Association of Demographic Characterization Among Dysmenorrhea and Non-Dysmenorrhea Females

Amsa Fatima*, Sidra Khalid¹, Maria Aslam*, Humaira Waseem*, Hamnah Fatima⁵, Wafa Fatima³

¹ University Institute of Diet and Nutritional Sciences, Faculty of Allied Health Sciences, The University of Lahore, Lahore, Pakistan; ² University Institute of Radiological Sciences and Medical Imaging Technologies, Faculty of Allied Health Sciences, University Ultrasound Clinic Green Town, The University of Lahore, Lahore, Pakistan and ³ University Institute of Public Health Sciences, Faculty of Allied Health Sciences, The University of Lahore, Lahore, Pakistan.

Abstract

Background: Dysmenorrhea is gynecological state of cramps with painful menstruation in the uterine origin described by pelvic cramp with pain initiating for a short period before or at the beginning of menstrual cycle and lasting 1-3 days.

Objective: To determine the association of demographic characterization among dysmenorrhea and non-dysmenorrhea females.

Methodology: A Comparative cross-sectional study was carried out at The University of Lahore, Lahore. Out of 150 Menstruating females (divided into two groups) were selected through non-probability convenient sampling technique. Participants were assessed through pre-tested questionnaire. SPSS version 21.0 was used for data analysis.

Results: There was an insignificant association found between study groups and BMI (p=0.59). Association between study groups and Marital status was insignificant (p=0.056). There was an insignificant association between study groups and socioeconomic status as the (p=0.052). Also, there was an insignificant association between study groups and residential location as the (p=0.080).

Conclusions: It was concluded that in the weight had insignificant association. There was an insignificant association between study groups and body weight. Also, residential area, socio-economic and marital status had no association with study group

Keywords: Association, demographic, females, non-dysmenorrhea, dysmenorrhea.

*Corresponding author: Amsa Fatima
University Institute of Diet and Nutritional Sciences, Faculty of Allied Health Sciences, The University of Lahore, Lahore, Pakistan.
Email: amsa.fatima@dnsc.uol.edu.pk

List of Abbreviations

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<tr>
<td>PGF</td>
<td>Prostaglandin F2alpha</td>
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<td>PMS</td>
<td>Premenstrual Syndrome</td>
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<td>PD</td>
<td>Primary dysmenorrhea</td>
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<td>BMI</td>
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<td>NW</td>
<td>Normal weight</td>
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<td>OB</td>
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Introduction.

Dysmenorrhea is gynecological state with painful cramps in the uterine origin [1]. Dysmenorrhea is described by pelvic cramp with pain initiating for a short period before or at the beginning of menstrual cycle and lasting 1 to 3 days. Exactly two to four days before menstrual cycle starts, prostaglandins pass in the uterine muscle where they develop rapidly at menstrual beginning and perform as smooth muscle contractors that help in the exclusion of the endometrium [2]. Dysmenorrhea may be correlated headache, nausea diarrhea, and vomiting and these complications may happen before the menstrual cycle or during the menstrual cycle [3].

Menstruation has been familiar among the females from the 19th era to now and has been viewed the new problems [4]. In the age of fertility each females experiences menstrual cycle for four hundred times [5]. The one-seventh of a female’s life is be associated with menstruation [6]. Young females who do not consume breakfast expressively more suffering from dysmenorrhea, as compared to females who consume breakfast and a high intake of fiber diet is directly linked with dysmenorrhea [7]. Females who were suffering from dysmenorrhea can eight to thirteen times more produce prostaglandin F2alpha (PGF) than the females who do not suffering this disorder [3]. The pain in menstrual cycle may spread to the lower back or the thigh. Dysmenorrhea may be categorized into minor, modest and severe [8]. Dysmenorrhea is categorized: primary or secondary [9]. Primary dysmenorrhea is described by painful cramps in uterine origin that experienced before the start of menstruation or during menstrual cycle in the lower area of the abdomen with no any evident on the pathology of pelvic [10]. The beginning of primary dysmenorrhea (PD) is usually at or just after six to twelve months of the menarche, when ovulatory phases are began [11]. For example, body mass index (<20 or >30), age, low socioeconomic status, alcohol consumption, smoking, initial age at menarche, long period of menstrual cycle, heavy menstrual bleeding, obesity, marriage history, past history of dysmenorrhea [12]. These supplements like: omega-3 unsaturated fats, vitamin B₁ (thiamine), vitamin B₆ (pyridoxine), vitamin E, vitamin B₃ (niacin), magnesium and calcium may reduce the pain [13].

