

## Study on the knowledge of school girls regarding menstrual and reproductive health and their perceptions about family life education program

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### ABSTRACT

**Background:** The doctors of The Obstetric and Gynecological Society of Bhopal and the department of Obstetrics and Gynecology, Gandhi Medical College, Bhopal have been imparting Family Life Education to school girls and aganwadis as part of their school health program. This project was designed to evaluate the effect of school health programs and to gain an insight into the perceptions of the school girls regarding menstruation, hygiene, nutrition, marriage and the program.

**Methods:** The study was conducted in five schools in which 537 girls participated. A questionnaire was provided to the school girls to know their knowledge and perception regarding menstruation, reproduction, nutrition and their views on the quality and usefulness of the Family life skills sessions.

**Results:** The study showed that most of the girls gained information about menstruation from their mothers. Menstruation is still considered as something shameful and young girls face many restrictions. Knowledge regarding menstruation, reproduction, contraception and diet is still lacking among the school girls. Family life skill sessions address these issues very effectively. Most of the girls enjoyed the sessions and were ready for more.

**Conclusions:** The Family Life sessions provide age appropriate, uniform skilled advice on nutrition, prevention of anemia, hygiene (menstrual), problems of growing years, career counseling, safe sex, contraception, teenage pregnancy and exclusive breastfeeding. Imparting family life skills to school girls provides a welcome platform for them to interact with doctors and counsellors, increasing their knowledge on health issues like menstruation, hygiene and nutrition.

**Key words:** Adolescent girl, Family life skills, Menstruation, Reproduction

### INTRODUCTION

The word adolescence is derived from Latin word "Adolescere" meaning to grow up. WHO defines "Adolescence" as the time period between 10 and 19 years of life characterised by critical physical and psychological changes leading to adulthood.<sup>1</sup> This age group requires adequate nutrition, education, counseling and guidance to ensure their development into healthy adults. Today India has a population of over 1 billion.

Adolescents form 22% (225 million) of the population, of which 47% are females.<sup>2</sup>

Menstruation is one of the most important changes during adolescent years. Unfortunately in Indian society it is still regarded as shameful and unclean. Hygiene related practises are not practised by many and result in RTIs and other long term illnesses. Isolation of the menstruating girls and restrictions imposed on them by the family, have reinforced a negative attitude towards this

phenomenon.<sup>3</sup> In India, restrictions are laid on young girls from participating in household and other religious activities during menstruation.<sup>4</sup>

Early initiation of sexual activity is increasing. Overall 35% of all reported HIV infection occurs among 15-24 years age group. The unmet need of contraception is much higher among adolescents. Contraceptive use among adolescents is as low as 7% in India.<sup>5</sup> Half of these girls get married at <18yrs and about half have their 1st child below 20yrs of age.<sup>6</sup> These factors have serious social, economical and public health implications.

The members of The Obstetric and Gynecological Society of Bhopal and the doctors of department of Obstetrics and Gynecology, Gandhi Medical College, Bhopal have been imparting Family Life Education to school girls and anganwadis as part of their school health program. Family life education is defined by the International Planned Parenthood Federation (IPPF) as “an educational process designed to assist young people in their physical, emotional and moral development as they prepare for adulthood, marriage, parenthood, ageing, as well as their social relationships in the socio-cultural context of the family and society”.<sup>7</sup>

The Family Life sessions provide age appropriate, uniform skilled advice on nutrition, prevention of anemia, hygiene (menstrual), problems of growing years, career counseling to school girls and for older girl’s sessions on avoiding RTI/STIs, safe sex, contraception, teenage pregnancy and exclusive breastfeeding.

These sessions covering both schools and colleges, are ongoing for past ten years. This project was designed to evaluate the effectiveness of Family Life Education program, and to gain an insight into the perceptions of the school girls regarding menstruation, hygiene, nutrition, marriage and the program.

## METHODS

The study was conducted after taking required permission from the school authorities. It was a descriptive, cross-sectional observational study. Five schools in the old Bhopal area were included in the study. These schools had students mostly from middle and lower class of society. These schools were selected from those in which we had been imparting Family Life Education programs. However it was not necessary that every individual girl had attended every or any session in that particular year.

The students were explained about the purpose of study and all those who consented to participate were given a questionnaire to assess their knowledge and perception regarding menstruation, menstrual hygiene, marriage, child birth, contraception and nutrition. The students were explained that they could refuse the questionnaire and refusal would not in any way reflect on their school marks or grades.

