

## Original Article

## Dysmenorrhea Experiences of Young Girls: A Phenomenological Study

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### Abstract

**Objective:** This research aimed to explore the dysmenorrhea experiences of young girls according to the comfort theory and the coping methods they used for dysmenorrhea.

**Methodology:** The research was conducted using both quantitative and qualitative methods. Descriptive quantitative part was made to determine the young girls with primary dysmenorrhea (n=363). Phenomenological qualitative part was made to explore the young girls' dysmenorrhea experiences and coping methods (n=14).

**Results:** Primary dysmenorrhea rate was 95%. Through thematic content analysis, themes were grouped as holistic comfort and individual comfort. Holistic comfort consisted from six main themes as physical effects, socio-cultural effects, psycho-spiritual effects, environmental effects, causes of dysmenorrhea and coping methods. In individual comfort, relief dimension was the emphasized.

**Conclusion:** Dysmenorrhea leads to biopsychosocial problems in young girls and the environment and culture affect dysmenorrhea experiences. Young girls should be supported on coping methods towards dysmenorrhea.

**Keywords:** Adolescent, comfort theory, dysmenorrhea, qualitative research, menstruation.

### Introduction

Dysmenorrhea is pelvic pain and one of the common gynecological problems in women (Taskin, 2012). Dysmenorrhea is classified into primary dysmenorrhea and secondary dysmenorrhea. Primary dysmenorrhea is localized ovulation in the first years after menarche. Usually, the pain is localized in the suprapubic region in the form of cramps or spasms, starts with menstrual bleeding, and lasts in 48-72 hours and no pelvic pathology. Secondary dysmenorrhea develops due to pathology in the pelvis or uterus (Cepni, 2005; Taskin, 2012). In the studies, the prevalence of dysmenorrhea has been reported to be 70.2% in India, and 60.9% in Pakistan (Omidvar et al., 2012; Ibrahim et al., 2015). In the studies conducted in Turkey, the prevalence of dysmenorrhea has been reported to be 76.5-87.7% (Midilli, Yasar, & Baysal, 2015; Seven et al., 2014; Unver 2021). Dysmenorrhea affects the

quality of life, daily activities, and performances of women negatively and leads to loss of workdays and absenteeism at school, especially in women who are employed or students. It can also cause anxiety, depression, and interpersonal and familial conflicts and affect the quality of life negatively (Cepni, 2005; Unver, 2021). The comfort theory developed by Kolcaba is taxonomically divided into two parts as comfort levels and comfort dimensions. According to the intensity of the individual needs that are met or not met, there are three levels in the first part that are relief, ease, and transcendence. In the second part, there are four levels that are physical, psychospiritual, sociocultural, and environmental, in which comfort needs arise (Terzi & Kaya, 2017). Dysmenorrhea not only affects the comfort of the individual physically but also as a whole (Orak, 2013).

The personal, psychological and behavioral dimensions of dysmenorrhea can be revealed by

examining the beliefs and experiences of young people regarding dysmenorrhea. The aim of this research was to explore primary dysmenorrhea experiences of young women according to the comfort theory and to determine the coping methods they used for dysmenorrhea.

**Research Question:** What are the life experiences and coping behavior of young girls with dysmenorrhoea?

### Material and Methods

**Research Type:** The research has two stages as quantitative and qualitative parts. The aim of the quantitative part was made in descriptive and cross-sectional design was to determine the descriptive characteristics of the young girls and the presence of primary dysmenorrhea in accordance with the diagnostic criteria in the literature. In the study pain should start after menarche, pain starts with menstruation or the day before menstruation, pain in the suprapubic region, waist or leg, pain passes within 48-72 hours after the onset of menstrual bleeding were determined as the diagnostic criteria for primary dysmenorrhea (Cepni, 2005; ErDogan, 2013). The phenomenological design qualitative part was based on in-depth interviews and conducted to explore the experiences of young girls with primary dysmenorrhea.

**Participants:** The quantitative research universe of the study consisted of students of the nursing department of School of Health (n=451). During the quantitative data collection phase, 363 students were reached and primary dysmenorrhea was determined in 348 of these students (95%).

