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Assessment of Knowledge and Health Practices Adopted by Adolescent Sports Girls During Menstruation

Prajapati Varsha, Singh Vikram* and Onima Reddy T.

Department of Physical Education, Faculty of Arts, Banaras Hindu University, Varanasi 221005, Uttar Pradesh, India

**Corresponding Author*

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Abstract: Girls who are just entering adolescence are unaware of the proper hygiene and health practices to follow for a longer, healthier life. This investigation was performed to analyze the awareness and health practices adopted by the adolescent sports girls during the menstruation. The total 60 subjects (age 15-18 years) were selected for present study. Current study was performed using questionnaires to gather socio-demographic, menstruation and menstrual health-hygiene related data. Results unveiled that 30% subjects had no idea about menstruation before their first menarche. 19% of girls were unaware of the typical menstrual cycle duration. Menstrual blood exits through the uterus; this fact was unknown to seven per cent (7%) of female respondents. The myth that menstrual blood is unclean is believed by 98% of participants. 13% of girls do not aware that hormones govern the menstrual cycle, and 10% of girls have irregular cycles. 12% of females do not wash their perineum frequently; they only wash it when they take a bath. Due to misconceptions/myths 15% girls take bath on third day and 5% on fourth day of their menstruation. A significant number of females was found to have a lack of information regarding pad disposal, with 10% flushing it in the toilet and 27% discarding it in household garbage without treatment. Findings suggested that lack of education of mothers in the family of studied subjects is the main cause behind their unawareness about health-hygiene practices during menstruation. They can not afford sanitary napkins because of their limited family income. Similarly, 18% of the girls changed their pad once during the day. Adolescent sports girls represent the nation's future, but if they can not maintain their health and cleanliness, they risk contracting a variety of dangerous infectious illnesses. They can be protected against these diseases by holding educational programmes and medical clinics in schools and athletic facilities.

Keywords: Adolescent sports girls, Questionnaires, Health practices, Menstruation

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Introduction

The transition phase from girlhood to womanhood is termed as adolescence (Dhingra *et al.*, 2009;

Desbrow, 2021; Demeke *et al.*, 2023). The phase of this special transition is highlighted by the onset

of menstruation (Desbrow, 2021; Sonowal *et al.*, 2021; Sharma *et al.*, 2022). In the present Indian cultural setup, menstruation and its related issues are linked up with myths, various traditions and a lot of misconceptions (Dhingra *et al.*, 2009; Kothari, 2010; Garg and Anand, 2015; Majeed *et al.*, 2022). Generally, in the Indian society the period of menstruation is considered as one of the unhygienic and bad phase. Due to the myths and misconceptions, the females face the isolations and restrictions which results in the development of negative thoughts in them. A number of reported studies enlisted the names of activities which are not allowed for females during menstruation (Dhingra *et al.*, 2009; Garg and Anand, 2015). They are not allowed to take bath, comb hairs, change cloths and enter to the holy places (Dhingra *et al.*, 2009; Kashyap and Chaudhari, 2023). Furthermore they also pushed for avoiding the food items like lassi, milk, rice, onion, sugarcane, potato etc. (van Eijk *et al.*, 2016; Vadeya *et al.*, 2021; Rogan and Black, 2023). Due to these cultural misconceptions, myths, lack of knowledge and awareness about menstruation, a large group of females in India suffers from various urinary tract infections and diseases (Deshpande *et al.*, 2018; Price *et al.*, 2020). This lack of knowledge about menstruation is specially seen in the case of adolescent girls. Hesitation of parents and social boundation stopped the flow of important information (i.e., regarding menstruation) towards adolescent girls (Kuhlmann *et al.*, 2017). The void of proper guidance, bad personal hygiene and lack of safety in sanitation of genital organs results in many gynaecological disease conditions (Dixit *et al.*, 2016; Deshpande *et al.*, 2018). Bad hygienic conditions during the menstruation period such as reuse of dirty cloth or reuse of used cloth without proper sterilization leads to infections of deadly microbes in genitals of adolescent girls (Nagaraj and Konapur, 2016; Kansal *et al.*, 2016; Kaur *et al.*, 2018; Garg *et al.*, 2022). In current study we targeted the adolescent sports girls' population to check their awareness and health practices adopted by them during menstruation. In our study we used close ended

questionnaire which was based on the questions that can be used to acquire knowledge on menstruation and practices of menstrual hygiene management.

