Caspian Journal of Health Research

Original Article

Knowledge and Practice toward Dysmenorrhea in Female Students of Guilan University of Medical Science

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A B S T R A C T

Background: Understanding the knowledge and performance status of young girls regarding dysmenorrhea can be an initial step towards the future health planning for this group. This study aimed to determine the knowledge and practice of female students about dysmenorrhea.
Methods: In this descriptive cross-sectional study, 315 female students were randomly selected. Data collection form included two parts. The first part consisted of questions regarding demographic characteristics and field of study, and the second part was knowledge and practice questionnaire. The scores were compared in terms of study variable.
Results: Prevalence rate of dysmenorrhea was 75.2% and the most frequent symptoms was aggression and anger (49.3%). Of total, 15.6% had good knowledge. The level of knowledge was significantly associated with field of study and dysmenorrhea. The midwifery students had the highest mean level of knowledge. The mean score of knowledge in students who had experienced dysmenorrhea was higher than girls who had not experienced dysmenorrhea (P-value = 0.031). There were no significant differences of practice scores in terms of study variable.
Conclusion: This study revealed a high prevalence of dysmenorrhea during menstrual period among female students. However, the study subjects had insufficient knowledge and moderate practice to reduce menstrual pain. It is recommended that more counseling education to be extended for female students to help them cope with the dysmenorrhea.
Keywords: Knowledge, Practice, Dysmenorrhea
Citation: Mansour-Ghanaei M, Safari T, Asgari-Galebin SM, Haryalchi K. Knowledge and Practice toward Dysmenorrhea in Female Students of Guilan University of Medical Science. Caspian J Health Res. 2020;5(2):45-9.

Introduction

About 60% of women experience dysmenorrhea, which defined as painful menstruation (1). Dysmenorrhea can be cyclical or chronic, and in some cases can cause severe pain associated with anxiety (2), which also may lead to depression (3). In studies from all over the world, the prevalence of dysmenorrhea has been reported from 8.8% to 94%. The lowest prevalence was in Bulgaria (8.8%) and the highest in Finland (94%) (4). Almost half of the world's population is less than 25 years old (5). The level of knowledge and practice of this group towards dysmenorrhea is not known completely and also the influence of tradition and culture on their behaviors is not clearly defined (6).

Most women (75.1%) believe that dysmenorrhea is a part of their life and the symptoms will be continued until their menopause (7). So despite the negative effects of dysmenorrhea on their quality of life, many women do not seek health care. For example, in the United States, 86% of

women with dysmenorrhea do not take medical attention (8). The aim of this study was to evaluate the knowledge of young female students about dysmenorrhea. This article examines the prevalence of dysmenorrhea among the study group and their performance in dealing with dysmenorrhea. The results of this study can help public health professionals for planning interventions to improve the management of dysmenorrhea among female students.

Methods

This cross-sectional descriptive study was conducted on 315 female students at Guilan University of Medical Sciences (GUMS), Iran. The sample were selected using non-random quota-convenient sampling method. The quota was defined as the course of study. The questionnaires were distributed among inhabitants of two dormitories for girl students of GUMS. The sample size was determined based on prior prevalence of 0.28 for dysmenorrhea considering 95% confidence interval and 5% limit of error. Data collection form included two parts. The first part consisted of questions regarding demographic characteristics and field of study, and the second part was knowledge (1-6), practice (7-10) and characteristics related to dysmenorrhea (11-18). A one-point score was assigned to the correct answer of knowledge items and right option for practice items. Knowledge score were then classified as poor (less than 33.3% of the maximum score), moderate (33.3-66.6 % of maximum score) and good (more than 66.6% of maximum score).

The validity of the questionnaire was determined using content validity according to the panel of 10 specialists. The content validity ratio of all items was 80% and content validity index was over 90%. The reliability of questionnaire was evaluated using test retest method on a sample of 10 students. The Pearson correlation coefficient was 0.8.

Data were described using frequency and percent or mean and standard deviation. The normal distribution of continues variables were assessed using Kolmogorov- Smirnov Test. Krusal-Wallis test and Mann Whitney test were used to compare the knowledge and practice according to the study variables. All data analysis was performed in SPSS version 16.

Results

The mean age and standard deviation of the participants was 22.61 ± 3.24 years. The mean age and standard deviation of the age at menarche was 12.99 ± 1.39 years. The prevalence of dysmenorrhea was 75.2%. The mean duration of Absenteeism was 1.4 ± 0.97. Regarding to psychological symptoms, 36 subjects (49.3%) expressed aggression and anger, 16 subjects (21.9%) reported depression and 71 individuals (28.8%) had both symptoms. Among people with neurological symptoms, 20 (39.2%) reported fatigue, 14 (26.8%) reported headache, 4 (7.2%) reported dizziness, and 14 (26.8%) reported more than one sign. In people who complained of gastrointestinal symptoms, 10 (20%) cases had nausea, 9 (18%) diarrhea, 7 (14%) anorexia, 25 (4%) vomiting and 22 (44%) had more than one symptom. From people who reported sleep changes, 6 (75%) cases had over sleeping and 2 (25%) had insomnia. Among those with dysmenorrhea, 82% required analgesic pills to relieve pain.

