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## CHARACTERISTICS OF DYSMENORRHEA SITUATIONS OF MIDWIFERY AND NURSING STUDENTS

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### ABSTRACT

*Dysmenorrhea is a common health problem of women and this pain gives difficulty to many women for carrying out their daily activities.*

*The present study was carried out to determine the dysmenorrhea frequency and the methods used to cope with dysmenorrhea of the Nursing and Midwifery students of Istanbul University Bakırköy College of Health (I.U.B.C.H).*

*All the students of I.U.B.C.H (204 midwifery and 142 nursing students) participated in the study. The data to determine the dysmenorrhea complaints and the methods to cope with dysmenorrhea were collected by a questionnaire containing 39 questions. SPSS statistics programme was used to analyse the data. The results were given as percentages and chi-square.*

*According to the results of the study, dysmenorrhea complaints were reported by more than the half (54%) of the Nursing and Midwifery students of I.U.B.C.H. The most frequent complaints were tiredness-weakness; and pain killer pills, bed rest and local heat compressions were used to cope with these complaints. There was a significant relation ( $p<0.05$ ) between first menstruation age and length of menstruation. No significant relation was found between menstruation order and dysmenorrhea ( $p>0.05$ ).*

**Keywords:** *Dysmenorrhea, pain during menstruation, menstruation disorder, coping with pain*

### ÖZET

#### **Hemşirelik ve Ebelik Öğrencilerinin Dismenore Özellikleri**

*Dismenore (ağrılı adet) kadınlarda sık görülen bir sağlık sorunudur ve bu ağrı bir çok kadını günlük aktivitelerinden alıkoymaktadır.*

*Bu araştırma İstanbul Üniversitesi Bakırköy Sağlık Yüksek Okulu Hemşirelik-Ebelik Bölümü öğrencilerinin dismenore sıklığını ve dismenore ile başa çıkmada kullandıkları yöntemleri tanımlamak amacıyla yapılmıştır.*

*Araştırmaya İstanbul Üniversitesi Bakırköy Sağlık Yüksek Okulu öğrencilerinin tamamı (ebelik 204, hemşirelik 142) alınmıştır. Öğrencilerin dismenore şikâyetlerini ve baş etme yöntemlerini belirlemeye yönelik veriler 39 sorudan oluşan anket formu kullanılarak toplanmıştır. Verilerin değerlendirilmesinde SPSS istatistik programı kullanılmıştır. Sonuçlar yüzdelik ve Ki-kare ile ifade edilmiştir.*

*Araştırmada elde edilen verilere göre; İstanbul Üniversitesi Bakırköy Sağlık Yüksek Okulu ebeler-hemşirelik öğrencilerinin yarısında (%54.0) dismenore şikâyeti saptanmıştır. Dismenore ile birlikte en sık yorgunluk-halsizlik şikâyetlerinin olduğu, bu şikâyetlerle baş etmede ise ağrı kesici hap, yatak istirahati ve lokal sıcak uygulama yöntemlerini kullandıkları belirlenmiştir. Ayrıca dismenore ile ilk adet yaşı ve menstruasyon süresi arasında anlamlı ilişki olduğu saptanmıştır ( $p<0.05$ ). Adet düzeni ile dismenore arasında ise anlamlı ilişki bulunamamıştır ( $p>0.05$ ).*

**Anahtar kelimeler:** *Dismenore, adet sırasında ağrı, menstrual düzensizlikler, ağrı ile baş etme*

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## INTRODUCTION

It is common for many women to have pain during their menstruation period and it is among women the most common gynaecologic illnesses. This pain during menstruation is called dysmenorrhea (Karanisoğlu 1996, Kızılkaya 1994, Rebato et al. 1993, Taşkın 2005). Dysmenorrhea affects 50-80% of young women at different levels and causes loss of working days, irregular attendance at school, rise in accidents, and decrease in productivity (Harel 2002, Harel 2006, Karanisoğlu 1996, Rebato et al. 1993, Taşkın 2005).

