Menstrual Pattern Among Adolescent Girls In Kancheepuram District Of Tamilnadu

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Abstract

Background: Every woman does experience one or other type of menstrual problems in her lifetime. Objectives: To understand the menstrual hygiene and menstrual pattern among adolescent girls in Kancheepuram district. Methodology: A descriptive cross sectional study was conducted among 104 adolescent girls aged above 12 years. A pre-tested proforma was used to collect the details of adolescent girls. Results: Age at puberty from 11 to 14 years (Mean: 12.44 years). 49% of girls attained puberty in the age of 12 and 37.5% at 13 years. 44.2%(46) of participants had been using the same inner garments around one year and 19.2%(20) using more than one year. 45.2% of participants are changing 2 napkins per day. 34.6% are changing 3 per day, 18.3% are changing 4 per day and 1.9% of participants are changing 1 napkin per day. 84(80.8%) have got regular cycles and 20 (19.2)participants have got irregular cycles. BMI<25 and >25 have influence on, onset puberty and bleeding quantity (p<0.05). Conclusion: Menstrual hygiene, personal hygiene are to be improved in adolescent girls. Also proper nutritional care is to be given to this group as low and high BMI are suffering from menstrual disorders.

Key Words: Adolescents , BMI, Menstrual disorder

Introduction

Adolescence marks the developmental transition from childhood to adulthood, a time when many important social, economic, biological, and demographic events set the stage for adult life. In India, myriad social, economic, and health factors may undermine the ability of adolescents to lead full and productive lives.¹ The lives of millions of adolescents worldwide are at risk because they do not have the information, skills, health services and support they need to go through sexual development during adolescence.² Young people (aged 10–24) constituted almost 315 million and represented 31% of the Indian population in 2001. Not only does this cohort represent India’s future in the socio-economic and political realms, but its experiences will largely determine India’s achievement. In recognition of the importance of investing in young people, several national policies and programmes formulated since 2000, including the National Population Policy 2000, the National Youth Policy 2003, the Tenth and Eleventh Five-Year Plans, the National Adolescent Reproductive and Sexual Health Strategy and the National Rural Health Mission, have underscored a commitment to
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Menstruation is a normal physiological phenomenon for females indicating her capability for procreation. However this normal phenomenon is not an easy one. It is often associated with some degree of sufferings and embarrassment. It is common observation that every woman does experience one or other type of menstrual problems in her lifetime. Menarche is a complex of growing up. The age of onset of the menstrual cycle varies from 9-18 years, about 12 year in India. Lack of menstrual hygiene was found to result in adverse outcomes like reproductive tract infections. It is a common observation that girls are rarely informed about menstruation unless they experience it for the first time. Hence it is better to understand the menstrual pattern in different strata of population.

Objectives: To understand the menstrual hygiene and menstrual pattern among adolescent girls in Kancheepuram district.

Materials and Methods

This descriptive cross sectional study was conducted among adolescent girls aged above 12 years. A convenience sample of 104 was chosen for this study. This study was conducted in a Higher secondary school and degree college in semmanjeri, Chenagallpat, Kancheepuram district of Tamilnadu. A pre-tested proforma was used to collect the details of adolescent girls. This includes basic demographic characteristics, nutritional and menstrual details. A detailed instructions about filling the form was given. Consent was taken individually before conducting the survey. Also necessary approvals were obtained from concerned authorities. All the parameters were entered in Microsoft excel and analysis done Using SPSS. Tables, Charts presented and proportion and chi-square test were used.

Results

Total adolescent girl participants in this survey were 104 aged ranges from 12-20 years (Mean 15.88 years). Mean weight and height of the participant’s were41.47 kgs and 146.60 cms respectively. Mean BMI was 19.48 kg/m$^2$ (SD:3.71)

Figure 1. Height and weight of study participants

Among participants, 63.5% were in the height of 140-160 cm and 28.8% of 120-140cm and 49% were weight of 35-45kgs and 32.7% of 45-55kgs.