A cross-sectional study conducted by Masho SW et al., to influence the relationship between Premenstrual Syndrome (PMS) and obesity. Total 874 females included and aged between 18 to 44 year. The study showed that obesity was more related with Premenstrual syndrome (PMS) [14]. In 2009, another cross-sectional study was
conducted by Ozerdogan N et al., to influence the prevalence of dysmenorrhea amongst Turkish university undergraduate and to assess the impacts of socio-demographic features. Among 857 undergraduate were included. Threat of dysmenorrhea was nearly 1.5- times greater in females who were underweight as compared with overweight and obese female. The study findings showed that the prevalence of dysmenorrhea was high in undergraduates [15]. A study by Rafique N and Al-Sheikh MH, to find out the relationship between BMI and primary dysmenorrhea (PD), on 370 females students. It was based on BMI, participants were distributed as underweight [UW], normal weight [NW], overweight [OW] and obese [OB]. Results of the study revealed that greater prevalence of medium and severe PD in underweight as compared to other obese groups [16]. A cross-sectional study was conducted by Hirata M et al., to assess if adolescents' body shape has any effect on the frequency of pain in menstrual cycle. Total 2,718 females aged between 18 to 21 years were included. The study showed that the prevalence of pain in menstrual cycle was high amongst the college females, 82.8% the occurrence being higher in the group of underweight (BMI < 19.8) [17].

The researcher was aimed to find out the association of demographic characterization among females having dysmenorrhea and non-dysmenorrhea. In order to highlight the demographic factors associated with dysmenorrhea.

Methods.
A Comparative cross-sectional study was carried out at The University of Lahore, Lahore. Out of 150 menstruating females were divided into two groups: group 1 was of females with non-dysmenorrhea and group 2: was of females with dysmenorrhea and group. They were selected through non-probability convenient sampling technique. Participants were assessed through pre-tested questionnaire. The study duration was 4 Months from January to April, 2018. SPSS version 21.0 was used for data analysis. In this study, menstruating University students aged between 13-30 years were recruited whereas, females with amenorrhea, pregnant females aged below 13 years and above 30 years, non-cooperative females, females from other institutions were excluded.

Results.
Out of 150 females in table 1, 75 were having dysmenorrhea and 75. Among non-dysmenorrhea group 6 females were underweight, 46 were normal, 19 were overweight and 4 were obese while in non-dysmenorrhea group 11 females were underweight, 41 were normal, 20 were overweight and 3 were obese. Also, there was an insignificant association found between study groups and BMI (ρ=0.59). In non-dysmenorrhea group 57 were unmarried and 18 females were married while in non-dysmenorrhea group 66 females were unmarried and 9 were married.
Association between study groups and Marital status was insignificant ($p=0.056$). In non-dysmenorrhea group 4 were from low socio-economic status, 57 were from middle and 14 were from upper middle socio-economic status and in dysmenorrhea group no one was from low socio-economic status.
socio-economic status, 53 were from middle and 22 were from upper middle socio-economic status. There was an insignificant association between study groups and socioeconomic status as the \((p=0.052)\). In non-dysmenorrhea group 75 belonged to urban area and no one was from rural area, whereas in dysmenorrhea group 72 belonged to urban area and 3 were from rural area. Also, there was an insignificant association between study groups and residential location as the \((p=0.080)\).

**Discussion:**
Finding of the current study revealed that, among non-dysmenorrhea group 6 females were underweight, 46 were normal, 19 were overweight and 4 were obese while in dysmenorrhea group 11 females were underweight, 41 were normal, 20 were overweight and 3 were obese. Also, there was an insignificant association found between study groups and BMI \((p=0.588)\). Similar results were found by Dars S *et al.*, during 2014 [18]. In the study of Hirata M *et al.*, out of 2,718 females, 34.8% was belonged to underweight, 53.8% were normal and 11.4% were overweight [17]. Similarly, according to Chauhan M and Kala J during 2012, out of 400 adolescent girls, the prevalence of dysmenorrhea was 76% in urban and 81.5% in rural [19]. Current results showed that, in non-dysmenorrhea group 57 were unmarried and 18 females were married while in non-dysmenorrhea group 66 females were unmarried and 9 were married. In previous studies all females were unmarried as compare to our study; both unmarried and married females were included.

**Conclusion:**
It was concluded that the weight had insignificant association. There was an insignificant association between study groups and body weight. Also, residential area, socio-economic and marital status had no association with study group.
References


