SPORT WORKOUT AND PARTICIPATION ASSOCIATED MENSTRUAL PROBLEMS AMONG ADOLESCENT ATHLETES OF ALIGARH

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ABSTRACT

Background: *Menstruation and related problems are issues of great importance for adolescent athletes. The concern becomes more crucial when it comes to the sports participation of athletes. The social and cultural setup in India leaves very less space for adolescent athletes to talk freely about menstruation. This raises a great concern regarding menstruation from health perspective.*

Objectives: *To study sport workout and participation associated menstrual problems among adolescent athletes.*

Materials and Methods: *A questionnaire based survey study was carried out during open sports meet 2017 in Aligarh, India. A sample of 158 girl athletes participated in this study. Data was collected using a 23-item semi structured questionnaire. Data collection lasted for two weeks and analysis was done using descriptive statistics, percentages and proportions.*

Results: *Showed that the mean age of menarche was 13.5 years. 37.19% had irregular menstrual cycle. 73.23% (20.11% severe and 53.12% mild) athletes had abdominal pain and cramping during menstruation. While, mere, 7.98% athletes seek any medical practitioner or OB-GYN about their menstruation problems. 56.97% athletes think that sports training and participation effect their menstrual periods. 49.78% reported that diet provided to them was not well balanced and 59.09% reported that imbalanced diet had caused many problems like that of irregular menstrual periods, dizziness, sleeping difficulties, mood swings, constipation and feelings of depression to them.*

Conclusion: *The knowledge of the participants of this study about the menstruation and related problems was very weak and did not know the safe maintenance procedures. They also have the ill faith that sports participation hampers the menstrual periods. Besides this the significant weight loss could be due to training load and dietary imbalances. This seems to have had played major role in the irregularity of the menstrual cycles.*

Key Words: *Adolescent, Menstruation, Athletes, India*

INTRODUCTION

As female adolescents reach the age of puberty, they need to adjust to physiological changes such as menstruation. Menarche is the first menstrual period or first menstrual bleeding, almost remembered by every

girl. The outset of menstruation is considered as the most striking event in the whole process of female puberty (UNICEF, 2011). Normal menstrual pattern is such that age at menarche is less than 16 years, length of menstrual cycle between 24-32 days, the length of flow 3-7 days and amount of flow ≤80mL (Sachar, 1997).

Menstruation is an inevitable physiological experience in female, but associated with a lot of inconveniences, ranging from irritability to weakness and a breakdown in the health of the woman most especially among teenagers and youth. Menstruation is still a taboo in India and it is common for people across society to feel uncomfortable about the subject (MHM, 2015). Given how much of a taboo topic menstruation still is both in professional sports and in general, it is extremely important to have such open and healthy conversations. Having a period during tournaments, especially athletic, can be difficult. Cramps and fatigue aside, there are the practical issues of changing the pads or tampons. Athletes from highly intensive sports like gymnastics or athletics are also prone to developing athletic amenorrhoea, or frequent missed periods, which can lead to reduced fertility and loss of bone density, if untreated (Nair, 2017). Marathoner, Kiran Gandhi (2015) said that better understanding of monthly periods is simply a part of helping female athletes perform better and more comfortably. For athletes, gaining a better understanding of menstruation could be the difference between success and failure is the difference between competing with confidence and competing with dread (Lewis, 2017).

Previous studies also show a high prevalence of one or more types of menstrual irregularity among female athletes and that these problems affect the women's social activities and attendance in the training (Prasad, et al., 1972; Desai, et al., 1990; Balachandar, et al., 1993). For example, studies have associated menstrual disorders with one of those common causes of psychological stress, regular absenteeism among young women in schools, work places, sports participation and other public functions (Drakshavani, et al., 1994; Sachar, 1997; Prasad, et

al., 1972; Sathyavathi, et al., 1979; Desai, et al., 1990; Vasanthi, et al., 1994).