Materials and Methods

For the present research study, data comprised on 60 adolescent sports girls in the age group 15-18 years. The data has been collected from primary sources by using random sampling method. These girls who play diverse games belong to Banaras Locomotive Works (BLW) railway ground, Varanasi, Uttar Pradesh, India. The procedures and goals of our study were vocalized to the chosen sports girls, and they were asked to complete questionnaires to gather socio-demographic, menstruation and menstrual health hygiene related data. Socio-demographic questionnaires were having questions to collect information related to their age, class, family type, ethnicity, religion, and economic condition etc. (Amgain and Neupane, 2019). In order to gather information about the menstrual cycle's length, blood source during menstruation, ending age of the menstrual cycle, and other factors, a menstruation-related questionnaire containing questions to assess the knowledge of a sample population of sports girls was circulated (Kumari *et al.*, 2021). Our next questionnaire was to collect information on menstrual hygiene management practices adopted by adolescent sports girls (Dhingra *et al.*, 2009). The questions were designed to know about factors such as washing the perineal region, materials used during menstruation, disposal of the used material, frequency of changing the sanitary material, and bath taken during menstruation period etc. Additionally, the girls were informed that completing and returning the questionnaire was optional. The prior verbal consent was obtained from the Professors and their sports students (i.e., respondent adolescent girls). For preservation of anonymity the respondents' names were excluded. The girls who refused to participate were informed that they could not return the survey form.

Results and Discussion

Assessment of knowledge about menstruation:

Sixty (60) teenage sports females between the ages of fifteen (15) and eighteen (18) were chosen as the study's sample and subjects. For the study, close ended questionnaire was distributed to collect the data. Out of 60 subjects in all, 97% of teenage sports females reached menarche between the ages of 12 and 18, whereas 3% reached it between the ages of 18 and 25 (Fig. 1). The knowledge about menstruation before menarche was found in 70% girls, while 30% had no idea about it before their menarche (Fig. 1 b). The average length of menstrual cycle is 21-35 days, this fact was only known to 81% while 14% said no and 5% said they do not have any idea (Fig. 1 c). The 100% population of subjects (i.e., total 60) said that menstruation is not a disease. Menstrual blood comes out from the uterus this fact was known to 93% subjects and rest 7% did not agreed to it (Fig. 1 e). The blood of menstruation is impure it was the opinion of 98% subjects and 2% said they do not know (Fig. 1 f). During the study it was also revealed that 90% girls were having regular menstrual cycle whereas 10% were having irregular cycle (Fig. 1 g). In the questionnaire it was also asked that Is menstruation regulated by hormone? 87% girls answered yes, 10% said no and 3% chosen do not know (Fig. 1 h). So on the basis of data collected regarding the general awareness about menstruation, it was analyzed that the subjects under study have the good knowledge/awareness regarding the maximum questions asked to them. But few points such as knowledge about menstruation before menarche, average length of menstrual cycle, and regulation of menstrual cycle by hormones were not clear to a significant number of candidates in the sample population.

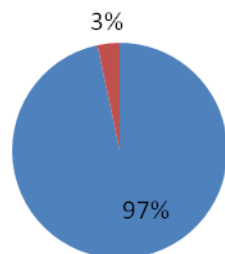
Assessment of sanitation by adolescent sports girls during menstruation:

In the current study, 60 teenage sports females between the ages of 15 and 18 were chosen as the sample/subject. Questions about menstruation-related health practices were asked of a total of 60