The target population of the research was determined by the individual reality target population used in the phenomenological method, which is one of the qualitative research methods (Bas & Akturan, 2008). 11. The target population of the qualitative part of the research was composed of students whose primary dysmenorrhea was determined in the quantitative part, and they met all the inclusion criteria (n=232). In qualitative research, there is no specific rule for sampling (Tarman & Yigit 2014). The sample size is accepted as the point where the data reach saturation (Sozbilir, 2017). While making the sample selection, purposeful sampling in the qualitative research tradition was used. According to what Yildirim and Simsek purposeful sampling, in this study, one of the

purposeful sampling methods; A homogeneous (homogeneous) sampling method was used, which aims to define a particular group by creating a small but similar sample. The criteria or criteria mentioned here can be created by the researcher (Yildirim & Simsek, 2016). In the research, interviews were made with the young people who met the criteria for inclusion (not having any gynecological disease, not having any systemic disease, intrauterin device (IUD) not attached, having regular menstruation, it is not a constant medication, students are between the ages of 18-25 in the research and who volunteered to participate in line with the semi-structured interview form. When the data started to repeat (n=14), qualitative data collection was stopped.

### Data Collection

**Instruments:** Data collection tools consisted of "Identification Form (IF)" and "Semi-structured Interview Form". The IF developed by the researcher according to the quantitative and qualitative research literature consisted of 30 questions determining the sociodemographic and gynecologic characteristics and pain levels of young girls (Gun, 2014; Potur, 2009). The semi-structured interview form consisted of 16 questions formulated by researchers according items from comfort theory and by the researcher by according to literature (Nguyen et al., 2010; Yusel, 2011).

**Procedures:** The study was approved by XXX University Scientific Research Publication Ethical Committee (24/04/2017-E.106091). Informed consent was obtained; interviews were done face to face interviews technique in researches workplace and were recorded in audio recording device. After transferring the interviews to a computer, interviews were transcribed into a written document.

**Data Analysis:** Quantitative data were calculated by SPSS 22.0 program with number, percentage and mean values. In the qualitative part, researchers analyzed transcripts using a thematic approach. The data was read over and over. After becoming highly familiar with the text and creating initial codes, themes were searched from collating codes by the researchers, which upon review of initial themes, final names of the themes and subthemes were developed. After code generation, thematic coding was done and

codes were classified by researcher, and appropriate themes and subthemes were extracted. Written documents of interviews were examined by a two specialist on the subject. Each researcher analyzed the data individually before collectively discussing their themes to ensure consistency of interpretation. Any differences between the researchers were discussed and agreed. Then, all data interpreted according to theme have been drawn up to reports.

## Results

**Quantitative results:** The mean age of the young girls was  $20.01 \pm 1.67$  years; the mean menarche age was  $13.13 \pm 1.11$ ; the frequency of menstruation was  $28.76 \pm 5.29$  days; the duration of menstruation was  $5.83 \pm 1.36$  days; the mean severity of pain was  $5.93 \pm 2.70$ . The young girls of 45.2% were experienced pain in each

menstruation; the pain started with bleeding in 44%; the pain became intense on the lower abdomen and groin in 39.7% (Table 1).

**Qualitative results:** The effects of dysmenorrhea are given with theme and expression examples under the main concepts according to the holistic comfort and individual comfort. The numbers at the end of each statement refer to the numbers given to each of the young girls to identify them. As it would take too much space in the article, there isn't sample expressions for all the themes.

**Effects of Dysmenorrhea according to the Holistic Comfort:** Six main themes that were physical effects, socio-cultural effects, psycho-spiritual effects, environmental effects, causes of dysmenorrhea and coping methods and their sub-themes were created according to holistic comfort (Table 2).

**Table 1. Descriptive characteristics of young people**

Descriptive characteristics			
Mean age (Mean±Sd)		20.01±1.67	
<b>Menstrual characteristics</b>	<b>Min-Max</b>	<b>Mean±Sd</b>	<b>Total</b>
Menarche age	10-18	13.23±1.11	363
Frequency of menstruation	17-60	28.76±5.29	356*
Duration of menstruation	2-10	5.83±1.36	351*
Severity of menstrual pain (0:No pain/10:Intolerable pain)	1-10	5.93±2.70	363
<b>Pain region during menstruation</b>	<b>n</b>	<b>%</b>	
In the lower abdomen-groin	144	39.7	
Other (no pain, lower abdomen, waist, groin, leg)	219	60.3	
<b>Time of onset of pain in menstruation period</b>			
With menstrual bleeding	182	50.2	
One day before menstrual bleeding	109	30.0	
Other(One week or two days before menstrual bleeding, second day of menstrual bleeding, uncertain, no pain)	20	19.8	
<b>Total</b>	<b>363</b>	<b>100.0</b>	

\*Girls with a history of irregular menstruation reported irregular frequency and menstruation duration