Of total, 49 subjects (15.6%) had good knowledge, 181 subjects (57.5%) had moderate knowledge, and 85 subjects (26.9%) had poor knowledge. The mean score of knowledge about dysmenorrhea was 3.24 ± 1.21 from a maximum score of 6. According to table 1, the mean score of knowledge about dysmenorrhea was significantly associated with the field of study and the occurrence of dysmenorrhea.

Table 1. Mean of Knowledge Score in Terms of Demographic Variables and Sources of Information

Variable	Groups	Number	Knowledge score Mean ± SD		P-value
Age group	< 20y	80	3.11	1.11	0.323
	20-30y	225	3.27	1.25	
	> 30y	10	3.60	1.17	
Marital status	Single	265	3.24	1.19	0.639
	Married	50	3.24	1.32	
Field of study	Medical	109	3.16	1.22	0.001
	Dentistry	23	3.00	0.95	
	Pharmacology	20	3.10	0.19	
	Midwifery	63	3.84	1.19	
	Nursing	48	3.25	1.28	
	Health	52	2.83	1.13	
Degree	Bachelor	154	3.32	1.26	0.159
	Masters	9	3.67	1.41	
	PHD	152	3.13	1.14	
Maternal education	Illiterate	10	3.50	0.71	0.489
	Below diploma	70	3.04	1.21	
	Diploma	129	3.34	1.29	
	High diploma	106	3.22	1.15	
Time of received information	Post menstrual	71	3.14	1.30	0.508
	Pre menstrual	244	3.27	1.19	
Source of information	Media	14	3.14	1.17	0.739
	Book and magazine	28	3.50	1.14	
	Family	145	3.29	1.19	
	Others	57	3.12	1.21	
Menstrual pain	Yes	237	3.32	1.16	0.031
	No	78	2.96	1.32	

Table 2. Frequency Distribution of Good Practice toward Dysmenorrhea According to the Demographic Variables and Sources of Information

Variable	Groups	Bathing	Post toilet washing	Food intake	Beverage intake
		Right option	Right option	Right option	Right option
Age group	< 20y	34 (42.5)	67 (83.8)	20 (25)	49 (61.3)
	20-30y	114 (50.7)	188 (83.6)	56 (24.9)	134 (59.6)
	> 30y	2 (20)	7 (70)	3 (30)	7 (70)
Marital status	Single	129 (47.7)	225 (84.9)	66 (24.9)	163 (61.5)
	Married	21 (42)	37 (74)	13 (26)	27 (54)
Field of study	Medical	56 (51.4)	95 (87.2)	22 (20.3)	64 (58.7)
	Dentistry	9 (39.1)	17 (73.9)	2 (8.7)	14 (60.9)
	Pharmacology	12 (60)	16 (80)	5 (25)	14 (70)
	Midwifery	29 (46)	52 (82.5)	19 (30.2)	37 (57.7)
	Nursing	24 (50)	39 (81.3)	18 (37.5)	29 (60.4)
	Health	20 (35.5)	43 (82.7)	13 (25)	32 (61.5)
Degree	Bachelor	67 (43.5)	128 (83.1)	47 (30.5)	94 (61)
	Masters	6 (66.7)	6 (66.7)	3 (33.3)	4 (44.4)
	Medicine	77 (50.7)	128 (84.2)	29 (19.1)	92 (60.5)
Maternal education	Illiterate	6 (60)	7 (70)	4 (40)	5 (50)
	Below diploma	34 (48.6)	59 (84.3)	14 (20)	43 (61.4)
	diploma	55 (42.6)	105 (81.4)	38 (29.5)	84 (66.7)
	High diploma	55 (51.9)	91 (85.8)	23 (21.7)	56 (52.8)
Time of received information	Post menstrual	32 (45.1)	62 (87.3)	16 (22.5)	40 (56.3)
	Pre menstrual	118 (48.4)	200 (82)	63 (25.8)	150 (61.5)
Source of information	Media	5 (35.7)	10 (71.4)	1 (7.1)	9 (64.3)
	Book and magazine	15 (53.6)	22 (78.6)	8 (28.6)	18 (64.3)
	Family	74 (51)	114 (78.6)	43 (29.7)	84 (57.9)
	Others	24 (42.1)	54 (94.7)	11 (19.3)	39 (68.4)
Menstrual pain	Yes	115 (47.7)	199 (84.3)	62 (26.3)	145 (61.4)
	No	35 (44.9)	62(79.5)	17 (21.8)	45 (57.7)

Values in the parenthesis are percent.

