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**BOOK OF EXTENDED  
ABSTRACTS**



## **PREVALENCE AND MANAGEMENT PRACTICE OF DYSMENORRHEA AMONG FEMALE UNDERGRADUATE NURSING STUDENTS, EASTERN UNIVERSITY.**

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### **Abstract**

**Introduction:** Primary dysmenorrhea is a menstruation pain, affects about 50% of menstruating women. Miscellany management techniques are used to improve dysmenorrhea worldwide.

**Objectives:** The aim was to study the prevalence, associated symptoms, and management aspects of dysmenorrhea among female undergraduate nursing students of Eastern University Sri Lanka.

**Methodology:** Descriptive cross-sectional study was conducted among undergraduate nursing students via the self-administered online questionnaire. Data analysis was done by using a statistical package for social sciences version 25 (SPSS V.25).

**Results:** Among 84 participants 73.8% had dysmenorrhea and 95.2% had associated symptoms of dysmenorrhea. More than half of the students (66.7%) reported not having a family history of dysmenorrhea. About 14.3% of the respondents had menstruated by age 12.89 with the mean onset of menarche as 12 years. About 51.2% of the respondents had moderate pain. Lethargy was the commonest associated symptom reported by 48.4% of them. Sleep disturbances were the second commonest associated symptom in 46.8% of respondents. The majority of them (93.5%) used non-pharmacological methods and 56.5% of them used self-pharmacological methods to improve dysmenorrhea. About 86.2% of them were using relaxation methods and 56.5% of them used self-pharmacological methods to improve dysmenorrhea. The majority self-medicated with Paracetamol (97.2%). 16.1% of participants were followed by medical advice for dysmenorrhea.

**Conclusion:** The overall prevalence of dysmenorrhea among undergraduate female BSc (Hons) Nursing students of Eastern University Sri Lanka was found to be high.

**Keywords:** Dysmenorrhea, Prevalence, Associated symptoms, Management, undergraduates, Sri Lanka

**Introduction:** Dysmenorrhea is defined as “painful menstruation which may commence with the onset of the menses (menarche) when it is called primary dysmenorrhea, or later in life when the term secondary dysmenorrhea is applied” (John, 2015). Primary/functional dysmenorrhea is menstruation and it affects about 50% of menstruating women and up to 95% of adolescents (John. 2015).

Dysmenorrhea which is one of the common gynecological disorders affects about 50% of women. Around 10% of them have a negative impact on the quality of life. It may even disturb the economic status of a community as well (Shrotriya et al., 2012). According to the World Health Organization (WHO), adolescents and young adult women are special groups who suffer from dysmenorrhea and heavy menstruation. Primary dysmenorrhea is associated with uterine vasospasm, ischemia, and nervous sensitization due to prostaglandins and other inflammatory mediators. Uterine contractions and theories accounting for the pathophysiology of dysmenorrhea are abnormal prostaglandins ratios or sensitivity, neuropathic dysregulation, venous pelvic congestion, and psychological causes (Arulkumaran., 2013). The pain usually persists for 2-3 days that may be associated with nausea, vomiting, anorexia, diarrhea, constipation like gastrointestinal disturbances, insomnia, depression, syncope, inability to concentrate, headache, dizziness, lethargy and tiredness, and absence of abnormal findings on examination (John, 2015). Non-steroidal anti-inflammatory drugs (NSAIDs) are widely used in a large proportion of affected women as an analgesic to control the symptoms of primary dysmenorrhea. Oral contraceptives (OCP), and Progesterone, either oral (Desogestrol) or parenteral (Medroxyprogesterone, Etonogesterel) is used for primary dysmenorrhea and also useful for anovulation and amenorrhea. There is some evidence to suggest that low fat, low sugar vegetarian diet and exercise improve blood flow to the pelvis to improve the symptoms of dysmenorrhea. There is a shred of strong evidence to the effectiveness of the heat therapy for primary dysmenorrhea as same as NSAIDs effectiveness (Bickerstaff, 2016).

**Objectives:** The study was aimed to assess the prevalence, associated symptoms, and management aspect of dysmenorrhea among female undergraduate nursing students of Eastern University Sri Lanka. Specific objectives of the study are to estimate the prevalence of dysmenorrhea among female undergraduate nursing students of Eastern University, to describe the socio-demographic factors of the study subjects, to study the menstrual cycle characteristics among the study unit, to assess the prevalence of associated symptoms of dysmenorrhea among the study participants, and to describe the dysmenorrhea management techniques of the study subjects.

**Methodology:** A descriptive, cross-sectional study was conducted among 88 undergraduate BSc Hons (Nursing) female students of Faculty of Health Care Sciences, Eastern University Sri Lanka. Complete enumeration was used to recruit the participants. The study period was from December 2020 to September 2022. With the Ethical approval, permission to collect data was obtained from the Head, Department of Supplementary Health Sciences through Dean Faculty of Health Care Sciences, Eastern University. The pre-tested self-administered online questionnaire was used to collect the data. Data entering, analyzing, and interpreting were done by using a statistical package for social sciences version 23 (SPSS V.23). The descriptive analysis was employed in the calculation of mean, median, frequency, standard deviation as appropriate.