The doctors and counselors involved in administering the questionnaire were those who had special training in school health and ARSH and were involved in School Health sessions. This ensured that the school administration, teachers and school girls are already familiar with the person. A self designed peer validated questionnaire was provided with aim to evaluate the prevalent knowledge, attitude (ideas) about menstrual and reproductive health and their perceptions about the school health program (Family Life Education) imparted by the doctors and counselors. The data obtained were collated and analyzed statistically by simple proportions.

## RESULTS

Data from five schools in which 537 girls participated was analysed. Age of the students varied between 12 and 21 years with the mean age being 16.12 years.

**Table 1: Age of menarche.**

| Age of menarche (years)     | Number of girls | Percentage |
|-----------------------------|-----------------|------------|
| 11-12                       | 104             | 19.3%      |
| 13-14                       | 353             | 65.7%      |
| 15-16                       | 63              | 11.7%      |
| Not attained/doesn't recall | 17              | 3.1%       |

The average age of menarche was 13.3 years with the range between 11-16 years. 3 girls had not attained menarche and all were below 14 years of age. 14 girls (2.6%) did not exactly remember their age of menarche (Table 1).

**Table 2: Knowledge and perception of adolescent girls regarding menstruation.**

| What is menstruation?                | Number of girls | Percentage |
|--------------------------------------|-----------------|------------|
| Normal physiology                    | 467             | 87%        |
| Passage of impure blood              | 51              | 9.5%       |
| Disease                              | 11              | 2%         |
| Did not answer                       | 08              | 1.5%       |
| <b>Source of blood</b>               |                 |            |
| Uterus                               | 396             | 73.7%      |
| Any other organ                      | 20              | 3.7%       |
| Not sure                             | 121             | 22.5%      |
| <b>Duration and length of cycles</b> |                 |            |
| Knew correctly                       | 430             | 80%        |
| Incorrect/ didn't answer             | 107             | 20%        |
| <b>Association to pregnancy</b>      |                 |            |
| Knew                                 | 87              | 16.2%      |
| Not sure                             | 450             | 83.7%      |

Most of the girls (87%) believed that menstruation was normal and a part of growing up although very few knew the exact reason for having mensus. Only 55 (10.2%) girls, mostly from science section had knowledge of reproductive physiology and knew why menstruation occurs. 51 (9.5%) girls believed menses to be passage of impure blood and perceived it to be unclean. 396 (73.7%) girls knew uterus to be the source of menstrual blood. 20 girls thought it be some other organ and the rest were not sure. 87 (16.2%) thought one could have a baby after attaining menarche. 430 (80%) of girls knew correctly the variation in normal duration and interval of menstruation. Few chose not to answer (Table 2).

**Table 3: Source of information regarding menstruation.**

| Source               | Number of girls | Percentage |
|----------------------|-----------------|------------|
| Mother               | 403             | 75%        |
| Other family members | 33              | 6.14%      |
| Friends              | 40              | 7.44%      |
| School education     | 34              | 6.33%      |
| Media                | 27              | 5%         |

All the girls had acquired some information regarding menstruation before attaining menarche. 403 (75%) girls received information from their mothers. For the rest it was either a family member, a friend or media. Only 34 (6.33%) girls gained information about menstruation from school (Table 3).

**Table 4: Restrictions observed by girls during menstruation.**

| Nature of restriction    | Number of girls | Percentage |
|--------------------------|-----------------|------------|
| No restrictions          | 262             | 48.8%      |
| Did not offer prayers    | 227             | 42.3%      |
| Did not attend school    | 161             | 30%        |
| Didn't enter the kitchen | 209             | 39%        |
| Avoided certain foods    | 180             | 33.5%      |
| Avoided going out        | 154             | 28.6%      |

More than 50% of the girls faced some restriction or the other during mensus. 227 (42.3%) of girls did not offer prayers during menses. 154 (28.6%) girls believed that daily activity is to be curtailed. 209 (39%) girls did not enter the kitchen and 180 (33.5%) girls avoided food such as pickles. 161 (30%) girls did not attend school (Table 4). 408 (76%) girls used sanitary pads. 387 (72%) girls disposed off their used napkin in a dustbin. 64 (12%) reused a homemade pad from old cloth after washing. The rest just threw it in a waste land or drain.