Although the, sportswomen in the West and European countries have talked openly about menstruation in recent years. But in Asian countries like India athletes still consider it a taboo to discuss menstrual problems with their coaches or experts. This menstrual history questionnaire was utilised to study sport workout and participation associated menstrual pattern and problems among adolescent athletes in Aligarh so that the menstrual health of the budding athletes could be traced and remedies could be provided thereupon.

Materials and Methods

Study Design and Settings

The study tool was a carefully designed, tested, self-structured questionnaire developed by the researchers to elicit information aimed at meeting the criteria of the purpose for the study. It is made up of two (2) sections: A and B, Section A obtains information about menstrual disordered, and details on menstrual history included age of menarche, average length of menstrual cycle, duration of menstrual flow, any passage of clots during periods, occurrence of dysmenorrhoeal and if present, is it severe enough to skip training, as well as any related sports absenteeism, or any need to take medications like analgesics and any perception of premenstrual symptoms were studied and analyzed. On the other hand, section B included food frequency checklist.

Data Collection and Analysis

Data was collected from the athletes using a self-structured questionnaire over a period of two weeks. The researcher explained the purpose of the study to the girl athletes and verbal consent was obtained from them. Briefing was done to the athletes regarding the questionnaire provided to them. Information on various aspects of menstruation was obtained from adolescent athletes who have attended menarche by validated questionnaire. The information about personal details, age of menarche in years, menstrual cycle pattern and whether they experience any menstrual problems was collected. They were also asked to indicate whether

they had sought medical advice or treatment for their menstrual problems. All the data were collected through questionnaire. Data was analyzed using descriptive, percentages and proportions analysis.

Results and Discussion

Menstrual Pattern

Table 1:
Shows respondent percentage for Mean Age of menarche of adolescent athletes

Statement	Respondent Percentage
Mean Age of menarche	13.5
• Lower Age	12
• Upper Age	15

The mean age of menarche was 13.5 with 12 and 15 years being the lowest and highest age for attaining menarche respectively.

Figure-1:
Represents the respondent percentage for Mean Age of menarche of adolescent athletes.

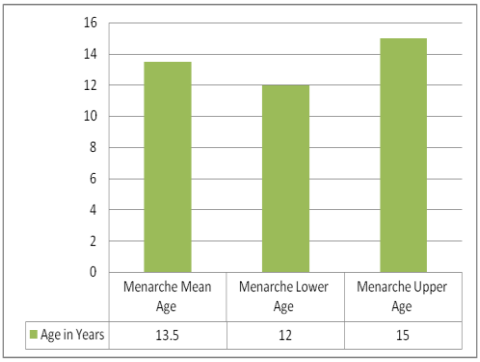


Table-2:
Shows respondent percentage for duration of blood flow of adolescent athletes

Statement	Respondent Percentage
Duration of blood flow	
• Within 5 days	72.06%
• Prolonged menses (>5 days)	27.94%

Overall duration of blood flow was within 5 days in 72.06% of athletes with 27.94% having prolonged menses (>5 days).

Figure-2:
Represents the respondent percentage for duration of blood flow of adolescent athletes

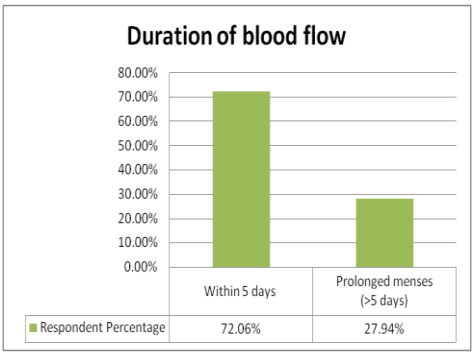


Table-3:
Shows respondent percentage for heavy menstrual flow of adolescent athletes

Statement	Respondent Percentage
Menstrual flow	
• Heavy	15.40%
• Moderate	66.82%
• Light	17.78%

15.40% athletes had heavy menstrual flow while 17.78% athletes had light menstrual flow and 66.82% had moderate menstrual flow.

