

PUB: 13/2014

Knowledge and Practices Related to Menstruation among Rural Adolescent Girls

Arun kumar A R¹, Bharath Reddy D¹, Naveen Kumar¹, Pusphalatha K²

¹Assistant Professor in Pediatrics, ²Professor in Pediatrics, Department of Pediatrics, Sri Devraj Urs Medical College, Sri DevrajUrs University, Kolar, Karnataka

ABSTRACT

Objective: This study was done in adolescent girls to evaluate the knowledge and practices about menstrual hygiene, beliefs and taboos .

Methodology: 70 adolescent post menarcheal girls between 11-15 years of age from a rural school at Doddaballapur (RLJalappa School) were included in the study. They were evaluated using structured questionnaire and were given proper education after collecting data.

Results: Majority (90%) of them had attained menarche between 12-14 years of age. 81.4% had menstrual cycles between 21-40 days. The duration of menstrual flow was 3 days to 1 week in majority of them (91.7%), 60% had normal amount of menstrual bleeding during their menstrual cycles. 66% used sanitary pads, 21% used clothes and 13% used both clothes and sanitary pads for absorbing menstrual blood. Among those who used clothes as pads 88% reused them & 71.3% practiced inadequate drying of clothes. Though majority (98.6%) knew the need of daily bathing, 1.4% felt there is no need to bath during menstruation. When enquired about methods of maintaining hygiene during menstruation, 44.3% practiced changing clothes/pads often, 8.6% by bathing twice a day, 17.1% by washing private parts and 30% followed all above measures. 40% felt menstrual flow as unclean. 68.6% had myths about not worshipping God and entering kitchen and 74.3% had misconception that they should not play or go to school during menstruation.

Conclusion: We conclude that there are substantial lacunae in knowledge and practices as well as myths and misconceptions about menstruation among adolescent girls from rural area even in this era. This needs to be considered while creating awareness programmes.

Keywords: Adolescents, Menstruation, Knowledge, Hygiene and Misconceptions

INTRODUCTION

One fifth of world's population is between 10 years to 19 years old amounting to over a billion young people, 85% of whom live in developing countries¹.

Adolescence in girls has been recognised as a special period which signifies the transition from girlhood to womanhood. This transitional period is

marked with the onset of menarche, an important milestone which is unique to females. In the existing Indian cultural milieu, the society is interwoven into a set of tradition, myths & misconceptions especially about menstruation & related issues.

Menstruation is generally considered unclean in Indian society. Isolation of menstruating girls & restrictions imposed on them in the family have reinforced negative attitude towards this phenomenon in girls.

Several studies have reported restrictions in daily activities such as not being allowed to take bath, change clothes, comb hair, enter holy places & even dietary restrictions are also imposed. Social practices

Corresponding author:

Arun Kumar A R

Assistant Professor

Department of Pediatrics, Sri Devraj Urs Medical College, Tamaka, Kolar-563101

Ph: 09742016897

about menstruation make girl child feel subnormal and may hamper her development^{2,3,4}. In India problems are more difficult & complicated because of marked socioeconomic diversity.

Social prohibition, negative attitude of the parents for right information, their strong bondage with traditional beliefs, taboos & misconceptions about menstruation has led to many serious health problems⁶, poor personal hygiene & unsafe sanitary conditions result in the girls facing many gynaecological problems⁷.

Repeated use of unclean clothes, improper drying of used cloth before its reuse results in harbouring of microorganisms resulting in genitourinary infections in adolescent girls.

Infections due to lack of hygiene during menstruation have been reported in many studies⁷. Several research studies revealed lacunae in knowledge towards menstruation among adolescent girls⁹. Data about the adolescents level of knowledge & practices related to menstruation is beneficial for planning programmes for improving awareness level regarding their life process & promoting their quality of life. Hence the present study was done among adolescent girls in a rural school.

OBJECTIVE OF THE STUDY

- 1) Collect baseline data about menstrual history in adolescent girls.
- 2) Study the hygienic practices followed by these girls.

METHODOLOGY

This study was conducted in a rural school, (R L J school at Doddaballapur) in 2007-2008. Study group consisted of 70 post menarcheal adolescent girls in the age group of 11-15 years. Written data was collected using structured questionnaire regarding knowledge & practices about menstruation. Correct knowledge was imparted at the end of the data collection.

Major components of the questionnaire were

1. Detailed menstrual history
2. Hygienic practices & beliefs during menstrual cycles.

3. Sources of information & related complication of menstruation.

Written data was collected after explaining the questions & was analysed. **Statistical software:** The Statistical software namely SPSS 9.0 was used for the analysis of the data and Microsoft word and Excel have been used to generate tables and graphs etc.

