Original Article

Prevalence Of Selected Symptoms Of Dysmenorrhea Amoung Adolescent Girls Residing At Nursing Hostel

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Abstract

Background: Dysmenorrhoea refers to the menstrual cramps that usually a female undergoes before or even during menstruation. This common problem interferes in between their daily activities in numerous ways like being absent for work, lack of concentration or may be even activity intolerance. Dysmenorrhoea is also associated with symptoms other than pain like, fatigue, weakness, nausea and diarrhoea which mostly effects adolescents during their lifetime specially in academic period.

Objectives:
1. To assess the symptoms of dysmenorrhoea among adolescent girls residing nursing hostel.
2. To find the association of symptoms of dysmenorrhoea with selected socio demographic variables.

Materials and method:
A descriptive study approach was used for this study. The study was conducted in selected nursing students residing at the nursing hostel of KIMDSU, Karad. Non probability purposive sampling technique was used to select 60 students from nursing hostel. Informed consent was taken from each participant after explaining the objectives of the study. Data was collected using symptoms questionnaires for dysmenorrhoea. The data was later tubulated and calculations were done using descriptive and inferential statistics.

Result: The result shows that majority students had severe pain i.e., 85% (51), 73% of them felt fatigue regularly, 70% (42) of them felt nausea, 52% (31) of them had diarrhoea sometimes, 35% (21) sweated sometimes and often felt weakness. Study also revealed the factors that were relatable to dysmenorrhoea were age of menarche, length of menstrual cycle, days of menstrual flow, family history having dysmenorrhoea, treatment for dysmenorrhoea, reasons for not taking any treatment and finally how it impacted on daily life for the selected adolescent.

Conclusion: The study shown that adolescent girls staying in hostel faced symptoms of dysmenorrhoea like pain, fatigue, weakness, nausea, and diarrhoea. These symptoms of dysmenorrhoea affected them in their daily life and academic presence as per their severity they faced. The importance awareness for female reproductive health can be suggested by the study findings

Key words: Dysmenorrhoea, symptoms, adolescent girls.

INTRODUCTION:

The meaning of dysmenorrhoea in Greek is "painful menstruation", menstrual problem is most found in adolescent girls. Dysmenorrhoea is characterized by cramping in lower abdomen that may radiate to lower back and upper thighs which is commonly associated with nausea, headache, fatigue, and diarrhoea.[(1)] There are two types of dysmenorrhoea: Primary dysmenorrhoea which is cramping pain caused by prostaglandins that usually occurs before or during pain and secondary dysmenorrhoea which is caused by a disorder in the reproductive organs.[(2)] Usually, prevalence of primary dysmenorrhoea is estimated to have in 45% -94.4% of women around the world and of different age groups. Studies have shown that dysmenorrhoea is affected by factors like young age, low body mass index, smoking, early menarche, long menses, premenstrual syndrome, pelvic inflammation, mental disorder, and pervious sexual attacks. [(3)] It has shown that dysmenorrhoea (primary or secondary) affects women's daily living, influencing their productivity in work or studies. The severity is commonly accompanied by anxiety, depressed mood, and irritability, may result in female students decreased academic performance and social dysfunction. [(4)] In India, dysmenorrhoea is estimated to be present in about 50%, in which the severity of the symptoms rises in school or work absenteeism in 15% and mild forms requiring no medication or consumes over the table analgesics occasionally is about 30%. [(5)]

As a result, an effort was made to assess the symptoms of dysmenorrhoea like pain, fatigue, weakness, nausea, and diarrhoea among college adolescents' girls staying in hostel.

METHODS:

A descriptive survey approach was used for the current study. The study was conducted in selected girls' hostel of KIMSDU, karad, Maharashtra. The students residing in hostel were given symptoms assessment questionnaires using google forms. 60 students were selected using non-probability sampling technique. Formal permissions were collected by the principal of the institution and rector of the hostel. Informed consents were taken before conducting the study from the hostel students.

The inclusion criteria for the study were adolescent girls who have dysmenorrhoea and regular menstrual cycle. The exclusion criteria for the participants with chronic gynaecological disorder.

The data was collected using socio demographic data like age, body mass index, dietary pattern and included menstrual variables like age of menarche, length of menstrual cycle, duration of period, family history of dysmenorrhoea, treatment taken for dysmenorrhea, impact of dysmenorrhea and reason for not taking medication.

