

## ORIGINAL ARTICLE

# ATTITUDES OF FEMALE ADOLESCENTS ABOUT DYSMENORRHEA AND MENSTRUAL HYGIENE IN TEHRAN SUBURBS

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**Background** – The aim of this study was to assess the level of knowledge, attitudes and behavior of female students, aged 15 to 18 years, with regard to dysmenorrhea and menstrual hygiene, in suburban districts of Tehran.

**Methods** – The study applied a descriptive, cross-sectional method, in which 250 students were selected at random using a cluster random sampling method. The data were collected by applying a 44-item questionnaire. The reliability of the questionnaire was checked by Chronbach-Alpha method, which showed a correlation of 90%.

**Results** – Seventy-seven percent of the subjects claimed that they had adequate knowledge of dysmenorrhea. But only 32% of these practiced personal hygiene, such as taking a bath, and used hygienic materials (i.e. sterile pads). About 33% of the subjects, avoided any physical activity or even mild exercise during menstrual period. Over 67% of the girls reported taking palliative medicine for their menstrual pain without consulting a doctor. Fifteen percent of the subjects stated that dysmenorrhea had interfered with their daily life activities and caused them to be absent from school from between 1 to 7 days a month. The prevalence of dysmenorrhea in this study was 71%.

**Conclusions** – The main conclusion derived in this study was the necessity of educating female students about personal hygiene associated with their menstrual period and to adopt a healthy behavior, which includes: appropriate nutrition, exercise and physical activity, personal hygiene, and appropriate use of medications based on a physician's prescription.

**Keywords** • dysmenorrhea • female student • menstrual period • Tehran

### Introduction

For years, Iranian women have been involved in important roles in various professional fields including management, medicine, industry, and others. Therefore, they require special care, particularly regarding medical and psychologic attention, to perform these tasks.<sup>1,2</sup> This assumption is based on medical evidence regarding menstrual period and its effects on women. Since the discomfort of the menstrual pain may affect the daily and professional activities of most women, they need to be more concerned about their health during

their health during their menstrual period.

Most females experience some degree of pain and discomfort during menstrual period,<sup>3,4</sup> which can impact on their daily activities, and disturb their productivity at home or at their workplace.<sup>5,6</sup> During menstruation, they should consult a doctor and take medications to relieve their pain and other relevant symptoms of dysmenorrhea.<sup>3,5</sup> By definition, dysmenorrhea is a painful period or menstruation cramping, which may be accompanied by other symptoms, such as nausea, vomiting, diarrhea, headache, weakness and/or fainting. It is reported to be the most common reason for females to visit a doctor in gynecology centers.<sup>2,7,8-11</sup> A majority of women would have experienced some degree of menstrual cramping

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especially in the first years of their reproductive life.<sup>1,5,12</sup> According to reports, the prevalence of dysmenorrhea is very high; at least 50% of women experience this problem during their reproductive years.<sup>3,13,14</sup> This problem not only causes discomfort in approximately one-fifth of the female population, but also causes many social, physical, psychologic and economic problems for women all around the world.<sup>14,15</sup> The results of recent studies showed nearly 10% of females with dysmenorrhea experienced an absence rate of 1 to 3 days per month from work or were unable to perform their regular/daily tasks due to severe pain.<sup>8,15</sup> Dysmenorrhea is considered the main cause of absence from school, among young female students.<sup>6,14</sup>

In addition to the subject of dysmenorrhea, pubertal hygiene is rarely discussed at home or in schools in most parts of Iran, especially in the regions where the current study has been conducted. This problem is observed particularly in traditional and poorly educated families, which could be mainly due to cultural restrictions, preventing sufficient information from reaching young girls. The combination of Eastern traditional culture and negative attitudes of school officials has had a strong impact on the discussion of the lack of sex education and related issues for youngsters in schools, in the mass media, and within families, especially in the rural areas of Iran. This has prevented the flow of accurate and sufficient information regarding pubertal hygiene and has often led to superstitious perceptions and beliefs about dysmenorrhea and menstrual hygiene in the rural areas.

This study was conducted on residents of Suburban districts of Tehran (Karaj and Shahreyar districts), as well as immigrants from small cities around the country, where many restrictions are strongly observed regarding aspects of education, health status and well being.

Although more than one-third of the Iranian population consists of females who are under 25 years of age—thus, for whom the issue of menstrual hygiene is very important—this subject has not been given priority for further investigation. This has resulted in only a few studies focused on this issue to date. The aim of this study was to assess the knowledge, attitudes and behavioral patterns of young, female students from suburban districts of Tehran, aged between

15 and 18 years, about dysmenorrhea and menstrual hygiene.

