Prevalence of dysmenorrhea in young women (16–25 years): A cross-sectional study

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ABSTRACT
Objective: To determine the frequency of dysmenorrhea among women in the 16-25 age groups in Ajman.
Materials and Methods: A cross-sectional survey was done in 300 female students from two universities in Ajman United Arab Emirates. The data was collected using a pilot tested, self administered questionnaire. Data was analyzed using the SPSS-19 and is presented mainly as tables and graphs. To verify associations the Chi square test was done.
Result: The study found that the prevalence of dysmenorrhea among women within the age group of 16-25 years was 75%. Females with heavy menstrual flow with clots have higher prevalence of dysmenorrhea (91.7%) than women with slight and moderate menstrual flow (69.7%). The most common symptoms reported by females suffering from dysmenorrhea are mild fatigue, moderate cramps, moderate back pain and mild premenstrual tension. Most common remedies taken for dysmenorrhea were taking rest (13%) and taking over the counter pain killers (41%).
Conclusion: The frequency of dysmenorrhea among women of age group 16-25 was high with three fourth of the study subjects reporting dysmenorrhea. Most common symptoms suffered were cramps followed by back pain and fatigue. Mostly dysmenorrhea was managed with over the counter pain killers.

Key words: dysmenorrhea, prevalence, frequency

INTRODUCTION
Dysmenorrhea is characterized by pain which is usually sharp but can also be dull, throbbing and radiating to the limbs. The pain can start either at the time of menses or two to three days prior to it1. Dysmenorrhea can be classified into: primary and secondary. Primary dysmenorrhea is defined as painful menses in women with normal pelvic anatomy, which usually begins during adolescence. Secondary dysmenorrheal is menstrual pain associated with underlying pathology, and its onset may be years after menarche. It can be caused by disorders such as endometriosis, pelvic inflammatory disease, intra-uterine devices etc1.

Primary dysmenorrhea peaks in late adolescence and the early 20s. The incidence falls with increasing age and with increasing parity.

The estimation of dysmenorrhea from studies around the world shows wide variations reporting a range between 28% and 71.7%. Studies on the prevalence of menstrual pain have shown that many factors are related to this disorder. The factors include a younger age of menarche, low body mass index, smoking, prolonged menstrual flow, perimenstrual complaints, pelvic infections, sterilizations, psychological disturbances, genetic influence, and a history of sexual assault influencing the prevalence and severity of dysmenorrhea1.

Due to the negative effects of dysmenorrhea on an individual’s psychological status, health-related quality of life may be disrupted among the particular age group of women. Furthermore, dysmenorrhea is a common
cause of sickness absenteeism from both classes and work by the female student community\(^1\).

In Arab World, dysmenorrhea is not discussed much due to various cultural and personal issues which hinders the research done on this topic\(^2\). As a result of which, there is not much public awareness regarding dysmenorrhea and its management. Young women often avoid consulting a doctor, being reclusive and reserved\(^3\). It is a topic of public importance as it has negative impact both on the physical and psychological state of people. In turn, affects the economic status of society and the nation. By this study, our aim is to determine the prevalence and the pattern of dysmenorrhea.

**MATERIALS AND METHODS**

A cross-sectional survey was conducted among female students from two universities in Ajman, United Arab Emirates. A total of 300 female students participated in this study and each student was given a self-administered questionnaire to complete. The variables included in the questionnaire were related to age at menarche, menstruation, elucidated variations in menstrual patterns like length of cycle, duration of bleeding period, self reported blood loss per cycle (as slight, moderate, heavy and heavy with clots), history of dysmenorrhea and its severity, the symptoms of dysmenorrhea and the severity of each symptom, stress related to dysmenorrhea, effect of dysmenorrhea on daily activities, dietary habits that affect dysmenorrhea and associated symptoms of dysmenorrhea.

Pilot Study was conducted among 10 female students from Batch 2009 of Gulf Medical University and they are not included in the final analysis.

Data was entered using Microsoft Excel and Data was analyzed using SPSS-19 software. Data is presented as percentages and graphs. Chi square test was done to verify associations.