RESULT ANALYSIS

The Study group consisted of 70 Adolescent girls in the age group of 10-15 Years. All of them had attained menarche.

Of the 70 girls majority (90%) attained menarche between 12-14 year. 5.7% & 4.3% attained menarche at 11 year and 15 years respectively. Out of 70 girls about 81.4% had menstrual cycle once in 21 - 40 days, 5.7% had their menstrual Cycles as late as once in 40-60 days. 2.86% had cycles once in 20 days. 10% had irregular cycles. 91.7% reported duration of menstruation between 3 to 7 days to 1 week while 8.6% reported duration > 7 days. 60% had normal amount of bleeding during menstruation. 17.1% had excessive bleeding & 22.9% had scanty bleeding. 60% knew menarche to be a normal process whereas 40% felt it unclean.

66% used sanitary pads whereas as 21% used cloth & 13% used both. 88% reused cloth after washing it with soap & water where as 8% threw them. 4% burnt them. 71.3% practiced inadequate drying method whereas only 28.6% dried it in adequate sunlight. Majority (98.6%) knew that they need bath during periods. however 1.4% opined no need of bathing during periods. 8.6% practiced bathing twice daily, 44.3% changing sanitary pads/clothes often, 17.1% washing private parts often & 30% followed all the above mentioned hygienic practices.

68.6% felt they should not worship god & enter the kitchen during menstruation. 74.3% felt that they should avoid playing & going to school during menstruation. Majority (74.3%) had dysmenorrhoea. 45.7% had dysmenorrhoea a day before periods. 11.4% had dysmenorrhoea on the first day of periods whereas 17.1% had dysmenorrhoea throughout the periods. Majority (51.4%) did not have any symptoms whereas 18.6% felt angry, 14.3% felt depressed, 12.9% felt irritable & 2.9% felt weepy. Out of 70 cases 64.3% did not have any symptoms, 14.3%

had headache, 10% had loss of appetite, 4.3% had loose motion, 1.4% had vomiting, 1.4% had fainting spells & 4.3% had more than 2 symptoms. Majority(71.4%) had no symptoms, 11.4% had curd like vaginal discharge, 4.3% had itching in private parts, 2.9% had foul smelling discharge, 1.4% had burning sensation while passing urine, 8.6% had more than 2.

DISCUSSION

There are substantial lacunae in the knowledge towards menstruation among adolescent girls especially those from rural back ground. Hence in depth studies are badly needed to know and to fulfil the reproductive health needs of adolescents. A three tier grid approach to improve adolescent reproductive health care is proposed¹.

Grid I: Identify the problem of adolescents in India.

Grid II: Identify existing facilities catering to teenage reproductive health program.

Grid III: Formulate project plan, research and training program.

The present study is an attempt to fill lacunae in grid I. This study was undertaken to assess the knowledge & practices related to menstruation among adolescent girls from rural background

Study group consisted of 70 post menarcheal girls

Age at menarche

Majority(90%) had attained menarche between 12-14yrs of age.

Similar results were found in the study done by Dr.Parvathy et al⁸, Dr. Terrvill et al¹¹ and Dr. SC Chan et al¹⁴ in which the mean age of menarche was 13.6 years, 12.8 years and 12.3 years respectively.

However in the study done by Dr.Rajani Dhingra et al⁵ and Dr. Adhikari et al⁶ majority had attained menarche between 10-12 years and 10-14 years respectively.

Frequency of periods

According to this study majority (81.4%) had menstrual cycles once in 21 to 40 days. However few of them (5.7%) had longer than usual cycles that could be attributed to some medical reason which needs further workup.

Similar results were found in the study done by Dhingra et al⁵, SC Chan et al¹⁴ and Adhikar et al⁶ in which majority were having their menstrual cycles between 30-45 days, 21 to 35 days and 26-30 days respectively.

Duration of bleeding

In our study majority (91.7%) reported duration of menstruation between 3 days to 7 days.

Similar results were found in the study done by Dr. Dhingra et al⁵, SC Chan et al¹⁴ and Adhikari et al⁶ in which 78.6% subjects reported their duration of menstruation between 0 to 6 days, 5.4 days and 3-5 days respectively.

Amount of blood loss during menstruation

In our study majority(60%) had normal amount of bleeding during menstruation whereas 17.1% had excessive bleeding and 22.9% had scanty bleeding. According to the study done by Dr.Dhingra et al⁵ 45% subjects reported normal bleeding, 26.7% reported excessive bleeding and 28.2% reported scanty bleeding.

