

## Original Article

# A Survey about the Prevalence of Dysmenorrhea in Female Students of Shahid Sadoughi University of Medical Sciences and Their Knowledge, and Practice toward it

Mohammad Hossein Baghianimoghadam<sup>1</sup> Ph.D., Azam Mohammad Loo<sup>2\*</sup> M.Sc., Hossein Falahzadeh<sup>3</sup> Ph.D., Mehdi Mirzaei Alavijeh<sup>4</sup> M.Sc.

1. Department of Health Services, Shahid Sadoughi University of Medical Sciences, Yazd, Iran.
2. Department of Health Education, Shahid Sadoughi University of Medical Sciences, Yazd, Iran.
3. Department of Biostatistics and Epidemiology, Shahid Sadoughi University of Medical Sciences, Yazd, Iran.
4. Department of Health Education, Shahid Sadoughi University of Medical Sciences, Yazd, Iran.

Received: 9/3/2012

Accepted: 10/8/2012

---

### Abstract

**Introduction:** Dysmenorrhea is one of the most common and important health problems especially among young girls. It causes absence from classes and work. It has some negative effects on daily activities of patients. Because of cultural problems, patients ordinarily don't seek help from others in this situation. The aim of this survey was to study the prevalence of this disorder among university students and evaluate their knowledge and practice toward it.

**Materials & Methods:** This was a descriptive study on 300 female students of Shahid Sadoughi University of Medical Sciences in Yazd. Subjects were selected by simple sampling. The data were collected by a researcher-made questionnaire. The data were analysed by SPSS (ver. 17) using Chi - Square and Kruskal-Wallis tests.

**Results:** The age range of participants was 18 - 35 years (mean: 21±4.3 years). Prevalence of dysmenorrhea was 38.3% and the knowledge of 6.3% of students was good. There was a significant difference between participants regarding their knowledge and age. The first source of awareness of 39% of students was their mother. The practice of 17.7% of subjects was good.

**Discussion:** the results of this study showed that the knowledge and practice of participants about dysmenorrhea was low, so there is necessary to plan training programs for university students.

**Keywords:** Prevalence; Dysmenorrhea/epidemiology; Knowledge; Students; Female

---

\*Corresponding author: *Tel:* +98351-6240691, *Email:* azammohamadloo@yahoo.com

## Introduction

Dysmenorrhea (pain during menstruation) is the most prevalent complaint in women <sup>[1]</sup>. It has both primary and secondary reasons. Its symptoms include crampy lower abdominal pain, radiating to some other places (e.g. legs), with moderate to severe intensity; It may be accompanied by such systemic symptoms as nausea, vomiting, diarrhea, headache and fatigue. This pain begins at 20 years old or three years after menarche and usually there is no pelvic pathology <sup>[2]</sup>. About 40% of women complain of dysmenorrhea among whom 10% are unable to do daily activities between one to three days per month <sup>[3]</sup>. Dysmenorrhea may have negative effects on daily activities and function of women in and out of the home and may deteriorate their living. In some of the countries, more than half of the employed subjects are women and their absence from work is an important problem in that country. The studies showed that in Mexico city 19.8% of women were absent from work due to dysmenorrhea <sup>[4]</sup>. The results of a study performed in Tehran showed that about 15% of girls were absent from school for 1-7 days in a year <sup>[5]</sup>. The data on a research on prevalence of primary dysmenorrhea in different parts of the world from 1981- 2006 showed the increasing prevalence of dysmenorrhea <sup>[6]</sup>. The results of studies in different parts of Iran showed the prevalence of primary dysmenorrhea in female students to be 85.5% in Rafsanjan <sup>[7]</sup>, 71% in Tehran <sup>[5]</sup> and 73.2% in Gilan <sup>[8]</sup>. This prevalence in other parts of the world was 40.7% in Delhi <sup>[9]</sup>, 14% in Gambia <sup>[10]</sup>, 73% in the USA <sup>[11]</sup>, 42.2% in

Thailand <sup>[12]</sup>, 58% in Nigeria <sup>[13]</sup> and 52.2% in Mexico City <sup>[14]</sup>.

