Comparison of Menstrual Pain among Dysmenorrhea and Non-Dysmenorrhea University Students

Amsa Fatima¹, Sidra Khalid*², Maria Aslam¹, Humaira Waseem¹, Riffat Mehboob², Sana Farooq¹, Bahisht Rizwan¹

1. University Institute of Diet and Nutritional Sciences, Faculty of Allied Health Sciences, The University of Lahore.
2. Department of Physical Therapy, Faculty of Allied Health Sciences, The University of Lahore.

* Corresponding Author’s Email ID: sidrakhalid.uaf@gmail.com

ABSTRACT: Dysmenorrhea is a gynecological state of cramps with painful menstruation. In this condition, pain initiates for a short period before or at the beginning of the menstrual cycle and lasts for 1-3 days. A comparative cross-sectional study was carried out at The University of Lahore, to assess the menstrual pain among dysmenorrhea and non-dysmenorrhea university students. A total of 150 menstruating females were divided into two groups: the dysmenorrhea group: 75 females aged between 21 to 30 years complaining of dysmenorrhea and non-dysmenorrhea group: 75 females aged between 21 to 30 years having normal menstruation were enrolled. Data were collected through interview form and participating females were pre-informed regarding the risks and benefits of the study and written informed consent was taken from the participants. Participants were assessed through a pre-tested questionnaire using a non-probability convenient sampling technique and data were analyzed using SPSS version 21.0. Among the non-dysmenorrhea group 55 females were having pain in 1 hour, while in the dysmenorrhea group only 9 females were having pain for 1 hour and 39 females were having pain >3 hours. According to the non-dysmenorrhea group, 9 females were using hot applications whereas in the dysmenorrhea group 34 were used hot applications. Among the non-dysmenorrhea group, 26 females were effected due to menstrual pain and were unable to perform daily activities whereas in the dysmenorrhea group 60 females were affected and unable to perform their daily activities. It was concluded that in dysmenorrhea groups more females were taking painkillers, using hot applications, doing messages and were unable to perform the daily activity as compared to the non-dysmenorrhea group.

Keywords: Comparison, menstrual pain, females, non-dysmenorrhea, dysmenorrhea, university students
INTRODUCTION

Dysmenorrhea is a gynecological state with painful cramps in the uterine origin (Kural et al., 2015). Dysmenorrhea is described by pelvic cramp with pain initiating for a short period before or at the beginning of the menstrual cycle and lasting 1 to 3 days (Unsal et al., 2010). Menstruation has been familiar among the females from the 19th era to now and has been viewed as the new problem (Kordi et al., 2011). In the age of fertility, each female experiences a menstrual cycle for four hundred times (Do Amaral et al., 2005). The 1/7th of a female’s life is to be associated with menstruation (Lee et al., 2009). The pain in the menstrual cycle may spread to the lower back or the thigh. Dysmenorrhea may be categorized into minor, modest and severe (Iliyasu et al., 2012). The individual becomes moody and depressed in pain and this disturbs social communication (Iliyasu et al., 2012). In this period, some females and adolescents lose their hunger and they may absent from work or school (Gumanga and Kwame-Aryee, 2012). Dysmenorrhea is categorized: primary or secondary (Iacovides et al., 2015). Primary dysmenorrhea is described by painful cramps in uterine origin that experienced before the start of menstruation or during the menstrual cycle in the lower area of the abdomen with no evidence of the pathology of pelvic (Rapkin, 2012; Hudson, 2007). The beginning of primary dysmenorrhea (PD) is usually at or just after six to twelve months of the menarche when ovulatory phases are beginning (Shah et al., 2013). Some females are released from this condition after their first baby and other females suffering from this problem until their menopause (Iliyasu et al., 2012). The duration of the distress in the menstrual cycle is mostly eight to seventy-two hours and is mostly related to menstruation (Shah et al., 2013). For example, body mass index (<20 or >30) (Haidari et al., 2011; Roberts et al., 2012), age, low socioeconomic status, alcohol consumption, smoking (Nohara et al., 2010), initial age at menarche, long period of the menstrual cycle, heavy menstrual bleeding, obesity (Gagua et al., 2012), marriage history (Bajalan et al., 2018), history of dysmenorrhea (Tavallaee et al., 2011). Abdul-Razzak et al. (2010) reported a correlation between low consumption of dairy items and the possibility of dysmenorrhea. Rodrigues et al. (2011) revealed that dysmenorrhea is extremely common among young adults and adolescents and is interrelated to school/ academic absenteeism (Rodrigues et al., 2011). Another study showed that almost 35% of the undergraduates in university had acute dysmenorrhea and around 21% had medium to acute PMS. The results also showed that set the intervention programs, such as educational courses, to decrease the harmful impacts of the problem on the undergraduates' productivity and value of life (Al-Dabal et al., 2014). Negi et al. (2018) noticed that PMS, dysmenorrhea
and irregular menstrual cycle were associated with daily activities and eating habits among young females. Dysmenorrhea was correlated with the consumption of junk food (66.10%), and PMS was correlated with lacking daily activities (78.94%). A greater prevalence of medium and severe primary dysmenorrhea in underweight as compared to other obese (OB) groups (Rafique and Al-Sheikh, 2018).