Figure-3:
Represents the respondent percentage for heavy menstrual flow of adolescent athletes

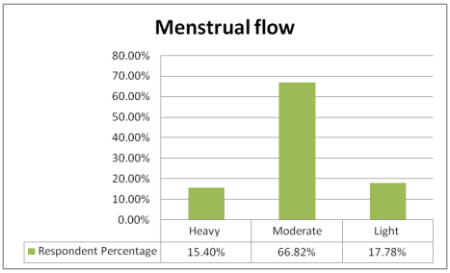


Table-4:
Shows respondent percentage for abdominal pain and cramping during menstrual cycle of adolescent athletes

Statement	Respondent Percentage
Abdominal Pain and Cramping during menstruation	
• Great deal	20.11%
• Slightly	53.12%
• Not at all	26.77%

20.11% athletes reported great deal of abdominal pain and cramping during menstrual cycle, while 53.12% reported slightly pain and 26.77% did not have any symptoms during menses.

Figure-4:
Represents the respondent percentage for abdominal pain and cramping during menstrual cycle of adolescent athletes

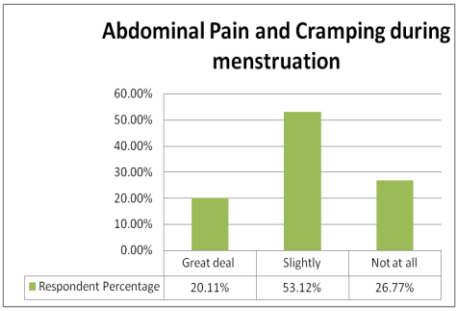
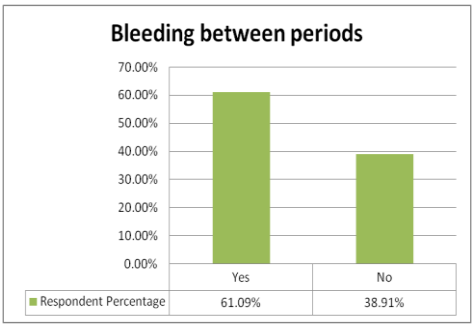


Table-5:
Shows respondent percentage for bleeding between periods of adolescent athletes

Statement	Respondent Percentage
Bleeding between periods	
• Yes	61.09%
• No	38.91%

61.09% athletes reported that they had bleeding between periods while 38.91% had not.

Figure-5:
Represents the respondent percentage for bleeding between periods of adolescent athletes



Menstrual and other related Problems

Table-6:
Shows respondent percentage for Regularity of cycle of adolescent athletes

Statement	Respondent Percentage
Regularity of cycle	
• Regular	62.81%
• Irregular	37.19%

Most of them 62.81% had regular menstrual cycle and 37.19% had irregular cycle.

Figure-6:
Represents the respondent percentage for Regularity of cycle of adolescent athletes

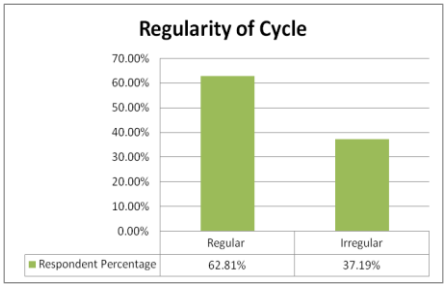


Table-7:
Shows respondent percentage for duration of the menstrual cycle of adolescent athletes

Statement	Respondent Percentage
Duration of the menstrual cycle	
• 28-35 Days	51.21%
• 21-27 Days	22.10%
• Very irregular	26.69%

51.21% athletes had menstrual period in the last year every 28-35 days gap in between, 22.10% had 21-27 days gap in between but 26.69% athletes had very irregular cycles and in some cases skipped for several months.

