

RELATIONSHIP BETWEEN MENSTRUAL PAIN AND QUALITY OF LIFE

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Abstract

Menstrual pain is a common socially significant problem that leads to discomfort and absence from work, with a negative impact on health status, improvement of life, and personal and public finances. The review of the scientific literature aimed at the concepts in world research related to menstrual pain and its impact on a better life. The current study aimed to investigate the relationship between menstrual pain and quality of life. The study contingent is physically active women of reproductive age. 125 physically active female students at the Vasil Levski National Sports Academy, Sofia, Bulgaria, were studied. The contingent was characterized by age, duration of bleeding in days, amount of menstruation, degree of menstrual pain, and self-assessment of the effect of menstrual pain on workability. We use the Brunnsvikien Brief Quality of Life scale (BBQ) in the study. A study conducted by us demonstrated a high prevalence of dysmenorrhea among young women. We consider it necessary to compile and approve a PROGRAM of physical exercises for personal and professional use by women with menstrual pain and specialists. Any effort in this direction will have an indirect benefit for personal and public finances, by preserving the working capacity of the women concerned.

Keywords: quality of life, dysmenorrhea, physical exercises.

1. INTRODUCTION

Primary dysmenorrhea is a very common problem in young women. Its proportion among menstruated women varies through different studies, evaluating quality of life, and ranges from 55,8% (Al-Jefout et al., 2015) to 100% (Ikramullah, 2016) (Kumbhar et al., 2011; Chuamoor et al., 2012; Tanmahasamut and Chawengsettakul, 2012; Al-Jefout et al., 2015; Ahuja et al., 2016; Atta et al., 2016; Ghani and Parveen, 2016; Ikramullah et al., 2016; Shewte and Sirpurkar, 2016; Emem and Hassan, 2017; Abramova et al., 2018; Fernández-Martínez et al., 2019; Akunna et al., 2020; Fernandez et al., 2020; Hashim et al., 2020; Özder and Salduz, 2020; Udayar et al., 2022; Mizuta et al., 2023). Dysmenorrhea is usually defined as cramping pain in the lower abdomen occurring at the onset of menstruation in the absence of any identifiable pelvic disease (Andrew and Coco, 1999). The initial onset is usually within 2 years from menarche (Rencz et al., 2017). Dysmenorrhea happens when uterine contractions during menstruation are unnecessarily severe: first, the uterine basal tone is higher; second, the frequency of contractions is higher; third, each of the contractions is more intense; and finally, contractions are arrhythmical (Serrahima and Martínez, 2023). The pain is located in the suprapubic region and can radiate to the upper thigh or back or both. Additional symptoms include nausea, vomiting, bloating, and diarrhea (Ferries-Rowe, Corey and Archer, 2020), generalized weakness, generalized pain, headache, loss of appetite, loss of interest in

daily activity, mood swings, chest tightness, fever (Unnisa et al., 2022), disgust, irritability, emotional instability, disturbed sleep, and reduced appetite, more of which are experienced also in non-dysmenorrhic girls, but significantly less (Kumbhar et al., 2011). In students with dysmenorrhea, physical health, psychological health, social relationship, and environmental health were significantly lower than those without dysmenorrhea (Yilmaz and Avci, 2020). Nearly 10% of dysmenorrhic women have severe symptoms, which can leave them bedridden for a minimum of one to three days during each menstruation (Unnisa et al., 2022). Dysmenorrhea improves in the third decade of a woman's reproductive life, and is reduced after childbirth (Chuamoor et al., 2012). It is known with certainty that primary dysmenorrhea affects millions of women worldwide (Hashim et al., 2020). In many countries, primary dysmenorrhea is the leading cause of recurrent short-term school and work absenteeism (Mahvash et al., 2012). Pain is one of the largest contributors to poor quality of life and dysmenorrhic pain can be considerably disabling (Iacovides et al., 2013). Worldwide, menstrual leave is currently offered in a small number of countries including Japan, Taiwan, Indonesia, South Korea and Zambia. Spain is the first European country which has just passed a law allowing those with especially painful periods to take paid "menstrual leave" from work (Bello and Llach, 2023). Akiyama et al. estimate that healthcare costs for primary dysmenorrhea in Japan are 2.2 times higher compared with matched controls, especially for outpatient care (Akiyama et al., 2017). The amounts to an annual loss in the USA are ~600 million working hours or up to \$2 billion (Iacovides et al., 2015).