Dysmenorrhea has been reported as the most common cause of regular absenteeism among young women by Kızılkaya 1994. There are two types of dysmenorrhea, primary and secondary. Primary dysmenorrhea is a painful menstruation with no detectable organic disease and is more common in adolescent women. Secondary dysmenorrhea is painful menstruation that is frequently associated with pelvic pathology (Çil 1996, Danakas and Pietrantonio 1997, Dawood 1990, Harel 2002, Harel 2006, Jones 2004, Kızılkaya 1994, Taşkın 2005).

Primary dysmenorrhea occurs 1-2 years after menarche with the settlement of ovulation and increases until the mid twenties (Kızılkaya 1994, Taşkın 2005). It decreases in the forthcoming years, particularly with the first vaginal birth. Dysmenorrhea is more frequent among nullipara, overweight, single women and women with longer menstruation period (Kızılkaya 1994, Taşkın 2005). However, among athlete women, who have irregular cycles, dysmenorrhea is less observed (Kızılkaya 1994).

In primary dysmenorrhea the complaints begin 1-2 days before menstruation, increase in the first 24 hours of menstrual bleeding, and usually decrease the second day. The period of menstrual pain is usually 48-72 hours (Çil 1996, Kızılkaya 1994, Taşkın 2005).

The pain might be in the lower abdominal area like cramps coming in intervals and sometimes it may widen across the back, waist, groin and vulva. Along with the pain, sweating, tiredness, gastrointestinal symptoms (having no appetite, nausea, vomiting, diarrhoea) and central nervous system symptoms (feeling dizzy, headache, syncope and lack of concentration) might be observed (Çil 1996, Danakas and Pietrantonio 1997, Kızılkaya 1994, Rebato et al. 1993, Taşkın 2005).

In primary dysmenorrhea, after ovulation and during the luteal phase and menstrual bleeding, ischemi and pain occurs. The result of the increase is prostaglandin F2 alpha (PGF2a) release in the endometrium and vasoconstriction due to the increase in the strength and frequency of uterine contractions (Çil 1996, Danakas and Pietrantonio 1997, Dawood 1990, Kızılkaya 1994, Taşkın 2005). The effect causing the excessive release of prostaglandin is not known (Taşkın 2005).

In the past, it was thought that primary dysmenorrhea originated from psychological reasons. However, it is now determined that psychological reasons are not causative factors for primary dysmenorrhea and reactive components have some roles in the formation of pain (Çil 1996, Kızılkaya 1994). It is accepted that some psychological factors, such as self determination of the woman, excessive constraints about sex, fear about sex as an adult, serious fears about sexual identity to feeling ashamed because of masturbation, ashamed of increased sexual and aggressive feelings, to isolate herself and to gain more interest and care might cause dysmenorrhea (Çil 1996, Karanisoğlu 1996, Taşkın 2005).

Generally, some pathology accompanies secondary dysmenorrhea. These are inflammatory diseases of the pelvis, such as endometriosis, adenomyosis, myoms and polyps of uterus,

prolapsed uterus, stenosis of cervix, intrauterine devices and congenital anomalies (Karanisoğlu 1996, Taşkın 2005). Secondary dysmenorrhea occurs more in older women (Taşkın 2005).

The diagnosis of dysmenorrhea is made by history and gynaecological inspection. To distinguish between primary and secondary dysmenorrhea it is important to take a good history. In the history, age at menarche, characteristics of menstrual periods, state of reproduction and emotional factors should be taken into consideration (Karanisoğlu 1996, Kızılkaya 1994, Taşkın 2005).

The treatment of dysmenorrhea is planned causatively. It can change according to the strength of the pain and the reason for the pain (Taşkın 2005).