individuals such as, the menstruation should be followed by a genital organ cleanse, where 98% of population agree while 2% of sports girls was unaware about this fact (Fig. 2 a). After asked how often women wash their private parts during menstruation, 77% of sports girls respondents stated they do so after changing their pads, 11% claimed they do so after each urine, and 12% only do so after taking a bath (Fig. 2). The questionnaire asks how girls wash their perineal areas, and 67% of respondents claimed they use merely water, 33% only using soap and water (Fig. 2). How often you like taking bath during menstruation, 78% of the respondents chosen every day, 15% on the third day, and 5% on the fourth day (Fig. 2). 2% of girls do not know of taking bath during menstruation. Changes in sanitary pad frequency among teenage girls: 18% of girls change their pads once daily, 10% mark twice daily changes, 20% mark three times daily changes, 47% mark four or more daily changes, and 5% mark changes only when the pads are drenched in blood (Fig. 2). The following question on the survey asked respondents if they agreed or disagreed with the statement that sanitary pads should be disposed of in a way that no one can see during menstruation. 10% of girls who responded in favor of the statement, 85% disagreed, and 5% were unsure (Fig. 2). The final question on the survey asked how adolescent girls should dispose of their used pads. 45% said they should burn it, 10% said they should flush them down the toilet, and 18% said they should put them in the trash, while 27% said they should dump them in the dustbin with other household items (Fig. 2). Based on the data collected regarding the sanitation measures taken during menstruation, it was revealed that the subjects under study have lack of knowledge on several points such as 12% girls wash their perineal area only while they are taking bath. But it is recommended that it should be washed at regular intervals. Another important point is that due to some misconceptions or myths, 15% girls take bath on third day and 5% on fourth day of their menstruation. 18% girls were

Age of Menarche

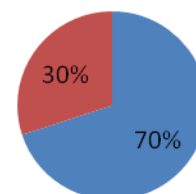
■ 12-18 years ■ 18-25 years



(a)

Knowledge about menstruation before Menarche

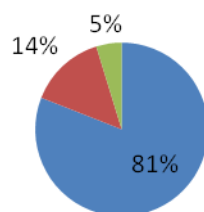
■ Yes ■ No



(b)

Knowledge about the average length of menstrual cycle is 21-35 days

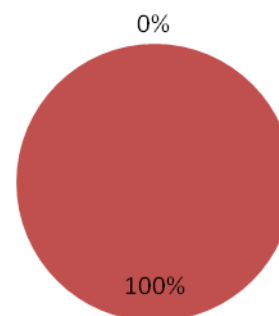
■ Yes ■ No ■ Don't know



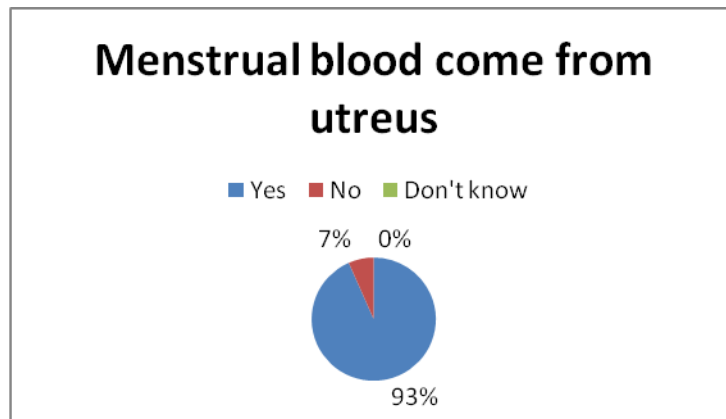
(c)