421 (78.4%) girls believed that during menses one should bathe daily. 50 (9.3%) took bath on fifth day where as 66 (12.2%) girls showered after seven days (Table 5).

**Table 5: Practice of menstrual hygiene.**

| Use of absorbent material                       | Number of girls | Percentage |
|---|-----------------|------------|
| Sanitary pads                                   | 408             | 76%        |
| Old cloth                                       | 129             | 24%        |
| <b>How often one bathed during menstruation</b> |                 |            |
| Daily   | 421             | 78.4%      |
| 5 <sup>th</sup> day                             | 50              | 9.3%       |
| After 7 days                                    | 66              | 12.2%      |
| <b>Method of disposal</b>                       |                 |            |
| Dustbin   | 387             | 72%        |
| Threw in a waste land                           | 86              | 16%        |
| Reused the old cloth                            | 64              | 12%        |

When asked about the right age of getting married most girls were shy to answer. 363 (67.67%) believed that a girl should get married after 21 years of age. 156 (29.07%) thought that a girl should get married between 18-20 years of age. 469 (87.44%) girls believed that one should have 1<sup>st</sup> child after 21 years of age. Majority of the girls had very little information about contraception and its methods (Table 6).

Most of the girls knew that to be healthy one has to eat well. But 55 (10.23%) girls believed that that it was not necessary to eat dal, egg, fish etc. everyday. Another 4.4% did not know the importance of green vegetables. This somehow reflected their eating habits.

**Table 6: Perception regarding age of marriage, contraception, and child bearing.**

| When should a girl get married                      | Number of girls | Percentage |
|---|-----------------|------------|
| <18 years   | 18              | 3.26%      |
| 18-20 Years   | 156             | 29.07%     |
| >20 years   | 363             | 67.67%     |
| <b>When should a girl have 1<sup>st</sup> child</b> |                 |            |
| <20 years   | 68              | 12.6%      |
| >20 years   | 469             | 87.44%     |
| <b>Contraceptive methods</b>                        |                 |            |
| Some knowledge                                      | 59              | 11%        |
| No knowledge  | 442             | 82.3%      |
| Did not answer                                      | 36              | 6.7%       |

476 (88.6%) girls enjoyed the session and found it useful. 467 (86.98%) wanted more information on the subject. 151 (28.1%) girls wanted yearly sessions where as 203 (37.9%) preferred monthly. 372 (69.3%) girls wanted a doctor to impart knowledge because they felt a doctor knew the best. 16.7% were comfortable with their

mothers for this. The rest were comfortable with their teachers doing the job. Overall almost all the girls enjoyed and found the sessions useful (Table 7).

**Table 7: Perception about family life skill programmes.**

| How did you find session                      | Number of girls | Percentage |
|---|-----------------|------------|
| Informative                                   | 476             | 88.6%      |
| Not useful                                    | 28              | 5.2%       |
| Did not answer                                | 33              | 6.1%       |
| <b>Would you like to get more information</b> |                 |            |
| Yes   | 467             | 86.98%     |
| No  | 37              | 6.9%       |
| Not sure                                      | 33              | 6.1%       |
| <b>How often would you like the sessions</b>  |                 |            |
| Yearly  | 151             | 28.1%      |
| Six monthly                                   | 183             | 34%        |
| More frequently                               | 203             | 37.9%      |
| <b>Who should provide you information?</b>    |                 |            |
| Doctor  | 372             | 69.3%      |
| Teachers                                      | 75              | 14%        |
| Mother  | 90              | 16.7%      |

## DISCUSSION

In the present study the average age of menarche was 13.3 years which is in accordance with other studies. Shanbhag et al in their study in Bangalore found 13.4 years to be the mean age of menarche.<sup>8</sup> A similar study in Singur, West Bengal, the mean age of menarche was 12.8 years.<sup>9</sup> Other studies also found the age of menarche around 13 years of age.<sup>4,10</sup> In India as in the rest of the world the age of menarche has been steadily decreasing.<sup>11</sup> Hence it is important to educate our girls early so that when they attain menarche, they are in no fear, anxiety or misconception regarding menstruation.