To treat dysmenorrhea combined oral contraceptives and non-steroid anti-inflammatory medicines are used. The reason for the use of these medicines is to depress prostaglandin release and to decrease ischemia and pain (Harel 2002, Harel 2006, Karanisoğlu 1996, Kızılkaya 1994, Taşkın 2005).

Other than medications, the health care information given to women about menstruation and dysmenorrhea, such as local heat application, appropriate feeding, bed rest, exercise, to attract attention to other things, and massage (to block the occurrence of pain and to get rid of it) can be effective (Karanisoğlu 1996, Taşkın 2005).

This study was carried out to understand what is the prevalence and impact of dysmenorrhea in young women in Istanbul University Bakırköy College of Health (IUBCH) and to determine their knowledge on the methods to cope with dysmenorrhea.

#### **METHODS**

The sample was a convenience sample of students that included 204

midwifery and 142 nursing from IUBCH. The data to determine the complaints of dysmenorrhea and coping methods of the students were collected using a questionnaire with 39 questions, prepared by the researchers, and based on investigation of related references. SPSS program was used to analyze the data and the results were stated in percentages and chi-square.

Dysmenorrhea is the most common gynecologic complaint among adolescent and young adult females. Because of this we wanted to document these problems among students of IUBCH.

Ethics; before the beginning of the study, official permissions were taken from the school administration. After an explanation of the purpose of the study was made by the researchers, the students that agreed to participate were asked to fill out the questionnaire.

#### **RESULTS AND DISCUSSION**

##### **1. The descriptive information about students**

There was no significant relationship between the body-mass index of the students and dysmenorrhea ( $p>0.05$ ). Research has found that dysmenorrhea is more frequent among fat women (Kızılkaya 1994, Taşkın 2005). The midwifery and nursing students in this study were not fat and the overweight ones were the minority (11% in midwifery and 8.4% in nursing students). This might explain the reason for body-mass index having no significant relationship with dysmenorrhea in the present study. Twenty four percent of the midwifery students and 18.3% of the nursing students smoked cigarettes. Vicdan et al. (1996) found that 19.7% of the 13-18 aged students smoked cigarettes. This is similar to the results of the present study.

Table 1. Distribution of the Characteristics of Menstruation Among Midwifery and Nursing Students (n= 346)

| Menstruation Characteristics           | Midwifery (n = 204) |      | Nursing (n = 142) |      |
|--|---------------------|------|-------------------|------|
|  | N                   | %    | N                 | %    |
| <b>Type</b>                            |                     |      |                   |      |
| Regular                                | 180                 | 88.2 | 129               | 90.8 |
| Irregular                              | 24                  | 11.8 | 13                | 9.2  |
| <b>Length of Menstruation</b>          |                     |      |                   |      |
| 1-3 days                               | 17                  | 8.3  | 11                | 7.7  |
| 4-6 days                               | 123                 | 60.3 | 96                | 67.6 |
| 7-8 days                               | 64                  | 31.4 | 28                | 19.7 |
| 9 days and over                        | -                   | -    | 7                 | 4.9  |
| <b>Number of daily pads</b>            |                     |      |                   |      |
| 2 pads and less                        | 91                  | 44.6 | 67                | 47.2 |
| 3-4 pads                               | 83                  | 40.7 | 54                | 38.0 |
| 5-6 pads                               | 13                  | 6.4  | 12                | 8.5  |
| 7 pads and more                        | 17                  | 8.3  | 9                 | 6.3  |
| <b>Frequency of daily pad changing</b> |                     |      |                   |      |
| One in 1-2 hours                       | 14                  | 6.9  | 7                 | 4.9  |
| One in 3-4 hours                       | 79                  | 38.7 | 57                | 40.1 |
| One in 5-6 hours                       | 94                  | 46.1 | 65                | 45.8 |
| 7 hours and over                       | 17                  | 8.3  | 13                | 9.2  |

## 2. The characteristics of students with menstruation

The start of menarche for the midwifery students was 13.29 years of age and for nursing students were 11.80 years of age. This finding is in similar to with the results of Öncel et al. (2003) 12.56±0.98, Demir et al. (2000) 12.9, Vicdan et al. (1996) 13.28±1.09 and Çil (1996) 13.03±1.25.