**RESULTS**

In this cross sectional descriptive study the number of woman suffering from dysmenorrhea are 72.3% out of 300 female participants.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Dysmenorrhea</th>
<th></th>
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<th>p.value</th>
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<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>Number</td>
<td>Percentage</td>
<td>No</td>
</tr>
<tr>
<td><strong>AGE GROUP</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16-19</td>
<td>51</td>
<td>68.9</td>
<td>23</td>
<td>31.1</td>
</tr>
<tr>
<td>20-25</td>
<td>174</td>
<td>77</td>
<td>52</td>
<td>23.0</td>
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<tr>
<td><strong>BMI</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Underweight</td>
<td>19</td>
<td>79.2</td>
<td>5</td>
<td>20.8</td>
</tr>
<tr>
<td>Normal</td>
<td>156</td>
<td>75.7</td>
<td>50</td>
<td>24.3</td>
</tr>
<tr>
<td>Overweight</td>
<td>50</td>
<td>71.4</td>
<td>20</td>
<td>28.6</td>
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<td><strong>NATIONALITY</strong></td>
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<tr>
<td>South Asian</td>
<td>117</td>
<td>73.6</td>
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<tr>
<td>African</td>
<td>32</td>
<td>78</td>
<td>12</td>
<td>22</td>
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<td>Arab</td>
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<td>67.7</td>
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<td>Emirati</td>
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<tr>
<td>Other</td>
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<td>86.2</td>
<td>5</td>
<td>13.8</td>
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<td><strong>MARITAL STATUS</strong></td>
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<tr>
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<td>61.8</td>
<td>13</td>
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<tr>
<td>Un-married</td>
<td>204</td>
<td>76.7</td>
<td>62</td>
<td>23.3</td>
</tr>
</tbody>
</table>

Table 1. Frequency of dysmenorrhea in different age group, BMI groups, nationality and marital status
The most common symptoms reported by females suffering from dysmenorrhea are mild fatigue, moderate cramps, moderate back pain and mild premenstrual tension.

Females with heavy menstrual flow with clots have higher prevalence of dysmenorrhea (91.7%) than women with slight and moderate menstrual flow (69.7%). Chi square test, p value (0.00) shows that there is significant association between dysmenorrhea and menstrual flow (Table 3).

The most common symptoms reported by females suffering from dysmenorrhea are mild fatigue, moderate cramps, moderate back pain and mild premenstrual tension.

On inquiring about common remedies taken by females suffering from dysmenorrhea, the most common remedies were taking rest (13%) and using hot water bottle (5%). While most of the females suffering from dysmenorrhea do not take complementary medicine, some reported to taking colicure. 41.3% of
women took over the counter pain killers to ease the pain (Table 4).

**DISCUSSION**

This study provides information about the frequency, symptoms and treatment of dysmenorrhea among women within the age group of 16 years to 25 years in Ajman, United Arab Emirates. This study found the frequency of dysmenorrhea to be 75% among women within the mentioned age group. There is a wide variation in the estimates of dysmenorrhea from studies around the world reporting a range of 28% to 71.7%. The frequency of dysmenorrhea among women in Ajman is higher than its prevalence in Delhi and Saudi Arabia while it is lower in Hispanics of USA and Egypt.

The frequency of dysmenorrhea was found to be more in women in age group 20-25 years, 77% as compared to 16-19 years (68.9%). One study done in Saudi Arabia among female medical students shows that the prevalence and incidence of dysmenorrhea is in the students in their early twenties is more than those in the teens. The prevalence of dysmenorrhea was more in countries like United States of America 86.2%, followed by Africa 78%.

Obesity and high body mass index is said to increase the risk of dysmenorrhea in our study the there was no significant difference in the prevalence of dysmenorrhoea in the different weight categories. In the current study only 34 married women participated and out of these only 21 women suffered from dysmenorrhea. No significant relation could be found between dysmenorrhea and the age of menarche. Prevalence of dysmenorrhea was found to be more in women with irregular menstrual cycles (88.5%) with heavy bleeding with clots (91.7%) and has been found to be significant, similar studies were done in Egypt. The most common characteristic of pain in dysmenorrhea was found to be cramping like pain (35.6%) followed by intermittent pain (31.1%) and constant pain (16%) supported by research. The most common symptom among the women suffering from dysmenorrhea was found to be mild fatigue followed by moderate cramps.

According to the current study conducted, 53.3% of the women had a positive attitude about dysmenorrhea which opposes the study that says women suffering from dysmenorrhea have low self-esteem. 68.4% of the women claimed that dysmenorrhea sometimes affected their daily activities and similar studies were conducted on Hispanic females in the United States to support this. Study stress was found to be high in female students suffering from dysmenorrhea (44.4%) as compared to work stress (32.9%) and a small percentage of family stress (10%) was also found among these women. However, more women with dysmenorrhea did not suffer from study stress (55.6%) or work stress (67.1%) which opposes the study which shows that stress increases the risk of dysmenorrhea.

Most common remedies taken by women suffering from dysmenorrhea are drinking tea or milk, resting, pain killers and anti spasmodic drugs.

**CONCLUSION**

The frequency of dysmenorrhea among women of age group 16-25 was high with three fourth of the study subjects reporting dysmenorrhea. Most common symptoms suffered were cramps followed by back pain and fatigue. Mostly dysmenorrhea was managed with over the counter pain killers.

**REFERENCES**