**Table 2. Main and subthemes of the research according to the holistic comfort**

<b>Main theme</b>	<b>1<sup>st</sup> Subtheme</b>	<b>2<sup>nd</sup> Subtheme</b>
<b>Physical effects</b>	Light-headedness Digestive system problems Sleep problems Excretory problems Movement problems Feeling bleeding Dizziness Headache and low back pain Change of body temperature Weakness Hand tremor	
<b>Socio-cultural effects</b>	Social effects  Cultural effects	Negative effects on school and lectures Postponing things Social isolation Failure in communication Current environment Positive thoughts Negative thoughts
<b>Psycho-spiritual effects</b>	Feeling bad-dirty Feeling restricted Dissimulating Lack of self-esteem Feeling helpless Angriness Concern	
<b>Environmental effects</b>	Cold Light Weather conditions Noise	
<b>Causes of dysmenorrhea</b>	Physiological Factors  Psychological Factors Unknown reason	Genetic Physiological Pain Threshold
<b>Coping methods</b>	Non-pharmacological methods  Pharmacological methods	Hot application Fluid intake Rest Exercise Distraction Mental/intellectual techniques Abdominal pressure application

It was found from most of statements that the women stated that physical effects of dysmenorrhea (12 participant).

**Physical effects:** There are 11 subthemes as, “digestive system problems”, “light-headedness”, “sleep problems”, “movement problems”, “dizziness”, “headache-low back pain”, “feeling bleeding”, hand tremor”, excretory problems”, “change of body temperature”, “weakness”.

**Digestive system problems:**

*...I only think about the pain, I do not think about other things such as nutrition, etc. When I cannot bear it, I finally take medicine and eat a little for the painkiller... I really do not have an appetite and I vomit [P5].*

The expression used when describing the desire to eat sweets;

*“For example, I'm craving much more sweets that day, normally I'm not a person who eats a lot of sweets and chocolate or something. But on my menstrual days, I eat a lot of chocolate, grape molasses, I eat spoonful of molasses and I get such cravings” [P4].*

**Sleep problems:** While participants correlate sleep problems with pain and bleeding, they emphasize their inability to sleep or waking up from their sleep. Seven (7) participants expressed the subtheme of sleep problems.

*“I can't even sleep well because even when I'm sleeping, I'm always trying to stay in one position because, you know, if I turn around too much, would it stain the bed? Will it leak? I have difficulty even sleeping during peak periods, I try to stay put like a block and sleep like this, I wake up at night psychologically as I feel the need to go to the toilet all the time” [P4].*

**Excretory problems:** Seven (7) participants stated that they had problems in urination during the menstrual period, and they emphasized that their toilet habits have changed.

*“I'm aware that the urination becomes is quicker, for example I go in and out of toilet more frequently than any other day...” [P13].*

*“I go in and out a lot thinking maybe I will feel relieved, besides there is this feeling like*

*I need to go to toilet and so I go a lot, but even that hurts” [P14].*

**Movement Problems:** In the subtheme of movement problems, it was observed that there was emphasis on "difficulty and decrease in movements", "sitting and lying down" (10 participants).

*“My menstrual pains are very severe, and I can't absolutely rest where I'm sitting... I have very bad lower back and abdominal pains, my back gets stiff, I can't move, my groin is so sore that I always stay put like this (demonstrating)” [P4].*

*“... I'm in bed all day” [P14].*

**Socio-cultural effects:** There are two subthemes as “social effects” and “cultural effects”. Secondary subthemes for both subthemes are listed below.

**Social effects of dysmenorrhea:** There are five subthemes of this subtheme and these are negative effects on schools and lessons, procrastination of work, social isolation and disruption in communication, and the environment.

*“If I am on my period and it is my first day, I cannot go to school. Even if I go to school, I have to leave. I do not stay there with that pain. If I am at the dormitory, I do not go out for three, four days. I study whenever my pain decreases” [P14].*

**Cultural effects of dysmenorrhea:** Two subthemes have been formed as “positive thoughts” and “negative thoughts” of this subtheme.

**Positive thoughts:** 13 participants answered the question "What do you think about sharing menstrual pain?" with positive expressions. In these positive thoughts, it is emphasized that pain can be "shared with women" due to social structure.