Beliefs and practices during menstrual cycles

In our study majority of adolescent girls (66%) used sanitary pads. 21% used cloth and 13% used both for absorbing menstrual blood. Among those who used clothes 88% reused the cloths and 71.3% practiced inadequate drying methods.

In the study done by Dr. Adhikari et al⁶ 98% used cloth, among them 88.7% reused it. In another study by Dr. Dhingra et al⁵ 87.5% girls reused the cloths and in majority of girls (96.9%) management of menstruation was very poor. In these two studies management of menstruation was very poor compared to our study probably as these studies were done in tribal girls and girls from lower socio economic class.

Majority (98.6%) of adolescents in our study felt the need of bathing during periods. Similar results were found in study done by Dr. Nair et al⁸ in which only 1.6% avoiding bath during periods. In contrast in the study done by Dr. Dhingra et al⁵ majority (98%) did not take regular bath and in study done by Dr. Adhikar et al⁶ only 4% took bath. This is because those studies were done in girls of lower socio economic and tribal class.

In our study to keep personal hygiene during menstrual cycles 8.6% adolescents practiced bath twice a day, changing sanitary pad/clothes often (44.3%), washing private parts often (7.1%) and 30% followed all these practices. Where as in the study done by Dr. Dhingra et al⁵. Majority (96.9%) did not follow proper hygienic practices.

Belief about menstrual flow

Majority in our study knew it to be a physical process and felt that flow is clean, whereas 40% did feel it as unclean. In the study done by Dr. Adhikari et al⁶ only 6% thought of it as a physiological process, 12% considered it as a pathological process whereas majority 82% considered it as a curse.

Myths about menstrual cycle regarding worshipping god and entering kitchen.

In this study majority (68.6%) felt they should not worship god and enter the kitchen.

Similarly in this study done by Dr. Dhingra et al⁵ and Dr. Parvathy et al⁸ 100% and 92% respectively were restricted from worshipping.

Restriction of activities like playing or going to school

In this study majority (74.3%) felt they should not play and go to school.

In the study done by Dr. Dhingra et al⁵ 23% were not allowed to go out and in the study done by Dr. SC Chan et al¹⁴ 12.1% reported absentism from school and 33.6% reported reduced daily activities.

Problems Associated With Menstrual Cycle

According to this study majority (74.3%) had dysmenorrhoea. Which is similar to study done by Hillard et al¹³, Chan¹⁴ and Parvathy et al⁸ in which dysmenorrhoea is reported in 60%, 68.7% and 63.75% subjects respectively.

Premenstrual psychological symptoms occurred 48.6% adolescents, 18.6% felt angry, 14.3% felt depressed, 12.9% felt irritable and 2.9% felt weepy where as in the study done by Parvathy et al⁸ and Adhikari et al⁶ irritability was reported in 62.9% and 96.7% respectively.

Premenstrual general symptoms occurred in 35.7%, 14.3% had headache, 10% had loss of appetite. Whereas in the study done by Parvathy et al⁸ 49.6% had headache, 24% had malaise. In the study done by Dhingra et al⁵ 62.5% had pain abdomen, 41.5% had

nausea, 7.5% had headache and 24% had loss of appetite.

Genito-urinary infections

According to this study 29.6% had symptoms of genitourinary infection. This can be attributed to poor hygienic practices.

CONCLUSION

This Study reveals that though majority of adolescent girls knew that menstruation is a normal process still they had many myths and misconceptions. This can affect their school performance and should be considered while creating awareness programmes.

The practice of maintaining menstrual hygiene is unsatisfactory among these girls, who practiced reuse of cloth pads which were dried inadequately (88%) which may predispose of Genitourinary infections.

Hence we conclude that there is substantial lacunae in knowledge and practices about menstruation among adolescent girls from rural area even in this era. This needs to be considered while creating awareness programmes.

Table 1: Age At Menarche

Age	Number(%)
11	4(5.7)
12	21(30)
13	28(40)
14	14(20)
15	3(4.3)
Total	70

Table 2: Frequency of Periods

Day	Number(%)
20	2(2.86)
25	1(1.43)
30	51(72.9)
40	5(7.1)
60	4(5.7)
IRREGULAR	7(10)
TOTAL	70

Table 3 : Duration of Menstruation

Response	Number	Percentage
1 DAY	0	0
3 DAYS	20	28.6
3 to 7 DAYS	44	62.9
>7 DAYS	6	8.6
Total	70	100

ACKNOWLEDGEMENT

We acknowledge the support and Co-operation provided by the Principal, Teachers and students of R.L.J School Doddaballapur. Special thanks to Dr. Susheela, Prof & HOD, Department of Paediatrics for her valuable guidance and support in completion of this project.

