

Knowledge and Practice Related to Menstrual Health and Hygiene in Female Athletes– A Cross-Sectional Study

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Abstract

Background: Female athletes have to manage regular training along with the pain and discomfort felt while they are having their menstruation. The study assesses level of menstrual health and hygiene knowledge and practice and it will help to take necessary steps for betterment of female athletes.

Objective: To assess the knowledge and practice of menstrual health and hygiene among female athletes.

Method: Cross sectional observational study; data were taken from various institutes and academies of Anand and Ahmedabad (Gujarat). A semi-structured validated questionnaire was used. Female athletes of age 15-21 are included in the study. Willing participants were given information about the study and obtained consent form. Descriptive statistics are used to summarize demographic variables. Results are represented as proportions.

Results: For the level of knowledge related to menstrual health and hygiene; more than 50% have good knowledge, about 3% participants have poor knowledge. Regarding the practice related to menstrual health and hygiene, majority of the participants use sanitary napkins as primary management material for menses and disposal is done majorly in dustbins.

Conclusion: Female athletes prefer to take part in sports even during their menses. Female athletes manage menses during sporting events by mind diverting, proper padding and taking pain killers.

Key Words: Female athlete triad, knowledge, menstrual health and hygiene, myths, practice

Introduction

Menstruation indicates the beginning of reproductive life in a female's life but it is considered as dirty in the Indian culture and various cultures worldwide.¹ It is important for females to have the knowledge, facilities and supporting cultural environment to cope up with their menstruation hygienically and with dignity.² The unhygienic practices during menstruation can lead to consequences like pelvic inflammatory diseases or even infertility.³ Majority of the female athletes do not know the consequences of menstrual problems.⁴ Cases of

markedly delayed menarche, and/or high prevalence of abnormal, irregular or absent menstrual cycles are seen in athletes (female athlete triad).⁵

Materials and Methods

Study design: Cross sectional observational study

Study setting: Various institutes and academies of Anand and Ahmedabad were approached for data collection.

Sampling Technique: Convenient sampling

Sample size collected: 61

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Eligibility Criteria:

• Inclusion criteria

- Age: 15-21 years
- Girls who have attended menarche.
- Who play any sport and participate at district / state / national level

Outcome measure:

A self-structured questionnaire was used to check knowledge and practice for menstrual hygiene management. The content validity of the questionnaire was found 0.908 after pilot testing with expert. The questionnaire is attached in the annexures.

Procedure:

ü The research proposal got permission from the scientific research committee and institutional ethical committee.

ü Prior permissions from the data collection sites were obtained. Consent was obtained from the participants whose age was above 18 years. Assent from

the participant and consent from one of their parents was obtained for participants whose age was below 18 years.

ü The willing participants were given the questionnaire of ‘knowledge and practice related to menstrual health and hygiene’.

ü Each of the participants was explained the purpose of study and then the data was collected.

Data analysis:

Descriptive statistics were used to summarize demographic variables. The knowledge and practice questionnaire is evaluated based on the answers of the questions and recorded answers are represented as percentage. Each question with correct answer was given 1 mark and with wrong answer 0 mark.

Results

Demographic details

As shown in the table 1, all the 61 participants were asked for their age, years since they achieved menarche, years since they play the sport/sports.

Table 1. demographic details

Variables in years	Mean ± S.D.
Age	19.93 ± 1.29
Years since onset of menarche	6.61 ± 2.42
Years since started playing sports	5.80 ± 3.24

Participants were asked about the sports they play and their level of participation. One or more of the various sports were played by the participants from which most of the participants were playing football, cricket, badminton (26.23%, 24.59% and 24.59% respectively), other sports played were kabaddi (16.39%), karate (16.39%), athletics (14.75%), basketball (13.11%)

followed by volleyball (6.56%), running (4.92%), swimming (4.92%), kho-kho (4.92%), tennis (3.28%), taekwondo (3.28%), long jump (3.28%) & hockey (1.64%). Also the level of their participation was asked. From total 61 participants 22 (36.07%) played at District level, 21 (34.43%) at State level and 18 (29.51%) at National level.

Details of menstruation

The participants were asked about their menstruation like regularity, missing any menstrual cycles in last 3 months, pain during menstrual cycle. The participants were also asked if they have any menstrual problem and

if so, have they ever consulted a doctor for the same or not. They were asked about any problem/diagnosis that they got to know after consultation. The details were mentioned in form of frequency and percentage in table 2.

Table 2. menstrual details of participants

Variable		Frequency (n=61)	Percentage
Regular	Yes	45	73.77 %
	No	16	26.23 %
Missed menses in last 3 months	Yes	7	11.48 %
	No	54	88.52 %
Menstruation	Painful	26	57.38 %
	Pain free	35	42.62 %
Have any menstrual problem	Yes	14	22.95 %
	No	47	77.05 %
Have consulted for the problem	Yes (11/14)	11	78.57 %
Problem/diagnosis	PCOD/Hormonal disturbance	4	36.36 %
	No abnormality detected	3	27.27 %
	Irregular menses	2	18.18 %
	Heavy flow	1	9.09 %
	Painful menstruation	1	9.09 %

Education of participants and their parents

Current education of participants, education qualification of their mother and father were asked. From total 61 participants 57 (93.44%) were undergraduate and only 4 (6.56%) were from higher secondary. Parents of the participants were Graduate and above (65% - 71%), Higher secondary (23% - 26%), primary (6.5% - 8%).

Myths regarding menstruation

The participants were asked if they knew any myths related to menstruation, if so, do they follow the same

or not and the description of myths. Surprisingly 25 (40.98%) out of 61 participants were not practicing any myths. 25 (40.98%) of them practiced not going to temple during menstruation. 4 (6.56%) practised not entering kitchen, 3 (4.91%) not washing hair, 3 (4.92%) not touching pickle, 1 (1.64%) not going to other’s home.