The researcher was aimed to find out the comparison of menstrual pain among dysmenorrhea and non-dysmenorrhea university students. To find out the lifestyle factors associated with dysmenorrhea.

**MATERIAL AND METHODS**

A comparative cross-sectional study was carried out among 150 menstruating females studying at the University Institute of Diet and Nutritional Sciences, Faculty of Allied Health Sciences, The University of Lahore, Lahore. The sample size was calculated using the WHO formula. Menstruating females, selected through non-probability convenient sampling technique were divided into two groups: non-dysmenorrhea and dysmenorrhea. Among the dysmenorrhea group: 75 females aged between 21 to 30 years complaining of dysmenorrhea and in the non-dysmenorrhea group: 75 females aged between 21 to 30 years having normal menstruation were enrolled. In exclusion criteria: Females with amenorrhea and females with other institution was not included in this study. Data were collected through interview form and Participating females were informed regarding the risks and benefits of the study and written informed consent was taken from the participants. Data were collected through a pre-tested questionnaire during 4 Months (January to April 2019). SPSS version 23.0 was used for data analysis. Females with amenorrhea, aged below 21 years and above 30 years, non-cooperative ones and females from other institutions were excluded. Ethical approval was taken from the Institutional Review Board (IRB), of The University of Lahore.

**RESULTS**

The present study was carried out in females with dysmenorrhea and non-dysmenorrhea. A questionnaire was used and information regarding pain one day before the onset of menstruation, pain on the first day and pain on the second day, changes in daily activities, etc. It was noticed during the study in dysmenorrhea group 21 were experiencing pain one day before the onset of menstruation whereas only 3 were having pain one day before the onset of menstruation whereas only 3 were having pain one day before the onset of menstruation in non-dysmenorrhea group 3. It was also recorded that the total duration of pain in hours per day in the non-dysmenorrhea group was 12 females having no pain while 55 females were having pain in 1 hour (Table 1).
Comparison of Dysmenorrhea and Non-Dysmenorrhea in University Students

Table 1: Prevalence of pattern of pain in dysmenorrhea and Non-dysmenorrhea group

<table>
<thead>
<tr>
<th>Sr No.</th>
<th>Groups</th>
<th>Pattern of pain</th>
<th>Pain one day before the onset of menstruation</th>
<th>Pain on the first day</th>
<th>Pain on the second day</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Non-Dysmenorrhea</td>
<td></td>
<td>03</td>
<td>20</td>
<td>11</td>
</tr>
<tr>
<td>2.</td>
<td>Dysmenorrhea</td>
<td></td>
<td>21</td>
<td>53</td>
<td>13</td>
</tr>
<tr>
<td>3.</td>
<td>Total</td>
<td></td>
<td>24</td>
<td>73</td>
<td>22</td>
</tr>
</tbody>
</table>

9 females were having pain in 1 hour in the dysmenorrhea group, 15 females were having pain in 2 hours, 12 were having pain in 3 hours and 39 females were having pain in >3 hours. It was also noticed that 12 females didn't complain of pain at the onset of menstruation in the non-dysmenorrhea group. Whereas 55 reported pain for 1 hour and no one complained of pain for 2, 3, or >3 hours of pain (Table 2).

Table 2: Distribution according to pain duration in dysmenorrhea and non-dysmenorrhea group

<table>
<thead>
<tr>
<th>Sr No.</th>
<th>Group</th>
<th>The total duration of pain in hours per day</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>1.</td>
<td>Non-dysmenorrhea</td>
<td>12</td>
<td>55</td>
</tr>
<tr>
<td>2.</td>
<td>Dysmenorrhea</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>3.</td>
<td>Total</td>
<td>12</td>
<td>64</td>
</tr>
</tbody>
</table>

It was also reported in the non-dysmenorrhea group 26 were having disturbed daily activities during menstruation whereas in the dysmenorrhea group 60 were having disturbed daily activities (Table 3)
Table 3: Effect of menstrual pain on daily activities in dysmenorrhea and non-dysmenorrhea group

<table>
<thead>
<tr>
<th>Sr No.</th>
<th>Group</th>
<th>Effect of menstrual pain on daily activities</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>1.</td>
<td>Non-dysmenorrhea</td>
<td>49</td>
<td>26</td>
</tr>
<tr>
<td>2.</td>
<td>Dysmenorrhea</td>
<td>15</td>
<td>60</td>
</tr>
<tr>
<td>3.</td>
<td>Total</td>
<td>64</td>
<td>86</td>
</tr>
</tbody>
</table>