A significant relationship was found between the age of menstruation and dysmenorrhea among the midwifery and nursing students ( $p<0.05$ ).

The menstruation characteristics of the midwifery and nursing students are presented in Table 1. It was found that 88.2% of the midwifery students and 90.8% of nursing students had regular menstruation. Vicdan et al. (1996) found in Turkey that the menstruation of 77.8% of the students were regular. The results of the present study found more women with regular menstruation. The difference between the two studies might be due to the average ages of the students in this study (20.7 in the midwifery and 20.2 in

the nursing students) being older than the ages of the students (13-18) in the study by Vicdan et al. (1996). Type of menstruation might have improved as age increase.

There was no significant relationship between type of menstruation and dysmenorrhea between midwifery and nursing students ( $p>0.05$ ). Length of menstrual bleeding was 4-6 days in 60.3% of midwifery and 67.6% of nursing students. There was a significant relationship between the menstruation cycle and dysmenorrhea of the midwifery and nursing students ( $p<0.05$ ). It was found that 44.6% and 47.2% of students used 3-4 daily pad and 40.7% and 38.0% of students used 5-6 daily pad among the midwifery and nursing students, respectively. During the day, 46.1% and 45.8% changed pad every 5-6 hours and 38.7% and 40.1% changed pads in every 3-4 hours, among midwifery and nursing students, respectively.

With regard to knowledge about menstruation, 79.9% of the midwifery students and 81.0% of the nursing

students stated that they were given information about menstruation before their first menstruation. The sources of the information for midwifery students were mother-sister (48.3%), journal-book-television (13.8%), friend (11.5%), teacher (9.7%), nobody (6.3%) and others (10.4%). The information sources of the nursing students were mother-sister (52.0%), journal-book-television (9.2%), friend (9.2%), nobody (10%) and others (4.0%). When the students were asked the explanation for menstruation (information they had before) the midwifery students responded no answer (39.2%), “a normal physiologic event” (30.9%), “it is experienced in bachelorhood” (15.7%) and “the release of the egg once in a month” (14.2%). The answers for the nursing students were no answer (44.4%), “a normal physiologic event” (23.9%), “it is experienced in bachelorhood” (17.6%) and “the release of the egg once in a month” (14.1%).

All of the midwifery and nursing students shared the occurrence of the first menstruation with somebody. The midwifery students shared this with mother-sister (84.3%), teacher (5.9%), friend (4.4%) and maternal-paternal-affinal aunt (4.4%). The nursing students shared this with mother (93.7%) and maternal-paternal-affinal aunt (6.3%).

In this study it was found that the midwifery and nursing students most commonly shared the news of their first menstruation with mother-sister. Öncel et al. (2003) reported that 69.4% of the students shared this news with their mothers.

### **3. The characteristics of dysmenorrhea among students**

The average age for start of dysmenorrhea was 14.9 for midwifery students and 14.8 for nursing students. It

has been reported that dysmenorrhea occurs 1-2 years after menarche, by the settlement of ovulation. The findings in this study for dysmenorrhea after 1-2 years after menarche are similar to findings by Kızılkaya and Taşkın (Kızılkaya 1994, Taşkın 2005).

The characteristics of dysmenorrhea of the students can be found in Table 2. Fifty percent of midwifery students and 59.2% of nursing students experienced dysmenorrhea. The frequency of dysmenorrhea in this study was higher than in the study by Demir et al. (2000) where they found 38.7% of students with dysmenorrhea, similar to secondary school students in the study by Hillen et al. (1999) 80%. Seventy one percent of 15-18 year old students had dysmenorrhea in a study by Poureslami and Osati-Ashtiani (2002).