Menstruation is a disease

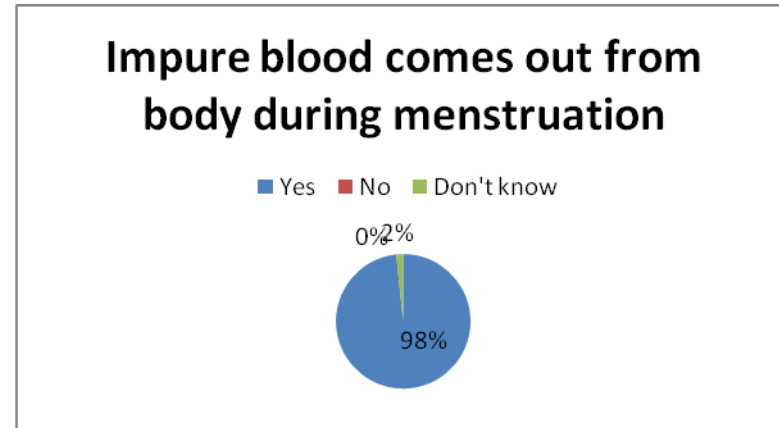
■ Yes ■ No



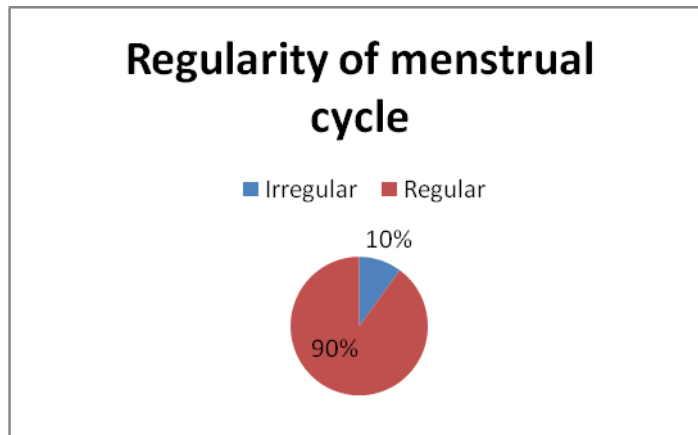
(d)



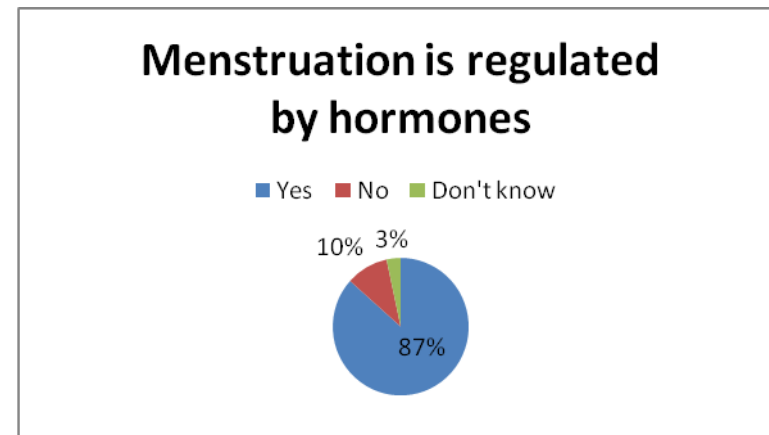
(e)



(f)



(g)

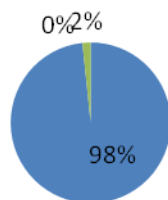


(h)

Fig. 1: Assessment of knowledge about menstruation in the subjects, (a) age of menarche, (b) knowledge about menstruation before menarche, (c) average length of menstrual cycle, (d) menstruation is a disease, (e) menstrual blood comes from uterus, (f) menstrual blood is impure, (g) regularity of menstrual cycle, (h) menstruation is regulated by hormones.

Genital organs should be washed during menstruation

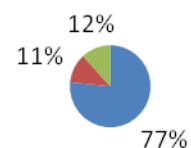
■ Yes ■ No ■ Don't know



(a)

Frequency of washing perineal area during menstruation

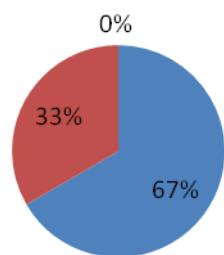
■ Each time after changing pad
■ After each urination and defecation
■ Only while taking bath



(b)

Washing of perineal area

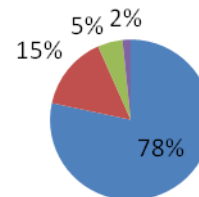
■ Only Water ■ Soap and water ■ Nothing



(c)

Taking bath during menstruation

■ Everyday ■ On third day ■ On fourth day ■ Other



(d)