The highest mean level of knowledge score was among students of midwifery, followed by nursing and general practitioner student. The mean score of knowledge in students who had experienced dysmenorrhea was higher than girls who had not experienced dysmenorrhea. The mean score of knowledge was not significantly different in terms of age group, level of education, marital status, maternal education and sources of information.

The majority of students (81%) considered dysmenorrhea as a physiological phenomenon. Regarding the effect of exercise on reducing pain, 76.8% had correct answer indicating that they correctly believe in light exercise as a relieving factor for intensity of the pain during dysmenorrhea. The lowest knowledge was about the effect of bathing with warm water on severity of bleeding (29.5% had correct answer), effect of bating on severing of pain (37.8% had correct answer), and effect of diet on reducing dysmenorrhea (40.4% had correct answer). Regarding to the urogenital infections, 58.7% correctly answered that washing the body during menstruation can prevent urogenital infection.

Table 2 showed the frequency of correct practice toward dysmenorrhea among female students. Overall 25% had good practice about food intake, 60% had good practice about beverage intake, 47% had good practice about bathing, and 83% had good practice about washing perineum after toilet during menstruation. There were no significant differences of practice scores in terms of study variable.

Discussion

The prevalence of dysmenorrhea in current study was 75.5%. It has been reported 56% in Jordan in West Asia (9), 80% at Hong Kong, 33 -79.67% at India in East Asia (10) and 14-93% in Iran (11). In one article, the prevalence of primary dysmenorrhea in 14-18 years old girls in Qazvin was reported to be 82.5% (12). 70.7% of nurses in two hospitals in south Taiwan (13), 71.8% of high school girls in Kwara, Nigeria (6), 77.6% of students in Gondar University, Ethiopia (14) and 84% of 12 years old urban girls In Sri Lanka (15), suffered from dysmenorrhea.

In this study, there was significant difference between people with and without dysmenorrhea in terms of knowledge, which indicates the interest of people with dysmenorrhea to obtain information in this field. In this study, 26.98% had poor knowledge that was in agree with the findings of Baghiani Moghaddam which reported, 29.7% had poor knowledge (11).

In this study, 77.5% of information about dysmenorrhea was obtained before menstruation that was similar to previous report by Baghiani Moghaddam et al (11). The most important source of information was from the family, books and magazines, radio, television and, internet respectively. in the Sadiq study (17) the role of the family, especially the mother on knowledge score was significant. There was no significant relationship between mother's education and students' knowledge toward dysmenorrhea.

Although dysmenorrhea has a substantial effect on quality of life, few women seek medical attention (18). Dysmenorrhea is one of the causes of absence from work for 1-3 days (20). In our study 27.8% of students mentioned that dysmenorrhea caused absence from university. In previous studies, the absenteeism rate was 27.6% with an average of 2 days; 23.6% in Egypt (16), 12.5% in Nigeria (21). In the Gebeyehu's study, 53% of Gondar University

students experienced persistent pain, which in 47.8% of cases lasted 1-2 days, and more than 63% of respondents stopped their social activities and 51.4% decreased their academic assignments (14). In our study, 4.1% did not bath during menstruation. In the Wijesiri study in Sri Lanka (15), 95% of students, in Baghiani Moghaddam's study 21.7% (11), in the Sadiq's study 22.6% stated that bathing is effective on menstrual cramps. Due to the fact that bathing, especially in the first days, is effective in reducing dysmenorrhea (17), the performance of our study in this field has been good. In our study 42.5% of the people consumed protein, 30.2% sweets and 25.1% vegetables and fruits, 78.5% in the Molazem's study (22), 21% in the Sadiq's study (17), which indicates there is need for further education on the effect of food in reducing dysmenorrhea.

In relation to beverage consumption, the majority of people (60.3%) consumed hot beverages, which indicates good performance (12% in Sadiq's study) (17) some studies showed that stachys lavandulifolia (23) Melissa officinalis and salvia officinalis (24), and ginger (25) are effective in reducing primary dysmenorrhea.

From all cases 83.3% had appropriate performance in relation to wash after the toilet. In general, the level of knowledge of the educated students about proper dite intake, menstrual hygiene, exercise and also their performance in relation to proper food intake and proper bath time is low.

This study suffered from some limitations. The study sample was selected from a non-probability sampling method which may induce some selection bias. The sample also were selected from one institution that may diminish the generalizability of the results. Moreover, using self-administration method may lead to some measurement bias.

Conclusion
This study found a high prevalence of dysmenorrhea during menstrual period among female students. However, the study subjects had insufficient knowledge and moderate practice to reduce menstrual pain. Considering the importance of this challenge on females' activity and quality of life, education and counselling should be extended among female students to help them cope with the dysmenorrhea.

Acknowledgements

Ethical consideration
This article is taken from the dissertation of a professional doctoral student, Tayebeh Safari with registration number 1855 and ethics code IR.GUMS.REC.1398.211 of Guilan University of Medical Sciences.

Conflicts of interests
Authors declared no conflict of interest.

Funding

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