Eighty one percent of the midwifery and 85.7% of the nursing students stated that dysmenorrhea was an obstacle for their daily activities and 49.5% of the midwifery students and 85.7% of the nursing students stated that dysmenorrhea was a reason for their irregular attendance at school. In a study of Vicdan et al. (1996) 25.6% of the students complained that they had irregular attendance at school because of the pain they lived with during menstruation. In the studied by Hillen et al. (1999), 37% of the students stated that they could not get involved in some of the school activities for the same reason. Similarly, most of the students in the present study shared that dysmenorrhea was an obstacle in their daily activities (81.6%) and also was a reason for their irregular attendance at school. It is obvious that dysmenorrhea is affecting the lives of many young girls and women at different levels.

Table 2. Distribution of Characteristics of Dysmenorrhea Among Midwifery and Nursing Students (n = 346)

| Dysmenorrhea characteristics       | Midwifery (n = 204) |      | Nursing (n = 142) |      |
|------------------------------------|---------------------|------|-------------------|------|
|                                    | N                   | %    | N                 | %    |
| <b>Dysmenorrhea</b>                |                     |      |                   |      |
| Present                            | 103                 | 50.5 | 84                | 59.2 |
| Not Present                        | 201                 | 49.5 | 58                | 48.8 |
| <b>Effects on daily activities</b> |                     |      |                   |      |
| It is an obstacle                  | 84                  | 81.6 | 72                | 85.7 |
| It is not an obstacle              | 19                  | 18.4 | 12                | 14.3 |
| <b>Effect on school attendance</b> |                     |      |                   |      |
| It affects                         | 51                  | 49.5 | 72                | 85.7 |
| It doesn't affect                  | 52                  | 50.5 | 12                | 14.3 |

The characteristics of the pain experienced by the students are presented in Table 3. Among the midwifery and nursing students 69.9% and 65.5% respectively stated that their pain began with menstruation; 85.8% and 88.5% experienced the pain as a cramp and the pain was spreading towards back, waist, inguinal area and vulva, and in both of the groups the pain lasted for 2.5 days at the average.

The four most common complaints in the midwifery students were tiredness (27.1%), having no appetite (13.5%), nausea-vomiting (13.5%) and lack of concentration (12.6%) and the four most common in the nursing students were tiredness (27.3%), nausea-vomiting (13.9%), having no appetite (13.1%) and lack of concentration (11.2%).

Among the methods to cope with pain the four most common for midwifery and nursing students were painkiller pills (25.2% and 23.0%), bed rest (22.3% and 22.3%), local heat application (17.1% and 20.4%) and bath (11.3% and 11.3%) respectively. Most of the students (80.3% midwifery and 75.0% nursing students) began to use the methods to cope with pain after the pain began.

Seventy-seven percent of the subjects stated that they had enough knowledge about dysmenorrhea. However, only 32% practiced personal health behaviors. Such as taking a bath and using hygienic materials. About 33% of the students avoided any physical activity or even mild exercise during menstrual period in the study of Poureslami and Osati-Ashtiani (2002).

Table 3. Distribution of Characteristics of Pain Among The Midwifery and Nursing Students (n= 346)

| Characteristics of Pain                                   | Midwifery |      | Nursing |      |
|---|-----------|------|---------|------|
|   | N         | %    | N       | %    |
| <b>Beginning time (Midwifery n = 103, Nursing n = 84)</b> |           |      |         |      |
| 7-10 days before menstruation                             | 5         | 4.9  | 2       | 2.4  |
| 2 days before menstruation                                | 26        | 25.2 | 27      | 32.1 |
| Together with menstruation                                | 72        | 69.9 | 55      | 65.5 |
| <b>Type (Midwifery n = 134, Nursing n=113)</b>            |           |      |         |      |
| As a cramp  | 24        | 17.9 | 38      | 33.6 |
| Spreading towards back, waist, inguinal area and vulva    | 91        | 67.9 | 62      | 54.9 |
| A tough pain  | 7         | 5.2  | 5       | 4.4  |
| Hits abdomen, breasts and ankles                          | 12        | 9.0  | 8       | 7.1  |