The data of a study showed that avoidance of the foods containing arachidonic acid such as dairy products, animal fat and decreasing the consumption of salt in the period of menstruation can reduce the pain of dysmenorrhea <sup>[15]</sup>. A study in Shahriar, Tehran revealed that there was a significant difference between the status of food and physical activity of girls and primary dysmenorrhea <sup>[16]</sup>.

Blakey et al. showed that there was a significant difference between physical activity and primary dysmenorrhea <sup>[17]</sup>. The results of the studies showed that such healthy behaviors as bathing with warm water in the first days of menstruation, physical activity, consumption of fruits, vegetables and grains, and avoidance of salt and sugar can decrease the pain of dysmenorrhea <sup>[5,18,19]</sup>. Most studies, particularly in traditional societies, besides insufficient knowledge, their practice in decreasing the pain of dysmenorrhea was not suitable and the first source of their knowledge was their mother <sup>[4, 5, 8, 9]</sup>.

Data of the study in Nigeria showed that the knowledge of adolescents about dysmenorrhea was insufficient and their practice was unsuitable <sup>[12]</sup>. The results of studies in Mexico City <sup>[4]</sup>, Tehran and Gilan <sup>[5, 8]</sup> revealed that the knowledge and practice of participants were unsuitable. As the data showed that knowledge and practice of women about dysmenorrhea is unsuitable and its prevalence is high, so the aim of this study was to determine the prevalence of this disorder among university students and evaluate their knowledge and practice toward it.

## Materials and Methods

This was a descriptive and cross-sectional study that was done with 300 students of Shahid Sadoughi medical university of Yazd that we're living in dormitories. The participants were selected by the simple sampling method. The data were collected by a researcher making questionnaire that completed by students. The questionnaire consisted of three sections: 1- questions about demographic data, including age, level of education of students' mothers, and marital status. 2- questions about knowledge regarding the causes of dysmenorrhea, methods of prevention and control of pain of dysmenorrhea. The knowledge was scored from 0 to 13, i.e. one score for each question, and the subjects were divided into three grades according to their knowledge: low, moderate and suitable. 3- questions about practice. The practice was scored from 0 to 12, i.e. one score for each question, and the subjects were divided into two grades according to their practice: suitable and unsuitable. The questionnaire was developed in consultation with three health educators and three questionnaire validations. The validity of the questionnaire was assessed by a healthcare specialist, with its reliability being determined by piloting and measuring related Croenbach's Alpha (0.74). All recorded data were transformed to SPSS-17 and analysed through descriptive statistics, T-test and ANOVA.

## Results

The age range of the participants was 18-35 years old (mean:  $21 \pm 3.4$  years). About 15.7% of them were married and 84.3% were single. The

age of first menstruation among 70.4% of them was between 13 and 15 years old. The prevalence of dysmenorrhea was 38.1%. The results showed that the knowledge of 74.7% of students about menstruation before beginning of the periods was low. The resource of knowledge of 39% of students before menstruation was their mother that after menstruation increased to 50.4%. Other sources of knowledge were books, their sister, friends, physicians and teachers, respectively (Table 1).

**Table 1.** : Frequency distribution of source of knowledge of students about menstruation

Source of knowledge	Before menstruation N(%)	After menstruation N(%)
Mother	117 (39)	117 (50.4)
Friends	111 (37)	114 (50.4)
Books	48 (16)	51 (22.6)
Sisters	43 (14.3)	48 (21.2)
Grandmother	8 (2.7)	7 (3.1)
Newspapers	11 (3.7)	16 (7.1)
Radio and TV	5 (1.7)	6 (2.7)
Physicians	6 (2)	5 (2.2)
Teachers	55 (18.3)	43 (19)

Results showed that 6.3%, 58.3% and 29.7% had suitable, moderate and low knowledge, respectively. There was a significant relationship between knowledge and age of participants ( $p=0.019$ ). About 50% of participants performed physical activity to decrease pain of the dysmenorrhea and 21.7% took a shower to decrease the pain of dysmenorrhea (table2).