Statements of participants who stated that it should be shared with women;

*“I think it can be talked about because I'm already going through difficult period at home, so everyone knows it, meaning it stands out. So, it can actually be shared [with men] if wanted. because it's an ordinary thing, but we don't share it, I think it's partly about the social structure” [P1].*

*“I think there's nothing wrong with talking about it, it's not a dirty thing to talk about, so I can talk easily. But I can only get up and talk to women” [P2].*

Dissimulation against men was emphasized among the cultural effects.

*I think it should be shared since we become both physically and spiritually different. When I do not say it, the others do not understand. We misstate ourselves, but of course, we are embarrassed since there is such a thing as hiding from men. So, in general, we try to dissimulate but I share with my girlfriends and my mother [P11].*

Statements of participants who stated that it can also be shared with men;

*“I think it should be shared because it is something natural that happens to everyone, because it's something of nature, so there's nothing for me,” the participant stated, and give the following reply to the question of “does gender matter?” “It's normal, it's something that is described everywhere, so there is nothing for me” [P5].*

*“Of course, it can be shared, it's a situation that everyone is going through, maybe it lessens the pain if it is shared, I don't know... It also depends to the other party (sharing with men)” [P6].*

**Negative thoughts:** One participant made a negative statement about the sharing of dysmenorrhea.

*“I do not think it is right to say. All women suffer this pain in general. ... I think it should not be shared” [P9].*

**Psycho-spiritual effects:** Seven subthemes were created in this subtheme: “feeling bad-dirty”, “feeling restricted”, “dissimulation”, “lack of self-esteem”, “feeling helpless”, “angriness”, and

“concern”. Most of the participants emphasized on “angriness”.

*“Since I am angry due to pain, I do not want to see anyone around me. Actually, I need everyone, it is better to get their help but I do not want to see anybody. I want to beat everyone” [P14].*

**Environmental effects:** “Cold”, “light”, “weather conditions”, “noise” were among subtheme environmental effects. “Eight (8) participants emphasized the “noise” subtheme in their statements.

*“I mean, the pain becomes so severe that even the smallest thing that can come from the outside looks bigger. Well, for example, even a small conversation in a crowd becomes very noisy to me because I am focusing on my pain. Those times make me more uncomfortable than usual” [P4].*

**Causes of dysmenorrhea:** In this subtheme, “physiological factors”, “psychological factors”, and “unknown reasons” subthemes were created. Genetic and physiological factors were cited as the cause of dysmenorrhea in physiological factors and the pain threshold was emphasized.

Genetic and physiological factors were expressed as the cause of dysmenorrhea.

*“My mother also suffers from severe pain. I think it is genetic” [P7].*

*“I think the ovaries cannot discharge itself, cannot excrete out. I think that is why the pain is severe until the bleeding becomes intense” [P6].*

One participant stated that psychological factors were effective on pain.

*“... I think it is psychological. If I think I will have a lot of pain, I will not be able to not to do anything, I will not be able to handle my work...” [P13].*

**Coping methods:** Non-pharmacological and pharmacological methods were expressed in this subtheme. “Hot application”, “fluid intake”, “rest”, “exercise”, “distraction”, “mental/intellectual techniques”, “abdominal pressure application” were reported in non-pharmacological methods subtheme. In coping methods, all participants indicated the “hot application” method.

*“I drink herbal teas; I drink linden or what I have at home. Sometimes I drink green tea. I think when I drink hot beverages I feel better” [P1].*

The majority of participants used drugs in pharmacological methods.

*“When my pain is very severe, I take painkillers and try to go to sleep ... I went to the emergency room many times previously and was given serum and had an injection” [P4].*

**Effects of dysmenorrhea according to the individual comfort:** It was seen that the most emphasized dimension was the relief dimension (11 participants) among the effects of dysmenorrhea on individual comfort.

*“... The pain mostly disappears; the pain is over on the second day, the worst on the third day. The bleeding is much more intense on the third and fourth days, but since that pain does not bother me as much, I feel more comfortable and used to the menstrual period on the fourth and fifth days. It gets close to being over, it's like three more days from there on, but I feel comfortable around fourth and fifth day” [P10].*

*“My pain is gone, my bleeding decreases, my headache is gone as well. My mood becomes normal. So the fourth day makes me feel relaxed” [P3].*

It was determined that the participants reached the dimension of overcoming the problems (relief) in dysmenorrhea mostly on the fourth and fifth days.