|  |    |      |    |      |
|--|----|------|----|------|
| <b>Complaints accompanying pain</b><br><b>(Midwifery n = 325, Nursing n = 267)</b>               |    |      |    |      |
| Sweating   | 32 | 9.8  | 24 | 9.0  |
| Tiredness/Weakness   | 88 | 27.1 | 73 | 27.3 |
| Having no appetite   | 44 | 13.5 | 35 | 13.1 |
| Nausea Vomiting  | 44 | 13.5 | 37 | 13.9 |
| Diarrhoea  | 23 | 7.1  | 23 | 8.6  |
| Dizziness  | 29 | 8.9  | 17 | 6.4  |
| Headache   | 24 | 7.4  | 28 | 10.5 |
| Lack of concentration  | 41 | 12.6 | 30 | 11.2 |
| <b>The time that the complaints begin</b><br><b>(Midwifery n = 103, Nursing n = 84)</b>          |    |      |    |      |
| Just before menstruation   | 34 | 33.0 | 31 | 36.9 |
| When menstruation begins   | 51 | 49.5 | 44 | 52.4 |
| 7-10 days before menstruation  | 18 | 17.5 | 9  | 10.7 |
| <b>Repeatedness of complaints</b><br><b>(Midwifery n = 103, Nursing n = 84)</b>                  |    |      |    |      |
| Yes  | 65 | 63.1 | 54 | 64.3 |
| No   | 38 | 36.9 | 30 | 35.7 |
| <b>Methods to cope with pain</b><br><b>(Midwifery n=309, Nursing n=274)</b>                      |    |      |    |      |
| Painkiller medicine injections   | 14 | 4.5  | 8  | 3.0  |
| Painkiller pills   | 78 | 25.2 | 63 | 23.0 |
| Local heat application   | 53 | 17.1 | 56 | 20.4 |
| Bath   | 36 | 11.3 | 31 | 11.3 |
| Appropriate nourishment  | 7  | 2.2  | 6  | 2.2  |
| Regular exercise   | 16 | 5.1  | 10 | 3.6  |
| Bed rest   | 69 | 22.3 | 61 | 22.3 |
| Directing attention to other things  | 15 | 4.8  | 17 | 6.2  |
| Massage  | 21 | 6.8  | 22 | 8.0  |
| <b>The time that the methods to cope with pain</b><br><b>(Midwifery n = 103, Nursing n = 84)</b> |    |      |    |      |
| Before menstruation  | 14 | 13.6 | 16 | 19.0 |
| During menstruation  | 83 | 80.3 | 63 | 75.0 |
| No answer  | 6  | 5.8  | 5  | 6.0  |

## CONCLUSIONS AND SUGGESTIONS

It was found that dysmenorrhea is a complaint in more than half of (54%) the midwifery and nursing students at IUBCH. The most frequent complaints accompanying dysmenorrhea were tiredness-weakness. Pain-killer pills, bed rest, and local heat applications were the most common methods used to cope with dysmenorrhea. There was a significant relation between menstrual age and dysmenorrhea. The relation between

menstruation type and dysmenorrhea was not significant.

Based on to these results the following suggestions are made:

- Young girls should be informed about menstruation,
- They should have information about deviations from normal, like dysmenorrhea in adolescence,
- There should be health personnel in the schools that the students could get information about reproductive health,



- Adolescent girls need to be taught about ways to cope with dysmenorrhea,

Dysmenorrhoea care providers have the important role of educating adolescent girls about menstruation-associated symptoms, as well as evaluating and effectively treating patients with dysmenorrhea,

The main point found in the study was the necessity of educating young students about the menstrual period, health behaviors to deal with dysmenorrhoea, appropriate nutrition, exercise and physical activity and personal hygiene.

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