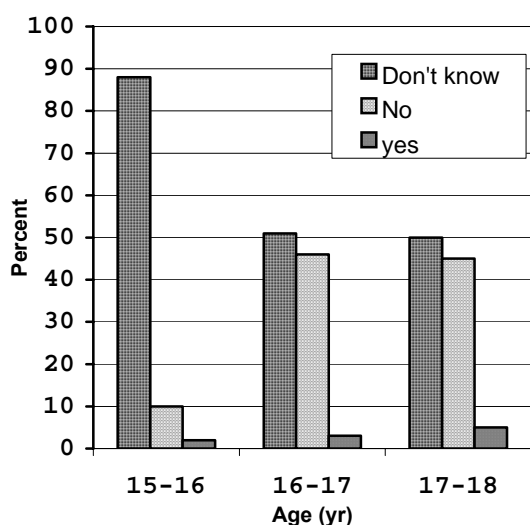
### Patients and Methods

In this cross-sectional study, 250 volunteer female students were selected at random from 20 high schools in suburban districts of Tehran, using a cluster random sampling method. In each selected school, one class from among the three different levels of first, second and third grades of high school were considered as a cluster; the subjects were selected from among 54 clusters. The study was coordinated by the district schools' top officials and their approvals were obtained before conducting the study. Students were informed about the aims of the study, and they participated voluntarily in this project. Students completed the questionnaire and returned it to a collector. The identity of the students was kept confidential. The participated students were subdivided based on their age in three groups of 15 – 16, 16 – 17 and 17 – 18 years old.

A questionnaire with 44 items was designed by the authors and a pilot test was performed on 35 students with similar characteristics of those in the main study for content validation. The concepts of Fishbien and Ajzen<sup>16</sup> were used to develop the main questionnaire. The Cornbach-Alpha measurement was used to determine the reliability of the questionnaire, which demonstrated a correlation of 90%. Data were analyzed using the SPSS 9 (SPSS Inc, Chicago, IL, USA) statistical package.

### Results

In this study, dysmenorrhea was reported by 178 (71%) students. Seventy-seven percent of the subjects (192 students) claimed to have had some education information regarding their menstrual period, of which 75% (144/192) received it from relatives such as their mother or a sister, or from friends. Regardless of this finding, many of the students did not have appropriate knowledge about menstrual period and hygiene, and did not practice health-oriented behavior (i.e. using sterile pads, taking baths and using appropriate diet). Of the 250 students, only eight (3.2%) believed that



**Figure 1.** Answers to the question: "Does a nutritious diet play a role in reduction of menstrual pain?"

diet management is effective to decrease menstrual period pain, while 87 (35%) did not believe so; 110 students (44%) did not have any idea (chose the answer of "don't know/have no idea" for this question); and 45 students (17.8%) did not respond to this question. Most of the students in the youngest group (15 – 16 yr) were not aware of the role of diet in decreasing menstrual pain (Figure 1). There was a significant difference between students in different age groups and the impact of appropriate diet management on menstrual pain ( $p < 0.05$ ).

While based on their answers to the questionnaires, most of the students in all three groups believed in the effectiveness of personal hygiene for the reduction of sever menstrual pain (Figure 2), only 79 (32%) said that they took a bath during the first days of menstrual period, while 162 (65%) reported not taking a bath at the beginning of their menstrual period. In addition, 85 girls (51.5%) reported not taking a bath for 8 days after the onset of their menstrual period. No significant difference was found between the three age groups in this regard.

The results of this study also revealed that an average of 67% of students with dysmenorrhea self-medicated with over-the-counter medications and only 18% consulted a healthcare provider. As

it is shown in Figure 3, there was no significant difference among different age groups in using over-the-counter medications.

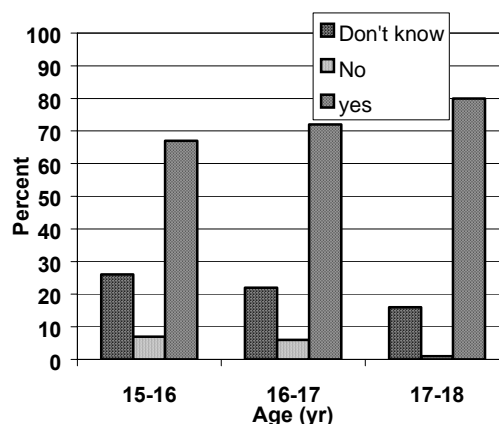
Most of the subjects in this study (66%) did not believe in the effectiveness of physical activity to reduce pain, and about 33% of students avoided any kind of physical activities during their menstrual period. The results presented in Figure 4 indicate the similarity of this believe among different age groups.