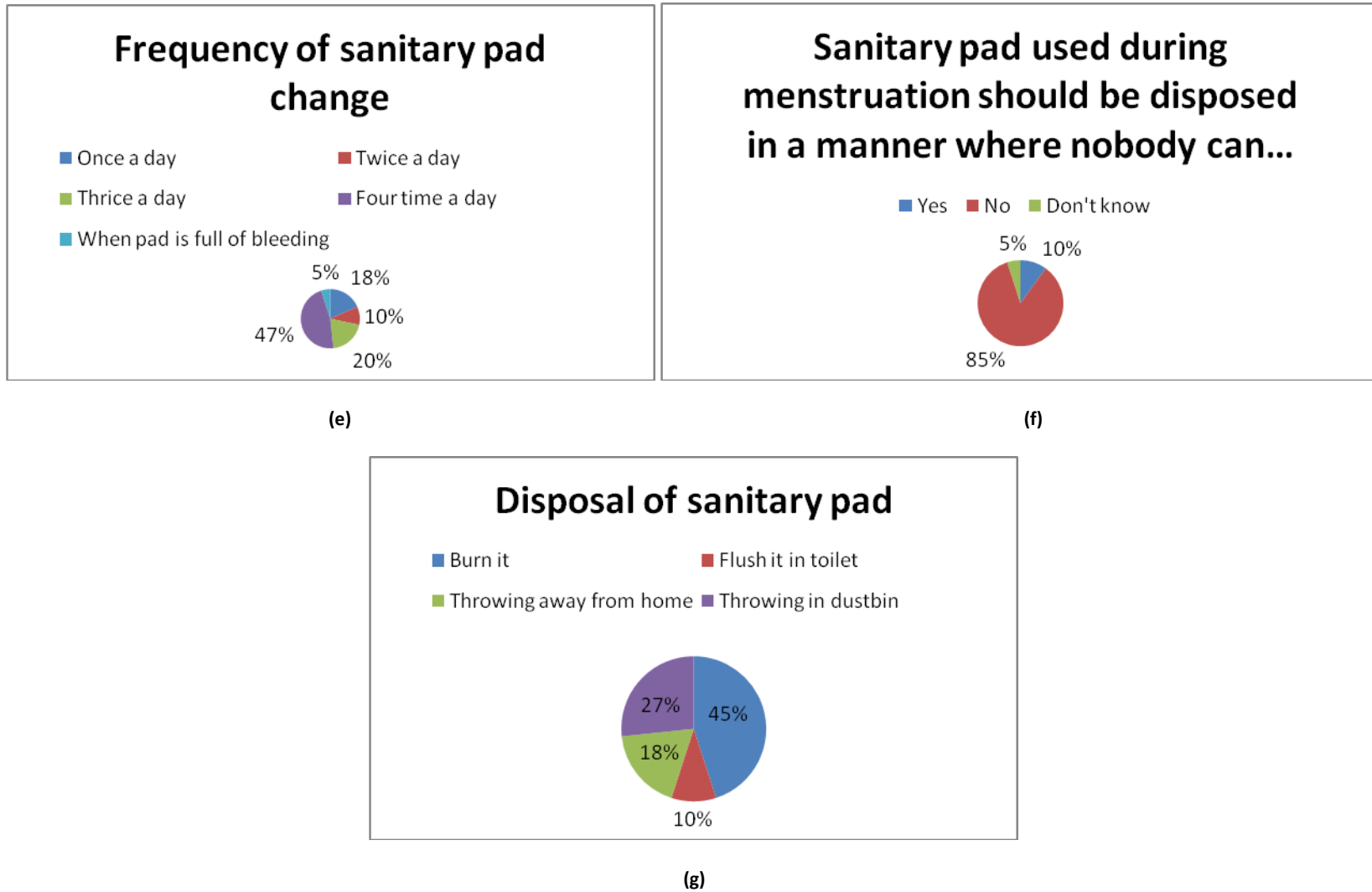


Fig. 2: Health practices adopted by adolescent sports girls during menstruation (a) Washing of genital organs, (b) Frequency of washing perineal area, (c) Methods for washing perineal area, (d) Taking bath, (e) Frequency of sanitary pad change, (.) Disposal of sanitary pad by hiding it, (g) Disposal of sanitary pad.