In our study as with many other studies mother was the first source of information.<sup>12,13</sup> When a girl attains menarche there is a feeling of anxiety and nervousness. She gains most of the information about menstruation from her mother who in majority of our cases was illiterate or had just primary schooling. Hence no proper guidance was given and lack of health education programmes in schools added to the gravity of it. There is a need to educate the mothers as well. Also the schools should add health education in the curriculum so that the adolescents know the changes they are going through.

Most of the girls did not know the reason for having menstruation. Only 10.2% girls knew the correct source of menstruation. 2.4% girls believed it to be passage of impure blood. 42.3% girls did not offer prayers during menses. This indicates that menstruation is still regarded as something impure in our society and the myths and misconceptions are running down the generations.

Around 30% girls admitted to absenteeism from school during menses. This was due to the lack of privacy and non availability of clean toilets and disposal facilities in the schools. In a study by Bodat et al school absenteeism due to menstruation was 78.6%.<sup>14</sup> Our schools need to have better sanitation facilities for menstrual management. School absenteeism not only is detrimental to academic performance but also reinforces a negative attitude towards menstruation.

76% of the girls in the study used sanitary pads. This may be due to the fact that although the girls did not belong to affluent families but due to the urban location of the area sanitary pads were easily available. In a study by Kendre and Ghattegi in Solapur usage of sanitary pads was very less in girls from slum areas (1.4%) as compared to non-slum areas (97.73%).<sup>10</sup> In our study 78.4% girls had daily baths and the rest bathed on 5<sup>th</sup> or 7<sup>th</sup> day of menses. This showed the lack of knowledge regarding menstrual hygiene amongst these 21.6% girls. This was related to socioeconomic and educational status of the family. In the study by Kendre and Ghattegi also, personal hygiene was correlated with educational and socioeconomic status.

When asked about the right age of marriage, 67.67% girls believed that a girl should get married after 21 years and 87% believed that 1<sup>st</sup> child should be born after 21 years of age. This view was held although most of them had sisters and cousins married before 21 years. This showed that education in itself has a positive impact on the thought process of these young girls. In India though the legal age of marriage for girls is 18 years, the National Family Health survey 2009 reports that 30.35% girls between 15-18 years were married. Girls younger than 15 years were married in certain regions. India is also the capital of teenage pregnancy. Adolescent pregnancies constitute 10-15% of total pregnancies in India. This is largely attributed to early marriage, a culture widely prevalent in the whole of the Indian sub-continent.<sup>15,16</sup> Teenage pregnancy has its own physical, psychological and social implications. Children born to teenage mothers often show behavioural and developmental problems and they are more likely to become teenage parents themselves.<sup>17</sup>

Almost all the girls knew the importance of eating healthy food. This is in contrast to study by Patel et al in which only 33.8% knew the importance of healthy diet.<sup>18</sup> Despite having the knowledge of healthy diet as many as 66.7% girls did not eat a balanced diet. National Family Health Survey 3 shows that 56% females in the age group 15-19 years were anemic. Adolescents are at high risk for nutritional morbidity. According to the Report of the Working Group on Adolescents for the Tenth Five Year Plan, 45% adolescent girls are malnourished.<sup>19</sup> Counselling on diet will bring forth healthy adolescents and healthy adults. 88% girls enjoyed the session on Family life skills and found it to be useful. Imparting family life skills to school girls provides a welcome

platform for school girls to interact with doctors and counsellors, increasing their knowledge on health issues like menstruation, hygiene and nutrition.

According to a report of Ministry of Health and Family welfare, Govt. of India 2006, only 15% young men and women in 15-24 age group reported that they had received family life or sex education in school or through special program sponsored by the government or NGOs although they expressed the need.<sup>20</sup> Various studies have shown the effectiveness of school health programmes in increasing knowledge of reproductive health.<sup>21-23</sup> School health programmes may have a positive impact in reducing unsafe sex, promiscuous behaviour and teen age pregnancies.<sup>24</sup> Family life education not only increases their knowledge on health issues but also makes them aware of their rights and responsibilities.

## CONCLUSION

1. Imparting family life skills to school girls increases their knowledge on health issues like menstruation, hygiene and nutrition.
2. They are more confident to ask and answer queries.
3. School education as such is increasing age at marriage and first child.
4. Mother is the first teacher and source of information hence emphasis should also be given on educating women so that they are able to guide their daughters.
5. Imparting family life skills to our girls would also help us achieve the Millenium development goals of gender equality, women empowerment and improving maternal health.
6. Educate a girl, empower her and her future family.

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