Figure-7:
Represents the respondent percentage for duration of the menstrual cycle of adolescent athletes

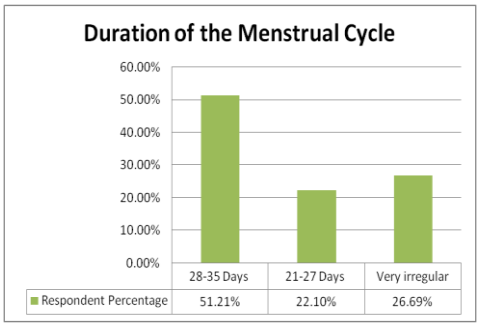


Table-8:
Shows respondent percentage for number of periods in last 12 month of adolescent athletes

Statement	Respondent Percentage
Number of periods in last 12 month	
• 12 Periods	51.65%
• < 12 Periods	38.25%
• >12 Periods	10.10%

51.65% athletes had regular period throughout year while 38.25% athletes had less than 12 periods in a year and 10.10% athletes had more than 12 periods in a year.

Figure-8:
Represents the respondent percentage for number of periods in last 12 month of adolescent athletes

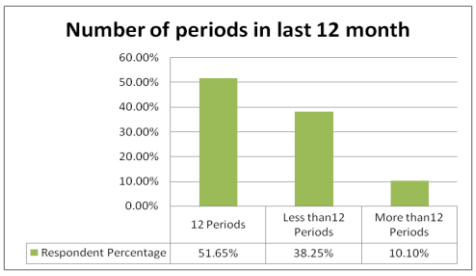


Table-9:
Shows respondent percentage for weight consideration by athletes of adolescent athletes

Statement	Respondent Percentage
Weight consideration by athletes	
• Just right	64.34%
• Underweight	16.31%
• Overweight	19.35%

Majority of the athletes 64.34% had just right weight, while 16.31% athletes were underweight, 19.35% athletes were overweight.

Figure-9:
Represents the respondent percentage for weight consideration by athletes of adolescent athletes

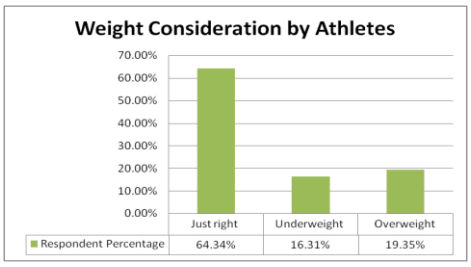


Table-10:
Shows respondent percentage for Missing Workout or Physical Activity/Competition of adolescent athletes

Statement	Respondent Percentage
Miss Workout or Physical Activity/Competition	
• Sometimes	63.61%
• Always	15.04%
• Never	21.35%

63.61% athletes reported that they take pain medication during menstruation, sometimes miss practice and reduce level of physical activity during menstruation, 15.04% athletes reported that they don't participate in any training session or competition during menstruation and take leave from classes also and the rest of 21.35% athletes reported that they didn't take pain medication, don't miss training classes and school.

Figure-10:
Represents the respondent percentage for Missing Workout or Physical Activity/ Competition of adolescent athletes

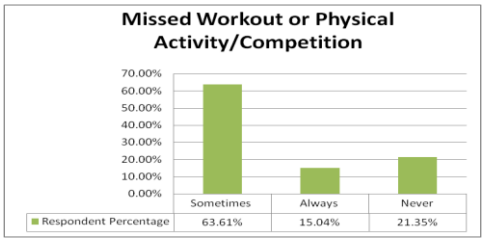


Table-11:
Shows respondent percentage for significant weight loss or gain of adolescent athletes

Statement	Respondent Percentage
Significant weight loss or gain	
• Gain	29.15%
• Loss	25.64%
• Remain same	45.21%

25.64% athletes experienced significant weight loss while 29.15% had experienced significant weight gain and 45.21% remained of same weight.

Figure-11:
Represents the respondent percentage for significant weight loss or gain of adolescent athletes

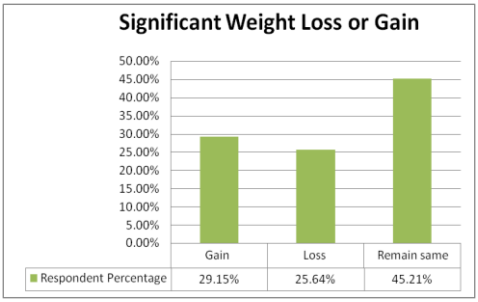


Table-12:
Shows respondent percentage for Sport activity/training of adolescent athletes

Statement	Respondent Percentage
Sport activity/training	
• Basically stayed	34.58%
• Decreased	43.58%
• Increased	21.84%

The sport activity of 34.58% athletes had basically remained the same, 43.58% had decreased sport activity and 21.84% had increased sport activity and training because of right guidance.