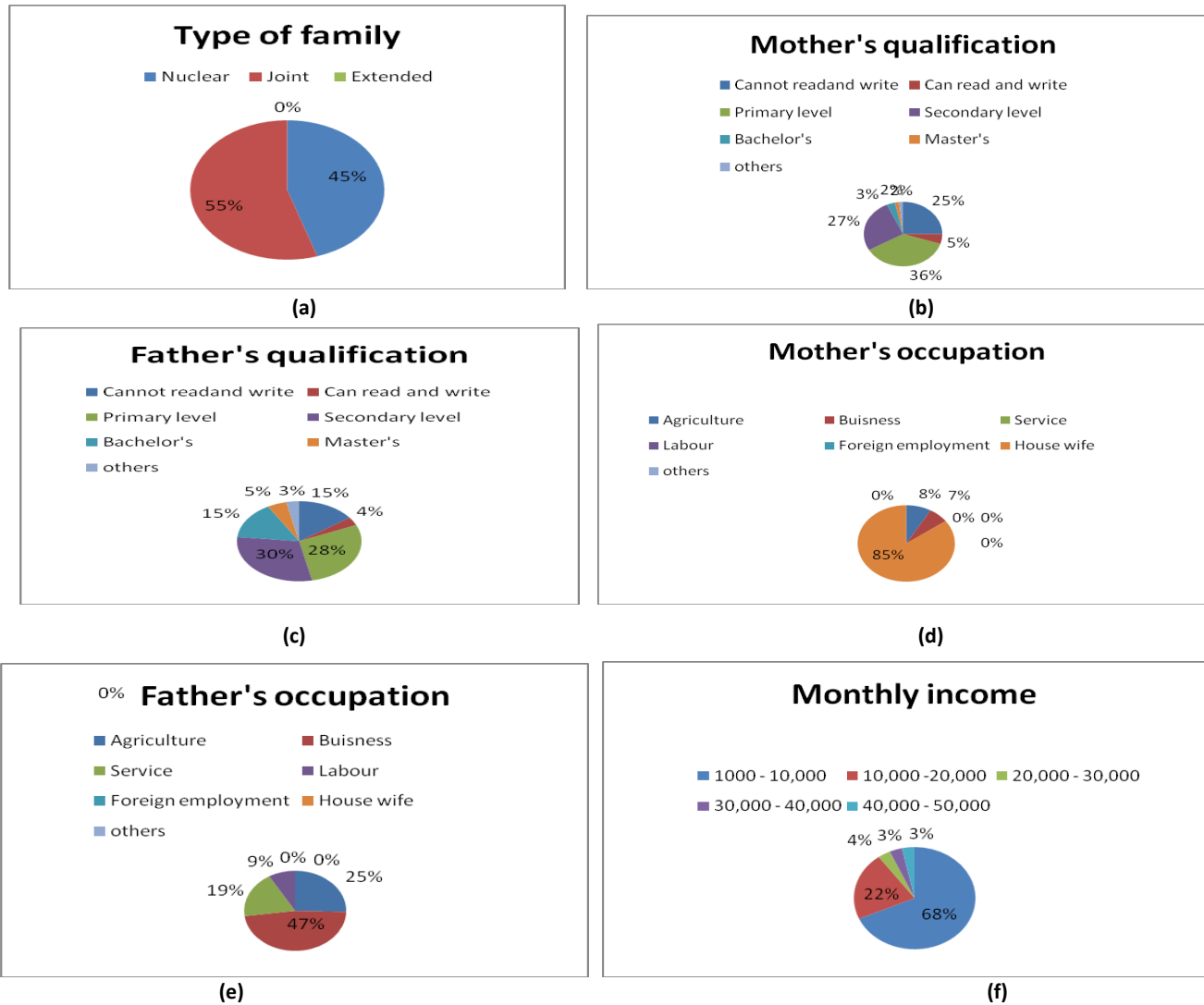


Fig. 3: Assessment of family education and economic condition of the studied subjects, (a) Type of family, (b) Mother's qualification, (c) Father's qualification, (d) Mother's occupation, (e) Father's occupation, (f) Monthly income.

changing their pads once a day. Furthermore, 10% girls were hiding their pad during disposal (Fig. 2). A significant population of girls was observed to have lack of awareness about disposal of pad, as 10% girls were flushing it in the toilet and 27% were throwing it in domestic dustbins without any treatment (Fig. 2).