The data revealed that the severity of pain was the cause of absence of students from classes.

About 66% of student used calmativie drugs. The diet of the students with dysmenorrhea for Decreasing the severity of pain differed, so as:

62.1% increased beverages in their diet, 55.8% sweets, 25.2%vegetables and fruits, and 57.3% dairy products(table 3).

**Table2.** Frequency distribution of behaviors that decrease the dysmenorrheal

The behavior in decreasing the dysmenorrhea	Yes N(%)	No N(%)	Total N(%)
Physical activity	51 (50)	51 (50)	102 (100)
Bathing in first day of menstruation	23 (21.7)	83 (78.3)	106 (100)

**Table 3.** Dietary changes in students with dysmenorrhea during menstruation

The diets that decrease dysmenorrhea	Yes		No		Total	
	N	%	N	%	N	%
Increase the beverages	64	62.1	39	36.9	103	100
Increase the sweets	58	55.8	46	44.2	104	100
Increase the vegetables and fruits	26	25.2	77	74.8	103	100
Increase dairy products	59	57.3	42	42.7	103	100
Decrease animal fat	42	41.2	60	58.8	102	100
Decrease meat and protein	19	17.9	82	81.2	101	100
Decrease consumption of salt	31	30.7	70	69.3	101	100

## Discussion

Dysmenorrhea is very prevalent among young females. Based on several studies, the prevalence of dysmenorrhea in women is 20-90% [20]. Our results showed the prevalence of dysmenorrhea in students to be 38.1% and the knowledge of 6.3%of participants were suitable and 17.7% of them had acceptable practice. The results of a study on students of medical university of Gilan showed that the knowledge of 15.3% of students was suitable that is similar to our results [8]. Data of a study revealed that 85% of female students in

Egypt had adequate knowledge about the difficulties of duration of menstruation and 75% of them had good behavior [21]. Results of two other studies showed that the knowledge of girls was not suitable [22,23]. A study that was done in Nigeria showed that the knowledge of Nigerian females was low [12]. In this study, the source of knowledge of 39% of students before menstruation and 50.4% of them after menstruation was their mother. This result is consistent with the results of other studies, as the source of knowledge of 25.5% of students before menstruation and 58% of them after menstruation

was their mother<sup>[8]</sup>. In studies that was done in Tehran and Mexico City, the source of knowledge of the participants was their mother<sup>[4,5]</sup>. As the previous studies recommended, there is a need to educate today girls, besides their mothers' educations. In our study, about 10.8% of students were absent from classes due to dysmenorrhea. Studies showed that percentage of lost days of females was related to pain severity and the adversity of their menstruation<sup>[4,5]</sup>.

A study in Mexico showed that 19.8% of students' absences from classes was due to

dysmenorrhea and the most common symptoms in these students were nervousness, irritability, depression and insomnia<sup>[4]</sup>.

The results of a research in Turkey showed that the cause of 25.6% of absence of girls from school was dysmenorrhea<sup>[24]</sup>. Our study and other studies showed that the women can decrease the pain of dysmenorrhea by bathing in the first days of menstruation, doing physical activity, consumption of fruits, vegetables and decreasing the salt consumption during menstruation period<sup>[4,5,18]</sup>. This study didn't have any limitations.