## Discussion

The study adds to the nascent literature on young girls' experiences with dysmenorrhea and coping methods throughout their lives. The study presents young girls' dysmenorrhea experiences with their own expressions in line with the comfort theory with a broad perspective. According to the holistic comfort, the main theme was emphasized the most physical effects. In primary dysmenorrhea, physical symptoms such as nausea and vomiting are seen due to increased prostaglandins in the systemic circulation and stimulation of the gastrointestinal tract (Akduman & Budur, 2016; Harel, 2008). In the research, loss of appetite, nausea-vomiting,

eating sweet, eating junk food was reported regarding the digestive system. In the studies made in Turkey and abroad reported that the participants with dysmenorrhea experienced loss of appetite, nausea-vomiting, and abdominal distention (Chen et al., 2006; Hu et al., 2020). In the study, it was stated that dysmenorrhea affected school performance negatively and that the participants stated that they postponed things. Nguyen et al. (2010) determined that 85% of the participants' school life was affected and that 15.29% canceled their social activities; Sanli and Oskay (2015) found that 78.1% of the participants' school activities were affected during menstruation (Nguyen et al., 2010; Sanli & Oskay, 2015).

In the research, it was stated that dysmenorrhea could be shared with others but only with women. Burbeck and Willig (2014) reported that menstruation could not be shared with everyone, especially with men, and that sex discrimination continued in the selection of doctors (Burbeck & Willig, 2014). 24. These findings suggest that thoughts and behaviors related to the social norms are learned and that sharing dysmenorrhea with others is completely a cultural phenomenon.

In the study, participants experienced “anger” during dysmenorrhea and that the noise increased discomfort. It was reported that in the studies, participants experienced aggression and anger with dysmenorrhea (Avci & Sari, 2018; Gagaa et al., 2013). Noise may lead to restlessness, insomnia, anger, impairment of concentration, short temper, and anger (Guner, 2000). The presence of excessive noise during dysmenorrhea may contribute to an increase in physiological, behavioral, and psychological responses.

In the research, “genetic” and “physiological factors” were specified as the cause of dysmenorrhea and it was seen that the participants had misinformation about physiological factors. The cause of primary dysmenorrhea is the endometrial contraction, uterine ischemia, and stimulation of pain fibers induced by prostaglandins. In the literature, the genetic transmission of dysmenorrhea has not been reported; however, it has been reported that menstrual attitude transmitted from mother to daughter is effective in dysmenorrhea (Bostanci, 2014).

All participants reported the “hot application” to cope with pain in the study. The hot application creates vasodilation in the region of application, increases circulation and tissue oxygenation, and ensures the release of cellular metabolites that stimulate pain impulses (Yavuz, 2014). Aziato et al. (2018) found that, the participants used hot applications due to their relieving effect (Aziato, Dedey, & Clegg-Lampsey, 2018). In Potur's research, it was found that the application of heat patch reduces dysmenorrhea (Potur, 2009).

The participants used painkillers to cope with pain; some of them stated that they used painkillers as a last resort and applied to a hospital. In studies conducted in Turkey and in foreign countries, it has been stated that painkillers are used to cope with dysmenorrhea (Chiou, Wang, 2008; Yilmaz, Nuraliyeva' & Dinc 2020).31,32. Although the rate of painkiller use was similar to those in some studies, it was determined to be high.

When the effects of dysmenorrhea were examined according to individual comfort, emphasized dimension was the “relief” dimension. Accordingly, it was found that the day the dysmenorrhea ended was the day the participants recover from their troubles. In the study, the fourth and fifth days were specified as the day the participants' dysmenorrhea ended and the day they recovered from their troubles. When the duration of dysmenorrhea is examined, similarly, in Yilmaz and Sahin research, 46.9% of the participants reported that the pain duration was the second and third days, and in the research of Dogan et al., 70.5% of the participants were found to that their pain lasts to 48-72 hours (Dogan, Eroglu, & Akbayrak, 2019; Yilmaz & Sahin, 2019).

**Conclusions:** This study provides important results regarding dysmenorrhea in young girls. The findings suggest that young girls with dysmenorrhea experience physical and social dimensions; especially in physical problems they prefer complementary methods. The cultural beliefs, perceptions, emotions and practices of young girls with dysmenorrhea should be considered in the diagnostic and treatment process. These findings and interpretations have potentially significant implications and guidance for young girls, health professionals, researchers and other key stakeholders. These factors are important to consider when guiding and

developing strategies to coping with dysmenorrhea in young girls. Therefore, medical staff must consider not only biological factors but also psychological and social factors when planning care and treatment.

Overall, this is the rare study, to the authors' knowledge, to explore and present evidence of the experiences young girls with dysmenorrhea in the work context. This study may be beneficial as a guide to further studies that could be conducted with larger communities.

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