According to Fig. 1, in dysmenorrhea group 11 were experiencing pain in the lower abdomen only while in non-dysmenorrhea group 25 were experiencing pain in the lower abdomen only. Among the dysmenorrhea group, 21 were experiencing pain in the lower abdomen and back only whereas in the non-dysmenorrhea group 10 were having pain in the lower abdomen and back only. In the dysmenorrhea group, 44 were having pain in the lower abdomen, back and legs whereas in the non-dysmenorrhea group 16 were having pain in the lower abdomen, back and legs. And in dysmenorrhea group 2 were experiencing pain in other body parts whereas in non-dysmenorrhea group 14 were experiencing pain in other body parts.

Fig. 1: Pattern of pain among participants in different body parts of Dysmenorrhea and Non-dysmenorrhea group
Fig. 2 showed that in the dysmenorrhea group 34 were using hot applications whereas in the non-dysmenorrhea group only 9 were using hot applications. Among dysmenorrhea group 6 was doing massage whereas among the non-dysmenorrhea group no one was doing massage. In the dysmenorrhea group, 45 were doing bed rest while in the non-dysmenorrhea group 27 were doing bed rest during menstruation. Among the dysmenorrhea group, 6 were taking any other precautions whereas in the non-dysmenorrhea group only 2 were taking other precautions. In non-dysmenorrhea groups, no one was taking medicines while in the dysmenorrhea group 18 were taking medicines.

![Fig. 2: Distribution of participants regarding treatments during menstruation in dysmenorrhea and non-dysmenorrhea group](image-url)

**DISCUSSION**

Results of the current study revealed that in non-dysmenorrhea group 3 patients were experienced early pain before the onset of menstruation whereas in dysmenorrhea group 21 were experienced pain early pain before the onset of menstruation. A similar study by Abdul-Razzak et al. (2010) showed that 87.4% of females with symptoms of pain starting a few days before menstruation. In the current study, in the non-dysmenorrhea group, 12 females were having no pain and 55 females were having pain in 1 hour, while in the dysmenorrhea group 9 females were having pain in 1 hour, 15 females were having pain in 2 hours, 12 were having pain in 3 hours and 39 females were having pain in >3 hours. Similar results
Comparison of Dysmenorrhea and Non-Dysmenorrhea in University Students

were revealed in a study and 34.1% females frequently experienced the pain 48.7% were sometimes and 17.2% rarely (Hirata et al., 2002). In another study 69.60% were having minor pain, as compared to 30.40% were having medium and severe pain in the menstrual cycle (Zurawiecka and Wronka, 2018). The results of the current study showed that among non-dysmenorrhea groups, no one was taken medicines while among the dysmenorrhea group 18 were taken medicines. In the study of Rodrigues et al., out of 48 females, 135 were using therapeutic methods to get rid of the pain of dysmenorrhea Most commonly medications were used to get relief from pain to contain oral tablets (37.0%) and NSAID's (38.5%) (Rodrigues et al., 2011). In 2014, the study was performed which showed 57% of females were using analgesics to get rid of pain (Al-Dabal et al., 2014). Similar findings were observed by Rafique and Al-Sheikh during 2018, 55.8% of the undergraduates were relieving relief from pain by using non-steroidal anti-inflammatory drugs (NSAIDs) (Rafique and Al-Sheikh, 2018). Findings of the current study revealed that in non-dysmenorrhea group 26 were the effect of menstrual pain on daily activities whereas in the dysmenorrhea group 60 were the effect of menstrual pain on daily activities. In the study of Rodrigues et al., during 2011 results showed that 65.7% were showed limits in their daily living due to pain (Rodrigues et al., 2011). Similar results were also found by Rafique and Al-Sheikh (2018) 54.5% of

the undergraduates were an effect on their physical activities. In another study 78.94% of students with PMS were lacking daily activities (Al-Dabal et al., 2014; Negi et al., 2018).

CONCLUSIONS

It was concluded that females with dysmenorrhea were having more pain duration and intensity in the menstrual cycle and were taking pain killers medicines, using more hot applications, doing message and were unable to perform daily activities in menstruation as compared to the non-dysmenorrhea group, among which female was not usually doing such activities in menstruation.

FUNDING

None

ACKNOWLEDGMENTS

None

CONFLICTS OF INTEREST

There is no conflict of interest to declare.

REFERENCES


Comparison of Dysmenorrhea and Non-Dysmenorrhea in University Students


Comparison of Dysmenorrhea and Non-Dysmenorrhea in University Students