Figure-12:
Represents the respondent percentage for Sport activity/training of adolescent athletes

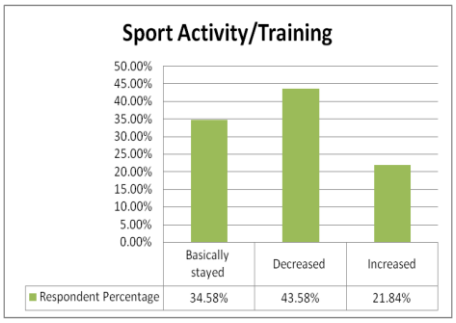
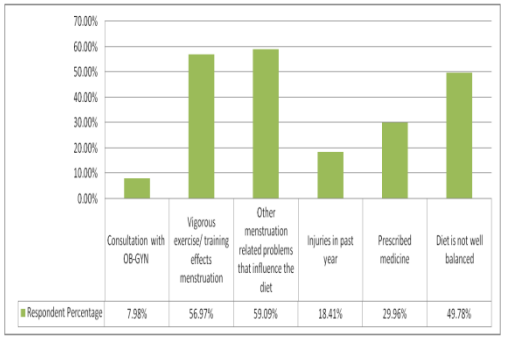


Table-13:
Shows respondent percentage for Menstrual and other related Problems of adolescent athletes

Statement	Respondent Percentage
Consultation with OB-GYN	7.98%
Vigorous exercise/ training effects menstruation	56.97%
Other menstruation related problems that influence the diet	59.09%
Injuries in past year	18.41%
Prescribed medicine	29.96%
Diet is not well balanced	49.78%

1. Only 7.98% athletes seek any medical practitioner or OB-GYN about their menstruation problems while the huge 92.02% does not seek any advice.
2. 56.97% athletes think that vigorous exercise/ training effects their menstrual periods.
3. 18.41% athletes had experienced injuries in the past year.
4. 59.09% athletes feel that they have certain problems which influence their diet like irregular menstrual periods, dizziness, sleeping difficulties, mood swings, constipation and feelings of depression.
5. 49.78% athletes feel that their diet is not well balanced.
6. 29.96% athletes take prescribed medication (vitamins, minerals, herbs).

Figure-13:
Represents the respondent percentage for Menstrual and other related Problems of adolescent athletes



Discussion

As evident from the results of this study majority of the participant athletes are suffering from menstrual problems like that of weight gain and loss, significant irregularity in the periods, pain during periods, increase and decrease in the number of periods in a year. Ample evidence is available that girls may begin to skip periods if they are not getting adequate nutrition for the amount of exercise they do. These findings are supported by various previous studies (CYWH, 2017;

Kishali, 2006; Lewis, 2017; Dusek, T. 2001). Besides that the athletes does not have a good understanding of menstrual disorders and discomfort associated with it. The belief of the athletes that exercise badly affects the menstrual cycle may be the leading cause for the significant absenteeism in the workout and sports participation as reported by the participants that their training and sports participation has decreased (Telegraph, 2015; McIntosh, 2015; Loucks, 1990).

Doctor's consultation for prescription of drugs for the management of menstrual disorders is not considered mandatory by the athletes. Lack of proper information and not seeking treatment for menstrual problems can lead to several adverse reproductive health outcomes on the prospective lives of adolescent athletes.

Conclusion

Present study concluded that menstrual problems are highly prevalent among athletes and they have lot of misconceptions regarding menstruation. Factors such as young age, lack of self care knowledge known to have an effect among respondents of this study. Improvement of menstrual health will not only help in improving the sports performance of the athletes and their self esteem, but also will prevent future problems like Polycystic Ovarian Disease, obesity and infertility. Hence, the athletes should be provided with adequate knowledge about the menstrual health.

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