In this study, 38 students (15%) said that menstrual pain caused them to be absent from school and prevented them from carrying out other activities for 1 to 7 days of the menstrual period during the previous school year. In addition, of the 178 students who experienced dysmenorrhea, 49% indicated that they became reclusive, 52.5% suffered from nervousness, and 52% reported being shy during their menstrual period.

When students were asked whether the menstruation pain was a natural phenomenon or a kind of disease, out of 250 studied girls, 121 students (48.5%) regarded the pain as a disease and/or had exact opinion on this regard. The vast majority of students (98.5%) indicated that young girls should receive appropriate and sufficient information related hygienic practices, and 61% of them referred to their mothers as the best source for giving such information.

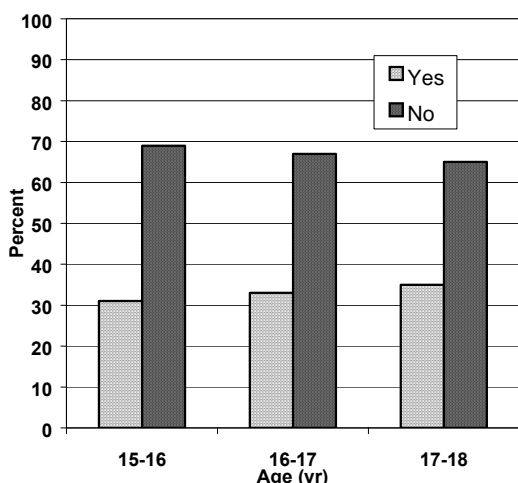
## Discussion

In this study, the prevalence of dysmenorrhea was reported by 71% of the study subjects. This



**Figure 2.** Answers to the question: "do personal hygiene practices play a role in reduction of menstrual pain?"

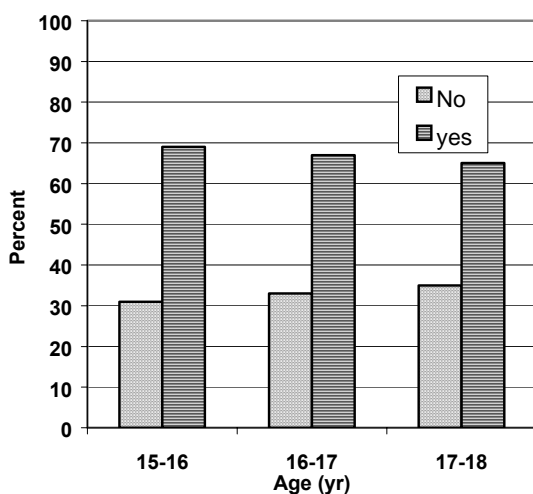
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**Figure 3.** Answers to the question: do you self-medicate reduce menstrual pain?

figure is similar to other relevant studies. Recent global surveys reported that between 50% and 70% of young girls experience dysmenorrhea each year.<sup>16-20</sup> While 77% of the study subjects claimed to have had some information about menstruation period, the vast majority lacked appropriate knowledge about personal hygiene during their menstrual period and, therefore, did not practice positive health behavior in this regard. This implies that their knowledge received from school and/or family members was not adequate and did not guarantee healthy, hygienic behavior. Health education should, therefore, use special methods and plan as early as possible to improve this situation.<sup>19,20</sup>

One-hundred-twenty-one subjects in this study (48.5%) believed that menstrual pain is a disease



**Figure 4.** Answer to the question: "do you believe that physical activity plays a role in reduction of menstrual pain?"

or had no comment. Young school girls should, therefore, also receive information explaining the nature of menstrual pain as being a normal physiologic process. However, if it causes severe mental and physical discomfort, and/or disruption to daily life activities, the patient should consult a doctor for appropriate medications.

The results of this study revealed that 67% of subjects with dysmenorrhea self-medicated with over-the-counter medications such as ibuprofen and about 18% consulted a healthcare provider for their problem. It seems subjects of this study did not pay any attention to the side effects of drugs (i.e., addiction and/or chemical poisons). That might be due to their lack of sufficient information regarding such side effects. Therefore, educating young girls at schools about consulting a healthcare provider for their menstrual period problems will not only increase the likelihood of pain relief, but also make them aware of the side effect of drugs they may take. Because if they get appropriate education. They could take a sound and more mature decision about taking medications during their menstrual period. As a result, we would empower them to take responsibility of their health and well being.