2. MATERIALS AND METHODS

The objective of the study was to explore the correlation between menstrual pain and quality of life. The participants in the study were women of reproductive age who were actively involved in physical activities. To assess their quality of life, the researchers utilized the Brunnsvikien Brief Quality of Life scale (BBQ).

3. RESULTS AND DISCUSSIONS

A study was conducted on 125 female students who were actively engaged in physical activities at the Vasil Levski National Sports Academy in Sofia, Bulgaria. The participants were assessed based on various factors, including their age, the duration of their menstrual bleeding, the volume of their menstrual flow, the intensity of their menstrual pain, and their self-assessment of how the pain affected their ability to work.

In the majority of women examined (70.4%), the duration of menstruation fell within the range of 4-6 days (Fig. 1). Regarding the amount of menstrual flow, 65.6% of women experienced a moderate flow (Fig. 2). However, only a small proportion, 8.8% of women, did not experience any pain during menstruation. Among the participants, more than a quarter of them (28%) reported severe pain, while 40% described the pain as moderate. These findings highlight the significance of the issue and its potential impact on work capacity and overall quality of life, emphasizing the need for further attention and interventions.

In 65.6% of women, the amount of menstruation is moderate, 23,2% a little and 11,2% a heavy (Fig. 2).

A mere 8.8% of women surveyed reported no pain during their menstrual periods. However, for over a quarter of them (28%), the pain experienced was severe (Fig 3). Around 40% of women described the pain as moderate. These findings highlight the importance of addressing this issue, as it has the potential to adversely affect work capacity and diminish overall quality of life (Fig 4).

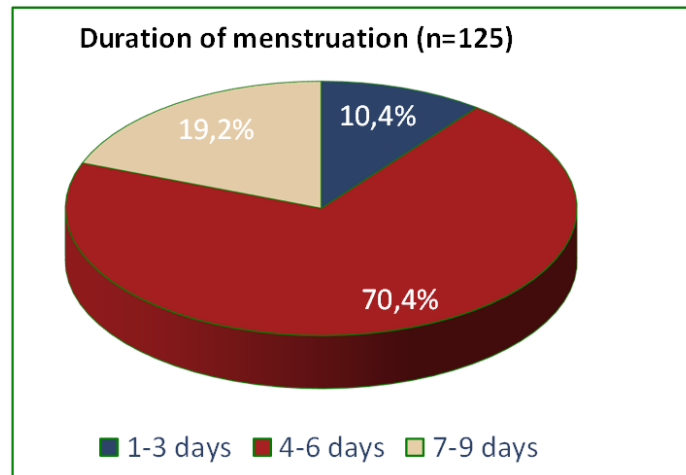


Figure 1. Duration of menstruation (n=125)

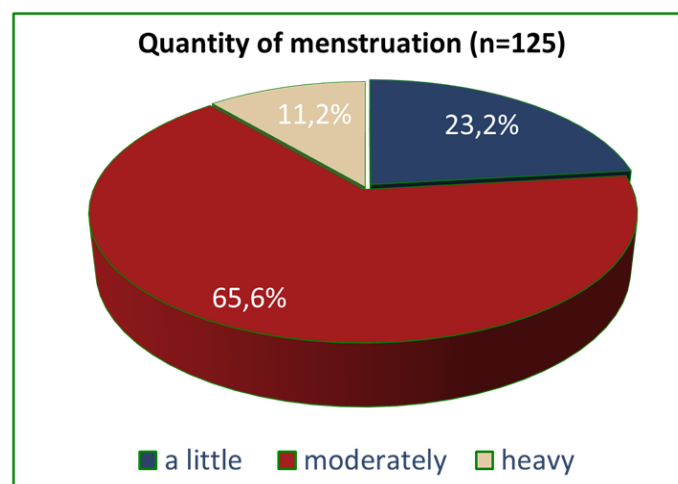


Figure 2. Quantity of menstruation (n=125)