Figure 2.Age at puberty of study population (years)

Age at puberty from 11 to 14 years (Mean: 12.44 years). 49% of girls attained puberty in the age of 12 and 37.5% at 13 years.
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Out of 104 participants 84(80.8%) have got regular cycles and 20 (19.2) participants have got irregular cycles. 74(71.2%) participants have normal bleeding per cycle and 30(28.8%) participants have scanty flow per cycle. Among 104 participants 76(73.1%) have experienced menstrual cycles once in 30 days, 17(16.3%) girls have once in 40 days cycle frequency, 3(2.9%),1(1.0%) and 7(6.7%) girls have got once in 20, 45 and 60 days cycle respectively In the study group, 40(38.5%) were suffering with dysmenorrhoea and 64(61.5%) were not suffering from dysmenorrhoea. When comparing BMI with menstrual indicators, it is observed that onset puberty and bleeding quantity were statistically significantly (p<0.05).

Discussion

In our study the mean age of menarche was 12.44 years,61% of participants had dysmenorrhoea. Also this study reveals 63.4% of adolescent were using

- Taking tablets. Mostly over the counter drugs were taken.
- Patient timing during menstruation among adolescent girls
- Age at puberty (years)
- bleeding quantity
- cycles frequency - once in (days)
- Nature of mensus
- dysmenorrhoea
- pain timing

Table 3. BMI and menstrual cycles among adolescent girls

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>BMI Group (kg/m²)</th>
<th>Total</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;20</td>
<td>20-25</td>
<td>&gt;25</td>
</tr>
<tr>
<td>Age at puberty (years)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>3</td>
<td>1</td>
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<tr>
<td></td>
<td>12</td>
<td>27</td>
<td>18</td>
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<td></td>
<td>13</td>
<td>28</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>bleeding quantity</td>
<td>normal</td>
<td>48</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>scanty</td>
<td>13</td>
<td>11</td>
</tr>
<tr>
<td>cycles frequency - once in (days)</td>
<td>20</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>47</td>
<td>21</td>
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<td>1</td>
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<td></td>
<td>60</td>
<td>5</td>
<td>2</td>
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<tr>
<td>Nature of mensus</td>
<td>regular</td>
<td>53</td>
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</tr>
<tr>
<td></td>
<td>irregular</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>dysmenorrhoea</td>
<td>yes</td>
<td>24</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>no</td>
<td>37</td>
<td>21</td>
</tr>
<tr>
<td>Total</td>
<td>61</td>
<td>32</td>
<td>11</td>
</tr>
<tr>
<td>pain timing</td>
<td>1st day</td>
<td>14</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>all days</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>one day before</td>
<td>5</td>
<td>2</td>
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<td>mensus</td>
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<tr>
<td>Total</td>
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</tbody>
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one or more than a year of inner garments. Another good sign was that around 99% of participants were using more than 2 napkins per day. Increasing body mass index is statistically significant with menarche and bleeding quantity.

The higher mean age of menarche in one study was found around 13.99 years (S.D. 1.8)\textsuperscript{10-14}. The reduced mean age of menarche in this region is due to higher BMI and other socio cultural practices, geographical conditions, health status etc \textsuperscript{15}

The prevalence of dysmenorrhea in our study with same as other studies conducted in various parts of India. Other studies have also found the dysmenorrhea the most common menstrual disorder\textsuperscript{16,17,18}. One in eight young women reported experiencing menstrual problems.\textsuperscript{5}

According to a multicounty survey, menstrual disturbances were among first and fourth most commonly reported causes of morbidity among adult women.\textsuperscript{19,20} Dysmenorrhea occurred in students with both regular and irregular cycles.\textsuperscript{21} Accessing medical care is very less in adolescent girls and most of the girls taking over the counter drugs for dysmenorrhea. One study indicates that exercise can decrease the duration and severity of dysmenorrhea and also using of the sedative tablets in high school girls.\textsuperscript{22} Hence maintaining an optimal BMI can help in menstrual problem.

Many studies also showing that girls were using old cloths (100%) for sanitary protection.\textsuperscript{23}

But less usage of cloths seen in one study.\textsuperscript{24} In our study participants were using sanitary napkins. Govt. of Tamilnadu has a scheme to provide sanitary napkins to school going girls.

Though menstruation is a normal physiological process, an adequate medical care is to be provided to adolescent girls.

Conclusion: Menstrual hygiene is to be still improved in adolescent girls in this region. Awareness regarding personal hygiene like frequent change of inner garments has to be taught through various channels. Also proper nutritional care is to be given to this group as low and high BMI are suffering from menstrual disorders. More experimental studies can be suggested to evaluate menstrual problem in adolescent girls.

**Conflict of Interest:** None

**Source of funding:** Nil

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