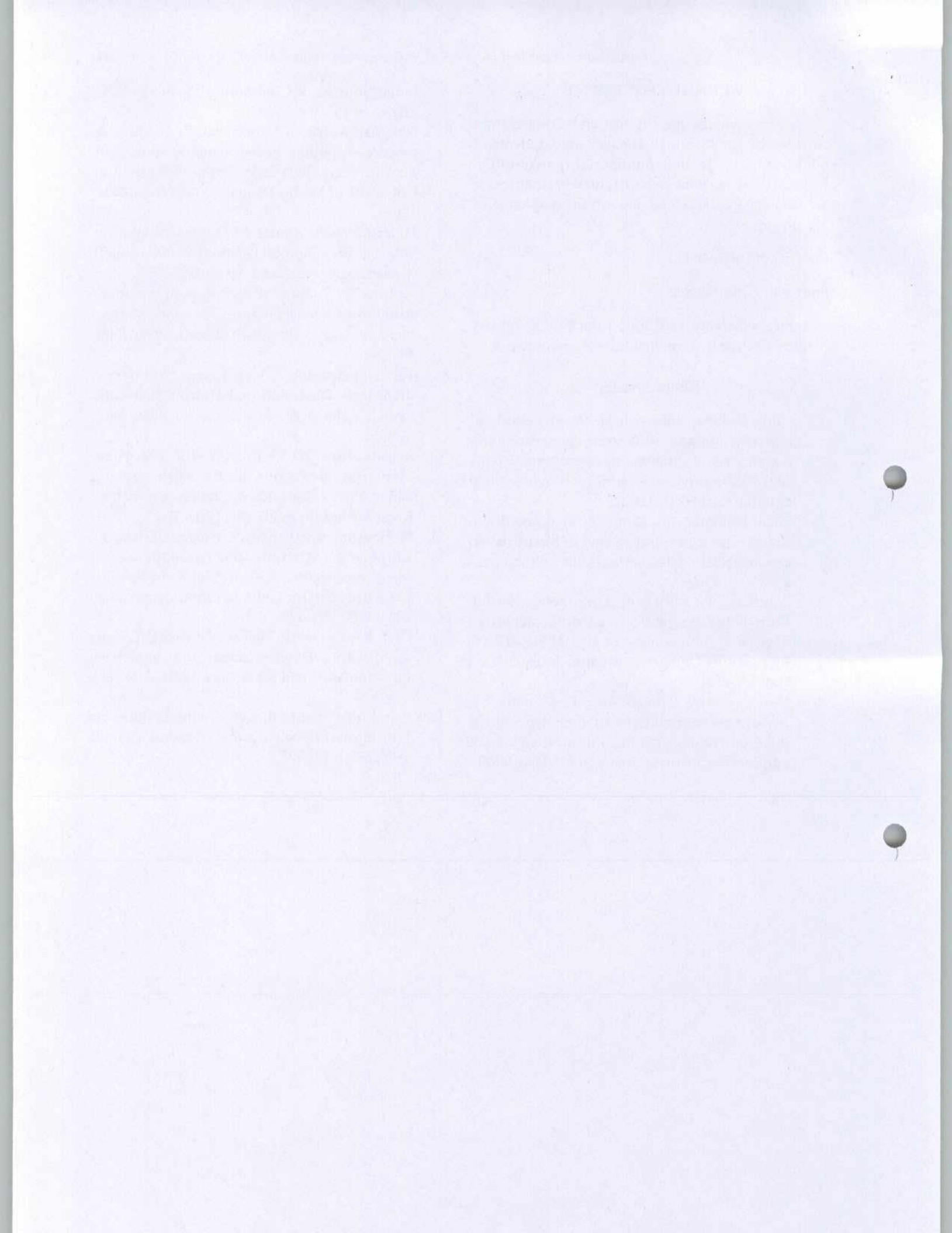
Conflict of Interest: Nil

Source of Funding: Self

Ethical clearance certificate from Sri Devraj Urs Medical College institutional Ethical committee