The tool contained questionnaire that had options to reveal the intensity of symptoms of dysmenorrhea which includes pain, fatigue, weakness, sweatiness, nausea, and diarrhoea. In which for pain numerical pain scale was used. In case of fatigue the FAS (fatigue assessment scale) was used.

Permission was taken by the Institutional Ethical Committee of Krishna Institute of Medical Sciences "Deemed to Be "University, Karad to initiate the research (protocol number: 264/2020-2021)

60 selected participants from the hostel were asked to fill the google form online that contained socio demographic Performa including menstrual characteristic and to select the severity of symptoms of dysmenorrhea they faced during the first day of their menstruation.

The data was then organized, tabulated, and analysed by using descriptive and inferential statistics.

RESULTS:

Table 1: Distribution of frequency and percentage of participants according to socio demographic variable. N=60

Demographic Variables	Frequency	Percentage
Age (in years)		
1.19	7	12%
2.20	20	33%
3.21	19	32%
4.22	14	23%
BMI		
1.Underweight	14	23%
2.Normal	37	62%
3.Overweight	9	15%
4.Obese	0	0%
Dietary Pattern		
1. non-Vegetarian	56	93%
2.Vegetarian	4	7%
Age Of Menarche (in years)		
1.Between Age 10-12	15	25%
2. Between Age 13-15	45	75%
Length of menstrual cycle		
1. 25 days	2	3%
2. 28 days	38	63%
3. 35 days	9	15%
4. 30 days	9	15%
5. more	2	3%
Duration of Menstrual Flow		
≤ 3 days	5	8%
4-6 days	47	78%
5-7 days	8	13%
Family history of dysmenorrhoea		
Yes	16	27%
No	36	60%
Maybe	8	13%
Treatment taken for dysmenorrhea		
Yes	7	12%
No	53	88%
Impact of dysmenorrhoea		
Activity intolerance	10	17%
Sleep disturbance	16	27%
Course absenteeism	21	35%
Lack of concentration in classes	13	22%
Reasons for not taking any treatment		
Not to decrease the bleeding	6	10%
To avoid any side effect	51	85%
Parents don't allow	3	5%

Table 1 shows frequency & percentage distribution according to selected socio demographic variables majority (33%)

adolescent girls belong to age of 20 years, (62%) had body mass index within normal range, 93% of them were non-vegetarian. 75% had menarche between the age 13-15 years, 63% had reported of 28 days menstrual cycle, 78% stated that they had 4 to 6 days of menstrual flow, 60% had no family history of dysmenorrhea, (88%) never took treatment and (85%) was afraid of side effect if they took treatment. Regarding impact of menstruation ,35% of the students stated about course absenteeism, followed by sleep disturbance, lack of concentration and activity intolerance that is 27%, 22% and 17% respectively.

Table 2: Distribution of Frequency and Percentage of Participants According to symptoms. N=60

Symptoms	Number of participants	Percentage
Pain		
1. No pain	0	0
2. Mild	0	0
3. Moderate	9	15%
4. Severe	51	85%
Fatigue		
1. Never	0	0
2. Sometimes	4	7%
3. Regularly	44	73%
4. Often	12	20%
5. Always	0	0
Sweat		
1. Never	9	15%
2. Rarely	16	27%
3. Sometimes	21	35%
4. Often	13	22%
5. Always	1	2%
Weakness		
1. Never	0	0
2. Rarely	13	22%
3. Sometimes	16	27%
4. Often	21	35%
5. Always	10	17%
Nausea		
1. Never	0	0
2. Rarely	0	0
3. Sometimes	42	70%
4. Often	15	25%
5. Always	3	5%
Diarrhoea		
1. Never	8	13%
2. Rarely	14	23%
3. Sometimes	31	52%
4. Often	6	10%
5. Always	1	2%

Table No.2 shows that 85% of participants had severe pain, 73% of the participant felt fatigue regularly. 35% of the participants reported that they had sweating sometimes. 35% of the participant often felt weakness. 70% of the participant felt nausea sometimes during their menstruation. 52% of them had diarrhoea sometimes.

Regarding the association of socio-demographic data with selected symptoms of dysmenorrhoea, it was found that only pain was significantly associated with family history with p value of 0.031 which is less than 0.05. Excluding pain, no other symptoms were associated with any socio-demographic data.

