
	Cloths	66	8.6
	Both	82	10.7
	Other	7	0.9
	No response	144	18.8
Length of usage of absorption materials of menstrual discharge	Less than 4 hours	466	60.7
		97	12.6
	4–6 hours	41	5.3
	More than 12 hours	164	21.4
	No response		
Sanitize menstruation discharge absorption materials	Mostly	412	53.6
	Rarely	124	16.1
	Never	92	12.0
	No response	140	18.2
Do you wash yourself during menstrual bleeding	Yes	325	42.3
	No	303	39.5
	No response	140	18.2

The association between participants' knowledge of menstruation and their mother's educational level is shown in Table 4. 58.2% of the participants' knowledge on menstruation and menstruation hygiene whose mother had college or higher educational level was found to be good.

Table 4
Association between participants' knowledge of menstruation and their mother's educational level

Mother's educational level	Category	N	(%)
Illiterate	Good	218	54.4
	Poor	183	45.6
Primary school	Good	37	44.0
	Poor	47	56.0
Secondary school	Good	58	54.7
	Poor	48	45.3
High school	Good	43	50.0
	Poor	43	50.0
College	Good	53	58.2
	Poor	38	41.8

P-value = 0.352

Association of the participants' knowledge on menstruation and their father's educational level is presented in Table 5. 46.7% of Participants with illiterate fathers had good knowledge on menstruation and menstruation hygiene. 63.4% of participants with their father's educational level of college or higher had good knowledge on menstruation and menstruation hygiene.

Table 5
Association between participants' knowledge of menstruation and their father's educational level

Father's educational level	Category	N	(%)
Illiterate	Good	98	46.7
	Poor	112	53.3
Primary school	Good	51	51.0
	Poor	49	49.0
Secondary school	Good	60	44.4
	Poor	75	55.6
High school	Good	79	59.8
	Poor	53	40.2
College	Good	121	63.4
	Poor	70	36.6

P-value = 0.001

Discussion

Menstruation is a normal physiological process in females that is a part of pubertal development (16, 17). In this cross-sectional study among secondary school girls in Herat city, only 39.2% of the participants heard about menstruation before they experience menarche. A study by Funmito Omolola Fehintola et, al. among secondary school girls in Nigeria showed that 96.4% of girls heard about menstruation before experiencing menarche (17). In another related study by Shivaleela P. Upashe et, al. in Western Ethiopia, 79.3% of girls heard about menstruation before menarche while Teketo Kassaw Tegegne et, al. study result shows that 86.7% of girls in Northeast Ethiopia heard about menstruation and menstruation hygiene before menarche (18, 19). In the general population to be polite, no one takes the name of genital systems parts, although it is part of the human body's it would be considered as impoliteness. According to this study result, most of the girls do not know anything about menstruation when they experience menarche. This makes the menarche a bad and fearful experience for them.

In general, 53.3% of the participants of this study had a good knowledge level on menstruation and menstruation hygiene. While 81.4% of the participants who did not experience menarche had poor knowledge of menstruation and menstruation hygiene. This study also shows that 35.6% of the girls who experienced menarche had poor knowledge of menstruation and menstruation hygiene. Although 38.8% of the participants did not know that menstruation is a physiological process of the female body and 35.2% of them did not know that the source of blood in the menstrual cycle is the uterus. The study by Teketo Kassaw Tegegn et, al. showed that 51.4% of schoolgirls in Northeast Ethiopia had a good

knowledge score on menstruation hygiene. Another study by Hussein Mohammed Gena in Eastern Ethiopia shows that 58.3% of schoolgirls had a good practice score on menstruation and menstruation hygiene (19, 20). Low level of knowledge of parents, thinking of menstruation as a shame are considered the main causes of the lower level of knowledge among girls. However, considering other country's girls' knowledge scores on menstruation and menstruation hygiene, the knowledge score of the girls in this study who did not experience menstruation is surprisingly bad.

Almost one-third (32.9%) of the participants replayed that they take rest and may not even attend school during menstrual bleeding. Compared to a study by George Miiro et, al. that shows 20% of schoolgirls miss at least one day of their school during menstrual bleeding and another study by Aditi Vashisht et, al. shows that 40% of school girls missed their school during their last period. Our finding was almost in line with the study by Aditi Vashisht et, al. in Indian, in missing schools during menstruation. The reason for this match could be sharing the same beliefs and myths about menstruation among the general population of Afghanistan and India (21, 22). According to studies missing school is due to a lack of menstruation hygiene management instruments and toilets (23–30).

Mothers' educational level association with girl's menstruation knowledge score was not found significant in this study. Mothers' educational level association with girl's menstruation knowledge score was not significant. However, in families with a father's higher educational level, a girl's knowledge score on menstruation was found to be significant. Considering only 2.1% of the participants of this study's primary source of information was teachers, it can be one of the reasons why the association between mothers' educational level and girl's knowledge score on menstruation is not significant. This shows the lack of awareness campaigns on the need to talk about menstruation in schools.

Conclusion

Only half of the participants had good knowledge of menstruation and menstruation hygiene. Which is not an encouraging sign at all. Our research finding shows, the association of good knowledge on menstruation and menstruation hygiene with their parents. Awareness campaigns/counselling sessions in the schools regarding the menstruation and menstruation hygiene are recommended to be conducted involving their parents. However, it would be better to add a subject regarding menstrual hygiene in the curriculum for secondary school girls so they can learn more and discuss openly on this matter.

Declarations

Author contributions

All authors made substantial contribution to conception and design, data collection and data entry, data analysis and their interpretation, drafting the article and giving the finale approval of the version to be published, and agreed to be accountable for all aspects of work.

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