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Prevalance of Musculoskeletal Pain During Menstruation Amongmid and Late Adolescent Girls

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Abstract

Menstrual pain is a common problem experienced by majority of adolescent girls. Musculoskeletal pain is associated to menstrual pain as its characteristics depend on the severity of menstrual pain. This type of pain may have an adverse effect on the physical, emotional, and social well-being and may lead to absenteeism from school/college during menstruation. This study was conducted on mid and late adolescent school/college going girls of age between 14 to 21 years based on the inclusion and exclusion criteria. The survey consisted of 15 questions related to musculoskeletal pain and menstruation. The Numeric Pain Rating Scale (NPRS) and the Nordic questionnaire were used to measure the intensity and musculoskeletal region of pain respectively. The results show that the most common area of pain during menstruation was low back (92.5%) followed by hips and thighs (33.3%). The intensity of pain in majority of female students was moderate (56%) followed by severe (28%) and mild (16%). Further the study concluded that majority of girls were having musculoskeletal pain during menstruation and was predominantly present in the lower back, hip and thighs. It was also concluded that most of the female students are unable to their daily activities and remain absent from school/college during menstruation.

1. Introduction

Menstruation is a part of woman's monthly cycle associated with release of blood through vagina. It begins from menarche i.e. onset of menstruation and ends at menopause i.e. cessation of menstruation. The ideal age of menarche is 12< years whereas the age of menopause is around 46 years.[1,2] A normal menstrual cycle is of 21 to 45 days with 2 to 6 days of blood flow and an averageblood flow of 20 to 60 mL.[3] During the menstruation phase a woman undergoes may changes that are physical, emotional, reproductive and social. These changes predominantly occur in the adolescent age also known as the age of puberty.

Menstrual pain is a form of dull pain and it is difficult to locate the exact point of pain.[4] It occurs in the form of cramps or pelvic pain that occur during the menstrual period. This is also known as dysmenorrhea. There are two types of dysmenorrhea i.e. primary and secondary. Primary dysmenorrhea consists of pain most commonly in the lower abdomen with associated symptoms like bloating, nausea, fatigue.[5] secondary dysmenorrhea is associated with an underlying disease.[5]Menstrual pain or cramps can have causes that aren't due to underlying disease such as heavy flow, Irregular menstrual cycle, stress.[6] External factors that can be a factor in causing menstrual pain are related to age, type of occupation, duration of work, improper lifestyle (excessive consumption of alcohol, smoking, unhealthy food).[7]

It is often difficult to locate the correct initiating area or point of the pain as is felt in regions far away from the myofascial trigger point. Musculoskeletal pain is associated to menstrual pain as its characteristics depend on the severity of menstrual pain. This type of pain is often accompanied by feeling of discomfort during menstruation.[8] Menstrual pain is a common problem experienced by majority of

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females and has prevalence of 70.2%.[9] Menstrual pain at adolescent

age maybe related to menarche at an early age, menstruation of long duration and abundant flows.[7] Musculoskeletal pain may have an impact on the physical, personal as well as social life of a person.[10] This might make it difficult for them to perform their daily activities and may lead to absenteeism from school/college.[11]

Therefore, this study is carried out to determine the most common regions of musculoskeletal pain and its severity during menstruation and the impact that it can have on the quality of life of young women. There were three simple objectives based on which the study was conducted to check the prevalence of musculoskeletal pain during primary dysmenorrhea among mid and late adolescent girls, to determine the severity of musculoskeletal pain during menstruation and to determine its effect on the quality of life.

2. Method

The study aimed at investigating the prevalence of musculoskeletal pain during primary dysmenorrhea among mid and late adolescent girls in age group of 14-21 years and to determine its effect on the quality of life. This study was conducted on mid and late adolescent school/college going girls with age between 14 to 21 years based on the inclusion and exclusion criteria. The inclusion criteria included school/college going girls, age between 14 to 21 years and regular menstrual cycles whereas the exclusion criteria consisted of Subjects with Irregular menstrual cycle, Current major medical and psychological problems, receiving any hormonal therapy Administration of contraceptives. The study was done by random sampling method. Total 93 responses were collected which fulfilled the criteria. Consent was taken from the female students willing to participate in the survey. The participants were given information about the aim of the study. The survey consisted of 15 questions related to musculoskeletal pain and menstruation. The intensity of pain was measured using the NPRS (Numeric Pain Rating Scale). The scale is divided into three categories from zero (no pain) to ten (maximum pain) as follows: Moderate Pain (Score of 4-7), Mild Pain (Score of 1-3) and Severe Pain (Score of 8-10). To investigate the regions of musculoskeletal pain Nordic Questionnaire was used. The questionnaire consists of multiple variants that focus on the anatomical regions of the body right from neck up to ankles. The survey was in English and all the data were entered into database on Microsoft excel. Microsoft Excel and Microsoft word were used to generate the tables and graph.

3. Results

Table 1: It shows the severity of flow and its percentage. 71% of the subjects had moderate type of flow, 18.3% had mild flow followed by 10.8% having severe flow.