An appropriate diet for the alleviation of pain during the menstrual period should include fruits, vegetables and corns, and avoidance of too much salt and sugar.<sup>10,15,17</sup> Of the 250 students, only eight (3.2%) believed that a nutritious diet could positively affect menstrual period pain. As it was indicated earlier, in overall, 27% of the girls did not practice menstrual period hygiene at all. This unhealthy behavior may result from a lack of access to hygienic materials and facilities, along with incorrect perceptions and attitudes regarding the menstrual period. This could also increase the chance of developing certain infections, as well as increase the discomfort associated with secondary dysmenorrhea, which were shown in recent studies.<sup>3,4,18</sup> Health education should be developed

to empower young women with sufficient knowledge so that they shift to appropriate health-taking behaviors.<sup>19-21</sup> For example, educating young girls about the routine practice of taking a bath with warm water in the early days of menstrual period, would not only lead to the development of positive mental and social behaviors, but could also be effective in reducing hygiene problems in the community.<sup>5,6,9,10,13,20</sup>

In this study, 15% of the subjects indicated that menstrual pain caused them to be absent from school and/or make them less physically active. These findings may be linked to established sociocultural norms and beliefs, particularly those that restrict discussion of puberty-related issues, including the menstrual period. In other studies around the world, it has been reported that dysmenorrhea is the leading cause of absenteeism of women from work, school, and other occupations, and between 10% to 18% of young girls believed that it hampers functions of daily life.<sup>6,8,11,16-18</sup> Between 33% and 48% of girls reported some degree of reduction in their physical activities during their menstrual period; however, other studies have shown that physical activity, especially mild exercise, relieves pain in most cases.<sup>3,4,12</sup>

A vast majority of students (98.5%) indicated that young girls should receive more information about menstrual period and related hygienic practice, and 61% identified their mothers as the best information source in this regard. Educating mother who could be the main source of information to pass out to their young girls should be taken seriously. This approach would not only educate the mothers to improve their own health, but also could help them to overcome their shyness to pass out the accurate and sufficient information to their young daughters. But it would seem that the female relatives are passing on unhealthy practices, thus they are not properly educated themselves. On the other hand, the results of recent studies<sup>4,6,7,14,21</sup> showed the effectiveness of educating female students about these health topics at schools, as many young girls also identified their peers as a common source for information sharing and discussion about health problems. Moreover, students spend most of their daily time at school, thus providing the opportunity for teaching programs. Therefore, teachers should also receive specific skills during their on going education to spread the information to their young students. It is evident from this study that it is necessary to educate young girls about nutrition, appropriate diet, personal hygiene, physical activity, and taking medications under a physician's supervision during their menstrual period. Furthermore, as reported by other studies,<sup>3,6,7,9,11</sup> education is the single most effective method that will lead to a decrease in the severity of menstrual pain and a reduction in the

rate of absence from school, as well as to prevent the possibility of getting secondary dysmenorrhea.

In Iran, the lack of appropriate and sufficient information about menstrual hygiene can be attributed to cultural and religious beliefs that make the topic of menstrual period inappropriate for discussion. This problem, unfortunately, has not yet been addressed seriously in terms of its mental, social and health impact on the country. Health education is an important communication channel, but there are very few local articles found on this subject in Iran.

The findings of this study indicate that having knowledge by itself does not guarantee the adoption of healthy behavior. A change in beliefs and attitudes is imperative to ensure optimal behavior and the promotional of a healthy life style. Also in order to develop educational curricula for young girls, health education professionals should clearly recognize the association between a person's beliefs and attitudes, and her health behavior. Social, environmental, and cultural factors affecting adolescents' behavior should also be taken into account when imparting health education.<sup>6,7,11,13</sup> By assessing these factors, health education providers would be able to come up with appropriate methods and strategies to empower and educate young girls to adopt necessary life skills that have a positive influence on their lifestyle.

Further, the results of this study indicate a need for the establishment of a comprehensive school health education program with strong familial input and strategies that address the components of puberty education. In addition, at the community level, the mothers of young girls should be educated about pubertal hygiene, and be empowered with the necessary skills to communicate with their children. Considering the limitations of this study in terms of sampling method, additional studies may be needed using a wider geographic scope and a larger sample size that should include young girls and their mothers are proposed in order to produce sufficient and comprehensive results.

Although this study was conducted on a small portion of the population of adolescent girls in Iran, limiting the relevance of the results to a larger population, the findings of this study could help the Ministry of Education to develop and

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initiate appropriate steps, and to update school curricula in order to educate young girls regarding this important health issue.

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