REFERENCES

1. Gupta Sadhna, Sinha Achala - Awareness about reproduction and adolescent changes among school girls of different socio-economic status 2001-2002. *Journal of Obstetrics and Gynaecology of India* 2006; 56(4): 324-328.
2. Rajini Dhingra, Anil Kumar & Manpreet Kaur. Knowledge & practices related to Menstruation among Tribal adolescent girls 2009. *Ethno med* 2009; 3(1): 43-48.
3. Adhikari P, Kadel B, Dhungel, Mandal. Knowledge & practice regarding menstrual hygiene in rural adolescent girls of Nepal. 2005, *Kathmandu University Medical Journal* 2007; 5(3): 382-386.
4. Nair Parvathy, Groven Vijay L, Kannan A T. Awareness & practices of menstruation & pubertal changes amongst unmarried female adolescents in rural area of East Delhi 2007. *Indian Journal of Community Medicine* 2007; 32(2): 156-157.
5. Sedighah Akhanan Karbasietal. Perceptions & practices regarding menstruation in adolescent girls in Yazd. 2004-2005. Shaheed Sadoughi, University of Medical Sciences, Yazd from 2004; 1-4.
6. Hillard, Paul J, Adams M D. Menstruation in Young girls: A Clinincal Perspective 2002. *Clinical gynaecologic series* 2002; 99 (4): 655-662.
7. Antony P. Acquavella, Paula Braverman. Adolescent gynaecology in the office setting. *Pediatric Clinics of North America* 1999; 46(3): 489-544.
8. Terril Bravender, S Jean Emans, Menstrual disorders- Dysfunctional Uterine Bleeding. *Pediatric clinics of North America* 1999; 46(3): 545-553.
9. Symphorosa SC Chan, KW Yiu, PM Yuen. Menstrual problems and Health seeking behaviour in Hong Kong Chinese girls. *Hong Kong Medical Journal* 2009; 15(1): 18-23.
10. A. Houston, A. Abraham, Z. Huang, L.D Angelo- Knowledge, Attitude and consequences of Menstrual Health in Urban Adolescent Females. *Journal of Pediatric and Adolescent Gynaecology* 2009; 19(4): 271-275.
11. Drakshayani Devi R, Venkata Ramaiah P A. Study on Menstrual Hygiene among rural adolescent girls. *Indian J medical Science* 1994; 48(6): 139-143.
12. Gundhi AB. Reproductive health of adolescent girl. *Journal of Obstetrics and Gynaecology India* 1999; 49(1): 132-135.



PUB: 13/2014

Knowledge and Practices Related to Menstruation among Rural Adolescent Girls

Arun kumar A R¹, Bharath Reddy D¹, Naveen Kumar¹, Pusphalatha K²

¹Assistant Professor in Pediatrics, ²Professor in Pediatrics, Department of Pediatrics, Sri Devraj Urs Medical College, Sri Devraj Urs University, Kolar, Karnataka

ABSTRACT

Objective: This study was done in adolescent girls to evaluate the knowledge and practices about menstrual hygiene, beliefs and taboos .

Methodology: 70 adolescent post menarcheal girls between 11-15 years of age from a rural school at Doddaballapur (RL Jalappa School) were included in the study. They were evaluated using structured questionnaire and were given proper education after collecting data.

Results: Majority (90%) of them had attained menarche between 12-14 years of age. 81.4% had menstrual cycles between 21-40 days. The duration of menstrual flow was 3 days to 1 week in majority of them (91.7%), 60% had normal amount of menstrual bleeding during their menstrual cycles. 66% used sanitary pads, 21% used clothes and 13% used both clothes and sanitary pads for absorbing menstrual blood. Among those who used clothes as pads 88% reused them & 71.3% practiced inadequate drying of clothes. Though majority (98.6%) knew the need of daily bathing, 1.4% felt there is no need to bath during menstruation. When enquired about methods of maintaining hygiene during menstruation, 44.3% practiced changing clothes/pads often, 8.6% by bathing twice a day, 17.1% by washing private parts and 30% followed all above measures. 40% felt menstrual flow as unclean. 68.6% had myths about not worshipping God and entering kitchen and 74.3% had misconception that they should not play or go to school during menstruation.

Conclusion: We conclude that there are substantial lacunae in knowledge and practices as well as myths and misconceptions about menstruation among adolescent girls from rural area even in this era. This needs to be considered while creating awareness programmes.

Keywords: Adolescents, Menstruation, Knowledge, Hygiene and Misconceptions

INTRODUCTION

One fifth of world's population is between 10 years to 19 years old amounting to over a billion young people, 85% of whom live in developing countries¹.

Adolescence in girls has been recognised as a special period which signifies the transition from girlhood to womanhood. This transitional period is

marked with the onset of menarche, an important milestone which is unique to females. In the existing Indian cultural milieu, the society is interwoven into a set of tradition, myths & misconceptions especially about menstruation & related issues.

Menstruation is generally considered unclean in Indian society. Isolation of menstruating girls & restrictions imposed on them in the family have reinforced negative attitude towards this phenomenon in girls.