Severity of flow	Percentage
Mild	18.3%
Moderate	71%
Severe	10.8%

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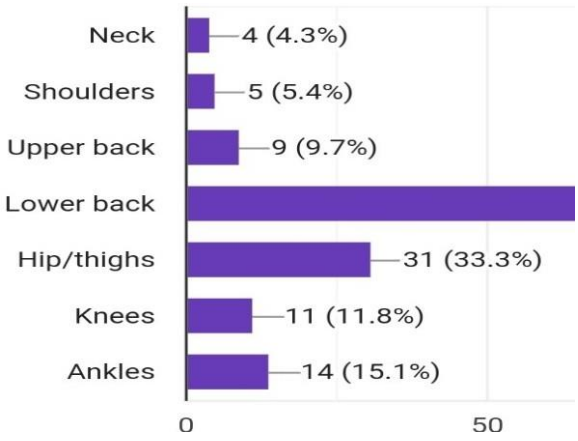
Table 2: It shows the severity of pain and its percentage that was measured using the Numerical Pain Rating Scale (NPRS), 56 % subjects had moderate pain(score 4-7). 28% had severe pain (score 8-10) and 16% subjects had mild pain (score 1-3).

Severity of pain (NPRS)	Percentage
Mild (1-3)	16%
Moderate (4-7)	56%
Severe (8-10)	28%

Table 3: It shows the region of pain and its percentage that was measured byusing the Nordic Questionnaire. 92.5% i.e. majority of subjects had pain in thelower back, 33.3% showed pain in hip/thighs, 15.1 had pain in the ankles. The least common areas of pain were knees, upper back, shoulders and neck with11.8%, 9.8%, 5.4% and 4.3% prevalence respectively.

Area of pain	Percentage
Neck	4.3%
Shoulders	5.4%
Upper back	9.7%
Lower back	92.5%
Hip/thighs	33.3%
Knees	11.8%
Ankles	15.1%



Graph 1- Region of pain and its prevalence in percentage.

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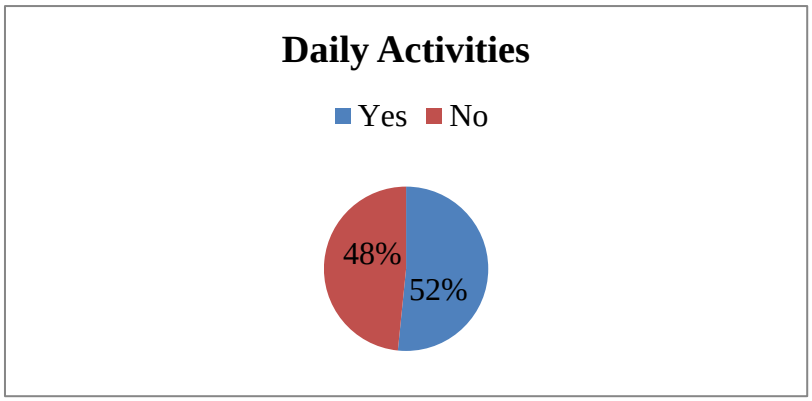
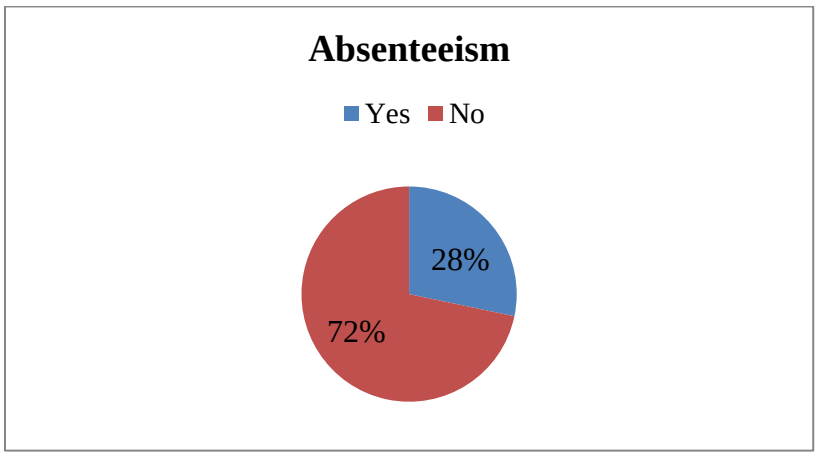


Graph 2- Inability to perform daily activities.



Graph 3- Absenteeism from school/college

4. Disscussion

Menstrual pain is a common problem amongst majority of females during menstruation. Causes of menstrual pain can be heavy flow, Irregular menstrual cycle, stress.[6] Other associated factors causing menstrual pain are related to age, type of occupation, duration of work, unhealthy lifestyle like excessive consumption of alcohol, smoking.[7] Menstrual pain is a non-localized pain as it is often difficult to locate the point of the pain as is felt in regions far away from the myofascial trigger point.[8]Musculoskeletal pain has a major role in affecting the physical, personal as well as social life of a person.[10] Students may have difficulty to perform their daily activities and this may lead to absenteeism from school/college causing an impact on their academics.[11] This in general can affect their quality of life.

The present study 'prevalence of musculoskeletal pain during menstruation among mid and late adolescent girls' was conducted to check the prevalence of musculoskeletal pain during primary dysmenorrhea among adolescent girls in age group of 14-21 years and to determine its effect on the quality of life. The objectives of the study were to determine pain in musculoskeletal regions during menstruation, to determine the severity of musculoskeletal pain during menstruation, to determine its effect on the quality of life. Based on the inclusion and exclusion criteria, the study was conducted on mid and late adolescent girls of age between 14 to 21 years. The survey consisted of 15 questions related to musculoskeletal pain and menstruation. The intensity of pain was measured using the NPRS (Numeric Pain Rating Scale). To investigate the regions of musculoskeletal pain Nordic Questionnaire was used. The graphs, tables and data was recorded using the Microsoft word and Microsoft Excel respectively.

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5. Conclusion

The study concluded that majority of girls were having musculoskeletal pain during menstruation. The pain was predominantly present in the lower back followed by hip and thighs. It was also concluded that most of the female students face difficulty in doing their daily activities and remain absent from school/college during menstruation.

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