**Results:-** Eighty four (84) students participated in the study. Among them, 73.8% of participants experienced dysmenorrhea. The mean age of the participants was  $24.35 \pm 0.151$ . From them 95.2% of respondents were unmarried. The majority of them (94%) stayed in hostel or boarding places. Only 14.3% of them had menstruation by age 12.89 with the mean onset of menarche as 12 years. Regular menstruation was found in 82.1% of participants. Around 66.7% reported not having a family history of dysmenorrhea. About 51.2% of them had moderate pain. The pain lasts the first two days in 50.6% of them. 75.8% of respondents experienced intermittent pain. The majority (62.3%) of them experienced lower abdominal pain.

According to analysis data, there were so many dysmenorrhea-associated symptoms. Lethargy was the commonest associated symptom in 48.4% of respondents. Sleep disturbances were the second commonest associated symptom in 46.8% of respondents. Other menstruation associated symptoms reported include loss of appetite (43.5%), loss of concentration

(40.3%), headache 40.3%, diarrhea (35.5%), nausea (25.5%) and dizziness (35.5%).

The participants who reported having dysmenorrhea may use pharmacological and non-pharmacological methods. The majority of the 93.5% used non-pharmacological methods and 56.5% of them used self-pharmacological methods to improve dysmenorrhea. Out of the total who present with dysmenorrhea (93.5%) participants was followed non-pharmacological methods. About (86.2%) of them were using the relaxation method. Other notable followed non-pharmacological methods were heat application (53.4%), taking hot drinks (50.0%), use of herbal remedies (31.0%), and use distraction activities (32.8%). Some 35 (56.5%) participants consumed analgesics and the majority self-medicated with Paracetamol (97.2%). (16.1%) participants were followed medical advice for dysmenorrhea.

**Discussion:** This study found that 73.8% prevalence of dysmenorrhea which is higher than comparable to 62.4% of Mexican University students (Ozder et al., 2020) and less than 85.0% prevalence rate in the United State of America (Balik et al., 2014). The majority (51.2%) of participants had of moderate pain as menstruation pain which is similar to records in Omani High School students (Al-harbi et al., 2020) but some studies show the majority classification of menstruation pain as mild pain (Bae et al., 2018). Lethargy was the commonest associated symptom reported by 48.4% of respondents in this study which is similar to the records of commonest associated symptoms in Omani High School students (Al-harbi et al., 2020). Self-treatment of dysmenorrhea is higher than the getting the medical advice and getting the medical advice rate was 16.1%, which is similar to between 14% and 16.3% reported Turkey (Balik et al., 2014) and the United State of America (Malgawi et al., 2012) respectively. The majority self-medicated with Paracetamol (97.2%) as similar to Northern Ghana University students records (Balkrishna et al., 2011). The majority of participants use resting/relaxation methods as a non-pharmacological method for dysmenorrhea similar to the Hispanic female Adolescents (Bae et al., 2018).

**Conclusion:** In this study, the overall prevalence of dysmenorrhea among undergraduate female BSc (Hons) Nursing female students of Faculty of Health Care Sciences, Eastern University Sri Lanka was found to be high. The majority of them experienced an intermittent type of moderate pain which last for the first two days. About two-thirds of participants were using non-pharmacological methods such as relaxation, heat application, and massage, drinking more hot water, coffee, or tea to manage their

dysmenorrhea pain. About one-half of the participants were using medication to control their dysmenorrhea.

## References

- Arulkumaran, S., Regan, L., Papageorghiou, A.T., Monga, A., Farquharson, D.I.M. :Oxford desk reference obstetrics and gynecology (2013)
- Al-harbi, A. S., Alrahili, M., & Al-harbi, S. S. (n.d.). *The Impact of Menstrual Periods on Performance of Female Workers Journal of Women's Health Care.* 1–5. <https://doi.org/10.35248/2167-0420.20.9.483>. Copyright (2020)
- John, M., John Murtagh's general practice, 6<sup>th</sup> edition (2015). [tandfonline.com/doi/full/10.3109/03009730903457218](https://doi.org/10.3109/03009730903457218)
- Ozder, A., & Salduz, Z. (2020). The prevalence of dysmenorrhea and its effects on female university students' quality of life : what can we do in primary care? *Int J Clin Exp Med*, 13(9), 6496–6505. <https://www.ijcem.com/doi/10.18546/ijcem.13.9.6496-6505>
- Balik, G., Üstüner, I., Kağitci, M., & Şahin, F. K. (2014). Is There a Relationship between Mood Disorders and Dysmenorrhea? *Journal of Pediatric and Adolescent Gynecology*, 27(6), 371–374. <https://doi.org/10.1016/j.jpag.2014.01.108>
- Bae, J., Park, S., & Kwon, J. W. (2018). Factors associated with menstrual cycle irregularity and menopause. *BMC Women's Health*, 18(1). <https://doi.org/10.1186/s12905-018-0528-x>