Several studies have reported restrictions in daily activities such as not being allowed to take bath, change clothes, comb hair, enter holy places & even dietary restrictions are also imposed. Social practices

Corresponding author:

Arun Kumar A R

Assistant Professor

Department of Pediatrics, Sri Devraj Urs Medical College, Tamaka, Kolar-563101

Ph: 09742016897

about menstruation make girl child feel subnormal and may hamper her development^{2,3,4}. In India problems are more difficult & complicated because of marked socioeconomic diversity.

Social prohibition, negative attitude of the parents for right information, their strong bondage with traditional beliefs, taboos & misconceptions about menstruation has led to many serious health problems⁶, poor personal hygiene & unsafe sanitary conditions result in the girls facing many gynaecological problems⁷.

Repeated use of unclean clothes, improper drying of used cloth before its reuse results in harbouring of microorganisms resulting in genitourinary infections in adolescent girls.

Infections due to lack of hygiene during menstruation have been reported in many studies⁷. Several research studies revealed lacunae in knowledge towards menstruation among adolescent girls⁹. Data about the adolescents level of knowledge & practices related to menstruation is beneficial for planning programmes for improving awareness level regarding their life process & promoting their quality of life. Hence the present study was done among adolescent girls in a rural school.

OBJECTIVE OF THE STUDY

- 1) Collect baseline data about menstrual history in adolescent girls.
- 2) Study the hygienic practices followed by these girls.

METHODOLOGY

This study was conducted in a rural school, (R L J school at Doddaballapur) in 2007-2008. Study group consisted of 70 post menarcheal adolescent girls in the age group of 11-15 years. Written data was collected using structured questionnaire regarding knowledge & practices about menstruation. Correct knowledge was imparted at the end of the data collection.

Major components of the questionnaire were

1. Detailed menstrual history
2. Hygienic practices & beliefs during menstrual cycles.

3. Sources of information & related complication of menstruation.

Written data was collected after explaining the questions & was analysed. **Statistical software:** The Statistical software namely SPSS 9.0 was used for the analysis of the data and Microsoft word and Excel have been used to generate tables and graphs etc.

RESULT ANALYSIS

The Study group consisted of 70 Adolescent girls in the age group of 10-15 Years. All of them had attained menarche.

Of the 70 girls majority (90%) attained menarche between 12-14 year. 5.7% & 4.3% attained menarche at 11 year and 15 years respectively. Out of 70 girls about 81.4% had menstrual cycle once in 21 - 40 days, 5.7% had their menstrual Cycles as late as once in 40-60 days. 2.86% had cycles once in 20 days. 10% had irregular cycles. 91.7% reported duration of menstruation between 3 to 7 days to 1 week while 8.6% reported duration > 7 days. 60% had normal amount of bleeding during menstruation. 17.1% had excessive bleeding & 22.9% had scanty bleeding. 60% knew menarche to be a normal process whereas 40% felt it unclean.

66% used sanitary pads whereas as 21% used cloth & 13% used both. 88% reused cloth after washing it with soap & water where as 8% threw them. 4% burnt them. 71.3% practiced inadequate drying method whereas only 28.6% dried it in adequate sunlight. Majority (98.6%) knew that they need bath during periods. however 1.4% opined no need of bathing during periods. 8.6% practiced bathing twice daily, 44.3% changing sanitary pads/clothes often, 17.1% washing private parts often & 30% followed all the above mentioned hygienic practices.

68.6% felt they should not worship god & enter the kitchen during menstruation. 74.3% felt that they should avoid playing & going to school during menstruation. Majority (74.3%) had dysmenorrhoea. 45.7% had dysmenorrhoea a day before periods. 11.4% had dysmenorrhoea on the first day of periods whereas 17.1% had dysmenorrhoea throughout the periods. Majority (51.4%) did not have any symptoms whereas 18.6% felt angry, 14.3% felt depressed, 12.9% felt irritable & 2.9% felt weepy. Out of 70 cases 64.3% did not have any symptoms, 14.3%

had headache, 10% had loss of appetite, 4.3% had loose motion, 1.4% had vomiting, 1.4% had fainting spells & 4.3% had more than 2 symptoms. Majority(71.4%) had no symptoms, 11.4% had curd like vaginal discharge, 4.3% had itching in private parts, 2.9% had foul smelling discharge, 1.4% had burning sensation while passing urine, 8.6% had more than 2.

DISCUSSION

There are substantial lacunae in the knowledge towards menstruation among adolescent girls especially those from rural back ground. Hence in depth studies are badly needed to know and to fulfil the reproductive health needs of adolescents. A three tier grid approach to improve adolescent reproductive health care is proposed¹.

Grid I: Identify the problem of adolescents in India.