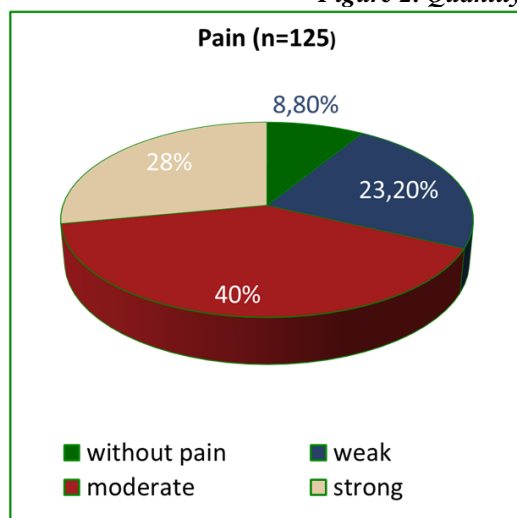


Figure 3. Pain (n=125)

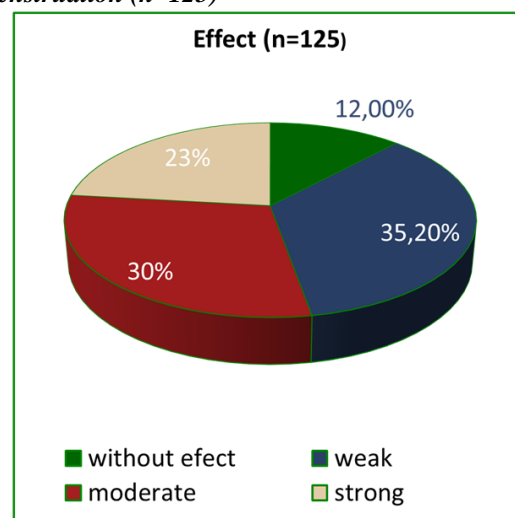


Figure 4. Effect (n=125)

Table 1. Statistical significance between the duration and amount of menstruation and pain and the amount, pain, and workability

	Days	Quantity	Pain	Effect	BBQ
Days	1				
Quantity	0,407**	1			
Pain	0,189*	0,262**	1		
Effect	0,155	0,223*	0,645**	1	
BBQ	-0,025	-0,095	-0,053	-0,05	1

The processing of the results proved a statistical significance between the duration and amount of menstruation and pain and the amount, pain, and workability (Table 1).

Table 2. The values of the results for the quality of life

BBQ	n	X min	Xmax	R	\bar{X}	S	V	As	Ex
BBQ	125	22	96	74	64,184	16,29	25,39	-0,167	-0,606

The values of the results for the quality of life of the studied contingent varied between 22 and 96 points, with the average value being 64.18 points (Table 2).

4. DISCUSSION

Dysmenorrhea is a prevalent condition that significantly impacts the quality of life for numerous women, causing both physical pain and associated social and psychological distress. In our modern society, various factors such as excessive work, heightened stress levels, chronic overwork, unhealthy eating habits, medication usage, poor posture, lack of physical activity, inadequate sleep, and negative emotions contribute to an escalation in pain symptoms and a decline in overall quality of life. These issues highlight the complex interplay between external factors and the experience of pain, emphasizing the need for comprehensive approaches to address and alleviate dysmenorrhea. It is crucial for women to prioritize their specific needs during their monthly menstrual cycles. This involves taking comprehensive preventive measures and considering the potential need for time off work. In today's world, it is essential for healthcare specialists to possess a thorough understanding of the issues associated with menstrual disorders and their impact on overall health and quality of life. Menstrual health depends on various factors, making it necessary to acquire detailed knowledge and develop new physical interventions that can contribute to the well-being, balance, and harmony of modern women. By maintaining the natural hormonal flow and cyclicity, women can preserve their rhythm and enhance their overall health.

5. CONCLUSIONS

The findings of our study revealed a high occurrence of dysmenorrhea (menstrual pain) among young women. The study also highlighted that a larger amount of menstrual bleeding and more

severe pain during menstruation have a significant negative impact on work performance and quality of life, respectively. Given these results, we believe it is necessary to implement a program of physical exercises specifically designed for women experiencing menstrual pain. By doing so, we can indirectly contribute to preserving the working capacity of women, which will have beneficial effects on both personal and public finances.

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