## References

1. Kennedy S. Primary dysmenorrhea. *Lancet*.1997; 349(9059):1116-7.
2. Durain D. Primary dysmenorrhea: assessment and management update. *J Midwifery Womens Health*. 2004; 49(6): 520-8.
3. Baighi P, Dehbozorgi Z. The survey of dysmenorrhea in adolescent girls. 5<sup>th</sup> congress of Zahra Nursing Faculty; 2002; Shiraz. [Persian]
4. Pedron-Nuevo N, Gonzalez-Unzaga LN, De Celis-Carrillo R, et al. Incidence of dysmenorrhea and associated symptoms in women aged 12-24 years. *Ginecol Obstet Mex*. 1998; 66:492-4.
5. Poureslami M, Osati- Ashtiani F. Assessing knowledge , attitude, and behavior of adolescent girls in suburban districts of Tehran about dysmenorrhea and menstrual hygiene. *Journal of International Women's Students*. 2002; 3(2):1-11.
6. Harel Z. Dysmenorrhea in adolescents and young adults: etiology and management. *J Pediatr Adolesc Gynecol*. 2006; 19(6): 363-71.
7. Mirzaei F, Bakhshi H, Yasini M, et al. Prevalence of dysmenorrhea in types of personality in high school girls in Rafsanjan city. *J Rafsanjan Med Uni*. 2001; 3(4):27-32.[Persian]
8. Panahande Z, Pakzad Z, Ashoori R . Survey the prevalence, knowledge and practice of Gilan university student about dysmenorrhea. *Journal of Guilan University of Medical Sciences*. 2008; 17(66):87-94.
9. Singh MM, Devi R, Gupta SS. Awareness and health seeking behaviour of rural adolescent school girls on menstrual and reproductive health problems. *Indian J Med Sci*. 1999; 53(10):439-43
10. Walraven G, Ekpo G, Coleman R, et al. Menstrual disorders in rural Gumbia. *Stud Fam Plann*. 2002; 33(3):261-8.
11. O'Connell K, Davis AR, Westhoff C. Self-treatment patterns among adolescent girls with dysmenorrhea. *J Pediatr Adolesc Gynecol*. 2006; 19(4):285-9.
12. Ogunfowokan AA, Babatunde OA, Management of primary dysmenorrhea by school adolescents in ILE-IFE, Nigeria. *J Sch Nurs*. 2010; 26(2):131-6.
13. Tangchai K, Titapant V, Boriboonthirunsarn D. Dysmenorrhea in Thai adolescents: prevalence, impact and knowledge of treatment. *J Med Assoc Thai*. 2004; 87:69-73.

14. Izoo A, Lobriola D. Dysmenorrhea and sports activities in adolescents. *Clin Exp Obstet Gynecol.* 1991; 18(2):109-16.
15. Barbieri RL, Ryan KJ. The reproductive system and disease. In: Ryan KJ, Berkowitz RS, Barbieri RL, Dunaif A.(editors) *Kistner`s Gynecology And Women`s Health.* 7<sup>th</sup> Edition. New York: Mosby; 1999:52-54.
16. Kermanshahi S, Hosseinzadeh SH, Alhani F. The Effect of the group counselling program for the student of primary dysmenorrhea, dietary condition and exercise in Shahreyar girls' high school. 2009; 16(65):49-60.[persian]
17. Blakey H, Chisholm C, Dear F, et al. Is exercise associated with primary dysmenorrhoea in young women? *BJOG.* 2010; 117(2):222-4.
18. Metheny WP, Smith RP. The relationship among exercise, stress, and primary dysmenorrhea. *J Behav Med.* 1989;12(6):569-86.
19. Moawed S. Indigenous practices of Saudi girls in Riyadh during their menstrual period. *East Mediterr Health J.* 2001; 7(1-2):197-203
20. Juhasz AG, Vincze G, Krasznai Z, et al. Dysmenorrhea in adolescent girls. *Orv Hetil.* 2005; 146(1):27-32.
21. El-Shazly MK, Hassanein MH, Ibrahim AG, et al. knowledge about menstruation and practices of nursing students aaffiliated to university of alexandria. *J Egypt Public Health Assoc.* 1990; 65(5-6):509-23.
22. Abraham S, Fraser I, Gebski V, et al. Menstruation, menstrual protection and menstrual cycle problems, the knowledge, attitudes and practices of young australian women. *Med J Aust.* 1985; 142(4):247-51.
23. Hillen TI, Grbavac SL, Johnston PJ, et al. Primary dysmenorrhea in young western australian women: prevalence, impact, and knowledge of treatment. *Society for Adolescent Medicine. J Adolesc Health.* 1999; 25(1):40-5.
24. Filippi V, Marshal T, Bulut A, et al. Asking question about women`s reproductive health: validity and reliability of survey finding from istanbul. *Trop Med Int Health.* 1997; 2(1):47-56.