Grid II: Identify existing facilities catering to teenage reproductive health program.

Grid III: Formulate project plan, research and training program.

The present study is an attempt to fill lacunae in grid I. This study was undertaken to assess the knowledge & practices related to menstruation among adolescent girls from rural background

Study group consisted of 70 post menarcheal girls

Age at menarche

Majority(90%) had attained menarche between 12-14yrs of age.

Similar results were found in the study done by Dr.Parvathy et al⁸, Dr. Terrvill et al¹³ and Dr. SC Chan et al¹⁴ in which the mean age of menarche was 13.6 years, 12.8 years and 12.3 years respectively.

However in the study done by Dr.Rajani Dhingra et al⁵ and Dr. Adhikari et al⁶ majority had attained menarche between 10-12 years and 10-14 years respectively.

Frequency of periods

According to this study majority (81.4%) had menstrual cycles once in 21 to 40 days. However few of them (5.7%) had longer than usual cycles that could be attributed to some medical reason which needs further workup.

Similar results were found in the study done by Dhingra et al⁵, SC Chan et al¹⁴ and Adhikar et al⁶ in which majority were having their menstrual cycles between 30-45 days, 21 to 35 days and 26-30 days respectively.

Duration of bleeding

In our study majority (91.7%) reported duration of menstruation between 3 days to 7 days.

Similar results were found in the study done by Dr. Dhingra et al⁵, SC Chan et al¹⁴ and Adhikari et al⁶ in which 78.6% subjects reported their duration of menstruation between 0 to 6 days, 5.4 days and 3-5 days respectively.

Amount of blood loss during menstruation

In our study majority(60%) had normal amount of bleeding during menstruation whereas 17.1% had excessive bleeding and 22.9% had scanty bleeding. According to the study done by Dr.Dhingra et al⁵ 45% subjects reported normal bleeding, 26.7% reported excessive bleeding and 28.2% reported scanty bleeding.

Beliefs and practices during menstrual cycles

In our study majority of adolescent girls (66%) used sanitary pads. 21% used cloth and 13% used both for absorbing menstrual blood. Among those who used clothes 88% reused the cloths and 71.3% practiced inadequate drying methods.

In the study done by Dr. Adhikari et al⁶ 98% used cloth, among them 88.7% reused it. In another study by Dr. Dhingra et al⁵ 87.5% girls reused the cloths and in majority of girls (96.9%) management of menstruation was very poor. In these two studies management of menstruation was very poor compared to our study probably as these studies were done in tribal girls and girls from lower socio economic class.

Majority (98.6%) of adolescents in our study felt the need of bathing during periods. Similar results were found in study done by Dr. Nair et al⁸ in which only 1.6% avoiding bath during periods. In contrast in the study done by Dr. Dhingra et al⁵ majority (98%) did not take regular bath and in study done by Dr. Adhikar et al⁶ only 4% took bath. This is because those studies were done in girls of lower socio economic and tribal class.

In our study to keep personal hygiene during menstrual cycles 8.6% adolescents practiced bath twice a day, changing sanitary pad/clothes often (44.3%), washing private parts often (7.1%) and 30% followed all these practices. Whereas in the study done by Dr. Dhingra et al⁵. Majority (96.9%) did not follow proper hygienic practices.

Belief about menstrual flow

Majority in our study knew it to be a physical process and felt that flow is clean, whereas 40% did feel it as unclean. In the study done by Dr. Adhikari et al⁶ only 6% thought of it as a physiological process, 12% considered it as a pathological process whereas majority 82% considered it as a curse.

Myths about menstrual cycle regarding worshipping god and entering kitchen.

In this study majority (68.6%) felt they should not worship god and enter the kitchen.

Similarly in this study done by Dr. Dhingra et al⁵ and Dr. Parvathy et al⁸ 100% and 92% respectively were restricted from worshipping.

Restriction of activities like playing or going to school

In this study majority (74.3%) felt they should not play and go to school.

In the study done by Dr. Dhingra et al⁵ 23% were not allowed to go out and in the study done by Dr. SC Chan et al¹⁴ 12.1% reported absentism from school and 33.6% reported reduced daily activities.

Problems Associated With Menstrual Cycle

According to this study majority (74.3%) had dysmenorrhoea. Which is similar to study done by Hillard et al¹³, Chan¹⁴ and Parvathy et al⁸ in which dysmenorrhoea is reported in 60%, 68.7% and 63.75% subjects respectively.

Premenstrual psychological symptoms occurred 48.6% adolescents, 18.6% felt angry, 14.3% felt depressed, 12.9% felt irritable and 2.9% felt weepy whereas in the study done by Parvathy et al⁸ and Adhikari et al⁶ irritability was reported in 62.9% and 96.7% respectively.