Primary source of information about menstruation

Participants were asked from whom they received primary information regarding menstruation. 87% of them received information from their mothers, followed

by Teacher, friends, grand-mother and internet.

Level of knowledge about menstrual health and hygiene among female athletes

For assessing level of knowledge about menstrual health and hygiene the questionnaire included questions

about physiology of menses. The questionnaire consisted questions about female athlete triad and its signs and symptoms also. The correct answers were given 1 point each and scoring was done on the basis of correct answers given. The knowledge level is divided in three levels: good, average and poor. The results are shown in table 3.

Table 3. level of knowledge

Level of knowledge	Frequency (N=61)	Percentage
Good (>75%)	32	52.46 %
Average (50%-75%)	27	44.26 %
Poor (<50%)	2	3.28 %

Practice regarding menstrual health and hygiene among female athletes

Participants were asked if they prefer to participate in the sports during menses. 38/61 (62%) prefer to take part in sports even during their menstruation, whereas 23/61 (38%) do not prefer to take part in sports during their menstruation.

Materials used for management of menstruation

All the participants were asked to rank the materials commonly used by them. All the participants answered

sanitary napkins as first material used for management and nine participants opted among new cloth, old cloth and tampon as second commonly used material by them.

Management of menses during competition and during training session

Participants were asked about how they manage their menstruation during their competition and during training respectively. Table 4 and 5 shows the results about how the participants manage their menstruation during their competition and during training respectively.

Table 4. management of menses during competition

Management of menses during competition	Frequency (n=61)	Percentage
Take pain killer	9	14.75 %
Avoid participation	15	24.59 %
Other	37	60.66 %
Take drug to delay menses	1	1.64 %
Use hot pack and take rest	1	1.64 %
Have chocolates, juices for energy	2	3.28 %
Proper padding	3	4.92 %
Mind diverting	8	13.11 %
Nothing	22	36.07 %

Table 5. management of menses during training session

Management of menses during training session	Frequency (n=61)	Percentage
Take pain killer	6	9.84 %
Skip training session	14	22.95 %
Other	41	67.21 %
Avoid high intensity training	2	3.28 %
Have chocolates, juices for energy	2	3.28 %
Mind diverting	3	4.92 %
Proper padding	4	6.56 %
Nothing	30	49.18 %

Method of cleaning genital area

The participants were asked what method they use to clean the genitalia. 50/61 (82%) participants use soap and 11/61 (18%) participants use only water to clean genitalia during menses.

Method of disposal of the used menstrual management materials

The participants were asked how they disposed the materials they used for their menstruation. 57/61 (93%) participants dispose used management materials in dustbin whereas only 4/61 (7%) participants burn the management material used during menses.

Discussion

Regarding level of knowledge about menstrual health and hygiene

More than half of the participants have scored > 75% marks in the knowledge section and achieved good level of knowledge and about 44% of participants have scored average level of knowledge with score between 50% to 75% and only about 3% participants have poor level of knowledge with score of < 50%. This contradicts with the findings of previous researches about menstruation where they showed lack of correct knowledge among adolescent girls of various rural and some of the urban areas. A study found that only about 43% females have good knowledge whereas 57% have poor knowledge.⁴ The athletes with average or poor knowledge score can be given reading materials, focused group discussion,

audio-visual aids etc for improving knowledge. This in turn will help in their performance in various sports they are participating and winning medals for their districts, states or nation at large.

Regarding practice related to menstrual health and hygiene

For practicing menstrual health & hygiene, primary management material for menstruation used by female athletes are sanitary napkins. Only few participants have opted for clothes and tampons as second option along sanitary napkins. Contrary to this results a study done in Nagpur district showed that about 49% adolescent girls use sanitary pad, 46% adolescent girls use old clothes and 5% use new cloth as management material for menses.⁸ This implies that most of the female athletes follow good practice for maintaining menstrual health & hygiene, which eventually prevent them to develop any reproductive tract infection (RTI) in future. While female athletes participating in events, few take pain killers or allied health measures like diversion therapy, hot packs etc... About 1/4th of female athletes either do not participate in events. The similar practice female athletes do while undergoing training during menses.⁷

Regarding source of information related to menstruation

Primary source of information about menstruation in majority of the female athletes is mother (n=53, 87%). Similar studies done previously also shows as mothers being the primary source of information

related to menstruation.⁶ Other than mother; teachers, grandmother, friends or even internet is found to be the source for providing information on this subject. So if we can improvise the knowledge about menstrual health & hygiene in totality among society, would be a great help to all of the female population at large.

Regarding the myths being practised

Results show that about 41% of female athletes do not follow any myths, which was quite surprising to the society we normally live in. About 41% do not go to temple and 6.5% females do not enter the kitchen. A similar study shows major difference in the results regarding myths that 86% do not go to religious places or attend religious function and 93% follow practice of not entering the kitchen. The separate facilities are being made and practiced as per many of the studies.⁴

Limitation

- The study has small sample size and various domains of knowledge have not been considered for the study

Future Recommendation

- Comparison between different groups of female athletes can be studied as the level of knowledge and practices may vary; the same can be explored.

- Knowledge and practice can be improvised by providing materials like booklets, audio-visual materials after assessing their knowledge and practice at the basic level. The efficacy of the same materials can be assessed after certain duration of time.

Ethical Clearance- Taken from ARIP-INSTITUTIONAL ETHICS COMMITTEE (2017-2019)

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Conflict of Interest- Nil

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