Assessment of family information:

The questions related to family information in the questionnaire were assessed. Family plays a significant role in having awareness about menstruation and its hygienic practices. The question asked such as -- The type of family to which teenage athletes belong, within which 55% belonging to joint families and 45% belonging to nuclear families (Fig. 3). The mother are the first one to aware about the menstrual cycle to their daughter so there occupation and qualification plays a significant role to awareness to their adolescent girls, it is found that 25% can not read and write, 5% can read and write, 36% are primary level passed, 27% are secondary level passed, 3% done bachelors, 4% did master's in which majority 85% of them were housewife, 8% belong agriculture and 7% of mothers do business (Fig. 3). The next question was qualification and occupation of father it is found that 15% of can not read and write, 4% can read and write, 28% primary level passed, 30% secondary level passed, 15% had done bachelors, 5% did master's and 3% others in the qualification of fathers where in occupation 25% of fathers belong to agriculture, 47% of them do business, 19% working in service and at last 9% of them were labor (Fig. 3). The last question of this section of family information which plays a significant role in the study was monthly income of family in which it is found that 68% comes under Rs 1000-10,000; 22% of girls family income was Rs 10,000-20,000, 4% had Rs 20,000-30,000; 3% comes under Rs 30,000-40,000 and last one 3% had Rs 40,000-50,000 (Fig. 3). In Indian societies, mostly mothers have the major role in making the adolescent girls aware regarding the menstrual cycle, care and precautions required for look after the genital

organs during menstruation. Collected data related to the families of subjects revealed that in case of most of the adolescent sports girls their mothers were not properly educated. The maximum mothers were in the categories like can not read and write, can read and write, house wife primary and secondary level. Only 7% mothers were having bachelor's and master's degree and rest were educated up to primary and secondary level (Fig. 3). So the findings of this study suggested that the lack of education of mothers in the family of studied subjects is the main cause behind their unawareness about health hygiene practices during menstruation. The family income of 90% fathers was <20,000 (Fig. 3). So, on the basis of data collected it is clear that the income of subjects' family is very low that is why they can not spend much amount on sanitary napkins. The same can be observed in the data of per day pad change frequency. 18% girls change their pad once in whole day (Fig. 3).

Conclusion

On the basis of data collected regarding the general awareness about menstruation, it was analyzed that the subjects under study have the good knowledge/awareness regarding the maximum questions asked to them. But few points such as knowledge about menstruation before menarche, average length of menstrual cycle, and regulation of menstrual cycle by hormones were not clear to a significant number of candidates in the sample population.

Based on the data collected regarding the sanitation measures taken during menstruation, it was revealed that the subjects under study have lack of knowledge on several points such as 12% girls wash their perineal area only while they are taking bath. But it is recommended that it should be washed at regular intervals. Another important point is that due to some misconceptions or myths, 15% girls take bath on third day and 5% on fourth day of their menstruation. Furthermore, 10% girls were hiding their pad during disposal. A significant population of girls was observed to have lack of awareness about disposal of pad, as

10% girls were flushing it in the toilet and 27% were throwing it in domestic dustbins without any treatment.

In Indian societies, mostly mothers have the major role in making the adolescent girls aware regarding the menstrual cycle, care and precautions required for look after the genital organs during menstruation. Collected data related to the families of subjects revealed that in case of most of the adolescent sports girls their mothers were not properly educated. The maximum mothers were in the categories like can not read and write, can read and write, house wife primary and secondary level. Only 7% mother were having bachelor's and master's degree and rest were educated upto primary and secondary level. So the findings of this study suggested that the lack of education of mothers in the family of studied subjects is the main cause behind their unawareness about health hygiene practices during menstruation. Ninety per cent (90%) of families were found to have income <20,000 rupees per month. On the basis of data collected it is clear that the income of subjects' family is very low that's why they can not spend much amount on sanitary napkins. The same can be observed in the data of per day pad change frequency. 18% girls change their pad once in whole day due to scarcity of money.

The adolescent sports girls are the future of nation, if they would not be able to maintain the health hygiene either due to their economic condition or lack of early age knowledge transfer from their mothers they can be caught by many infectious diseases. So to solve this issue we suggest that there should be arrangement of medical camps to spread awareness, availability of free sanitary pads and medications for sports girls. It can really helps our rising sports stars to be healthy and fit for participation in different competitive games.

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