Premenstrual general symptoms occurred in 35.7%, 14.3% had headache, 10% had loss of appetite. Whereas in the study done by Parvathy et al⁸ 49.6% had headache, 24% had malaise. In the study done by Dhingra et al⁵ 62.5% had pain abdomen, 41.5% had

nausea, 7.5% had headache and 24% had loss of appetite.

Genito-urinary infections

According to this study 29.6% had symptoms of genitourinary infection. This can be attributed to poor hygienic practices.

CONCLUSION

This Study reveals that though majority of adolescent girls knew that menstruation is a normal process still they had many myths and misconceptions. This can affect their school performance and should be considered while creating awareness programmes.

The practice of maintaining menstrual hygiene is unsatisfactory among these girls, who practiced reuse of cloth pads which were dried inadequately (88%) which may predispose of Genitourinary infections.

Hence we conclude that there is substantial lacunae in knowledge and practices about menstruation among adolescent girls from rural area even in this era. This needs to be considered while creating awareness programmes.

Table 1: Age At Menarche

Age	Number(%)
11	4(5.7)
12	21(30)
13	28(40)
14	14(20)
15	3(4.3)
Total	70

Table 2: Frequency of Periods

Day	Number(%)
20	2(2.86)
25	1(1.43)
30	51(72.9)
40	5(7.1)
60	4(5.7)
IRREGULAR	7(10)
TOTAL	70

Table 3 : Duration of Menstruation

Response	Number	Percentage
1 DAY	0	0
3 DAYS	20	28.6
3 to 7 DAYS	44	62.9
>7 DAYS	6	8.6
Total	70	100

ACKNOWLEDGEMENT

We acknowledge the support and Co-operation provided by the Principal, Teachers and students of R.L.J School Doddaballapur. Special thanks to Dr. Susheela, Prof & HOD, Department of Paediatrics for her valuable guidance and support in completion of this project.

Conflict of Interest: Nil

Source of Funding: Self

Ethical clearance certificate from Sri Devraj Urs Medical College institutional Ethical committee

REFERENCES

1. Gupta Sadhna, Sinha Achala - Awareness about reproduction and adolescent changes among school girls of different socio-economic status 2001-2002. *Journal of Obstetrics and Gynaecology of India* 2006; 56(4): 324-328.
2. Rajini Dhingra, Anil Kumar & Manpreet Kaur. Knowledge & practices related to Menstruation among Tribal adolescent girls 2009. *Ethno med* 2009; 3(1): 43-48.
3. Adhikari P, Kadel B, Dhungel, Mandal. Knowledge & practice regarding menstrual hygiene in rural adolescent girls of Nepal. 2005, *Kathmandu University Medical Journal* 2007; 5(3): 382-386.
4. Nair Parvathy, Groven Vijay L, Kannan A T. Awareness & practices of menstruation & pubertal changes amongst unmarried female adolescents in rural area of East Delhi 2007. *Indian Journal of Community Medicine* 2007; 32(2): 156-157.
5. Sedighah Akhanan Karbasi et al. Perceptions & practices regarding menstruation in adolescent girls in Yazd. 2004-2005. Shaheed Sadoughi, University of Medical Sciences, Yazd from 2004; 1-4.
6. Hillard, Paul J, Adams M D. Menstruation in Young girls: A Clinical Perspective 2002. *Clinical gynaecologic series* 2002; 99 (4): 655-662.
7. Antony P. Acquavella, Paula Braverman. Adolescent gynaecology in the office setting. *Pediatric Clinics of North America* 1999; 46(3): 489-544.
8. Terril Bravender, S Jean Emans, Menstrual disorders- Dysfunctional Uterine Bleeding. *Pediatric clinics of North America* 1999; 46(3): 545-553.
9. Symphorosa SC Chan, KW Yiu, PM Yuen. Menstrual problems and Health seeking behaviour in Hong Kong Chinese girls. *Hong Kong Medical Journal* 2009; 15(1): 18-23.
10. A. Houston, A. Abraham, Z. Huang, L.D Angelo. Knowledge, Attitude and consequences of Menstrual Health in Urban Adolescent Females. *Journal of Pediatric and Adolescent Gynaecology* 2009; 19(4): 271-275.
11. Drakshayani Devi R, Venkata Ramaiah P A. Study on Menstrual Hygiene among rural adolescent girls. *Indian J medical Science* 1994; 48(6): 139-143.
12. Gundhi AB. Reproductive health of adolescent girl. *Journal of Obstetrics and Gynaecology India* 1999; 49(1): 132-135.