DISCUSSION:

Description of the socio-demographic data

The adolescent girls were aged between 19 to 22 years in which most of them from 20 years of age (33%), followed by 21 years (32%),22 years (23%) and 19years (12%). Maximum hostels girls had normal BMI that is 37 (62%) of them whereas 14% and 9% were underweight and overweight respectively.

Most of the participants were non vegetarian (93%). Maximum participants had their menarche between the age 13 to 15 years old (75%) and rest had between age of 10 to 12 years (25%).

Major girls had length of menstruation cycle of 28 days (63%), whereas 15% of them had 30 and 35 days and only 3% had 25 days and more than 35 days.

In context of the duration of menstruation, 78% of them had their menstruation from range of 4-6 days though only 13% and 8% of them had less than 3 days and 5-7 days of menstruation.

The above findings were found supported by a study conducted by Vlachou E et al which had mean BMI was 22.66±4.33kg/m^2. In the study the mean age of menarche 12.74 ± 1.57 years, the mean duration of menstruation was 5.85 ± 1.23 days and the average length of menstrual cycle was 28.76±3.4 days. [(4)] The results have used similar demographic data to the current study in respect of BMI, menarche age, length of menstrual cycle and menstruation duration. Although, in the present study mean average was calculated for the collected data.

Another similar study done by Acheampong k et al found that 70.8% of study participants were between age 16-19 years old, 57.5% of girls had age of menarche between 13-15 years,86.2% of them had more than or equal to 21 days of menstrual cycle, major of them (90.9%) had more than or equal to 3 days of menstruation. Moreover, 71.9% had no family history of dysmenorrhoea. [(6)] Regarding family history,88.2% out of 321 participants had family history of dysmenorrhoea and 85.5% of them had no history related to it. [(7)] In the present study 60% of the adolescent girls had no family history of dysmenorrhoea. Whereas 16% of them had history and 8% of them was sure of any such history.

In most of the participant didn't opt for any treatment for dysmenorrhea and only 7% of them went for treatment for dysmenorrhoea. The reason behind not taking medications were founded that 6% of them feared that it would affect their bleeding pattern, parents didn't allow in some case (3%) and 51% students reported that they feared of any adverse reactions. Although, many studies have shown that the participants used pharmacological ways or other non-pharmacological remedies to cope up with the symptoms of dysmenorrhea [(i.e.,8,9,10,11,12).]

Majority of the students (35%) reported course absenteeism as an impact of dysmenorrhoea, while for other it impacted in their daily life activities, disturbed sleeping pattern, and affected their concertation that is for 17%, 27% and 22% of the participants respectively. These findings are consistent with a study done by Abdel-Salam dm et al reporting 85% of the participant having impact of dysmenorrhoea in daily activities, 48% in concentration, 44.9% in social activities, 38.9% in domestics activities, 34% in university attendance and 29% in daily exercise. [(7)]

Distribution of symptoms of dysmenorrhea

In the current study, 60 participants were selected who were facing severe and moderate pain based on numeric pain scale that is 85% and 15% students respectively.

Result was supported by a study conducted in a university, among the Spanish female students 38.8% of them reported menstrual pain as severe and 58% as moderate. [(13)] Similarly, in another study conducted among college girls ,84.2% students reported severe menstrual pain, 36.6% moderate and 29.9% mild pain. [(14)] Although in present no participants reported for mild or no pain.

Apart from pain in the present study, other symptoms were also included. 73% of the hostel girls reported for that they regularly felt fatigue (73%), but only 7% and 20% stated that they felt fatigue sometimes and often respectively. Even though other research study goes in depth of the parameters of fatigue related to dysmenorrhea. Certain study showed that 81% out of 321 participants of Jouf University reported of fatigue as associated symptoms of dysmenorrhea. [(7)] 51.51% reported fatigue in a study conducted in Ethiopia. [(15)]

The other symptoms included in the present study was sweat, in which majority students (35%) had it sometime, followed by rarely and often sweating i.e.,27% and 25% respectively and only 15% and 1% reported never and always sweated during their menstruation. For weakness, 35% of the participants complained that they often felt weakness and only 22% and 27% felt weakness rarely or sometimes respectively. In Ethiopia, 63.5% felt weakness during menstruation. [(16)] 70% reported weakness in a selected Chinese college. [(17)] However, no other relevant study was found for sweating as a symptom of dysmenorrhoea.

Lastly the other two symptoms were nausea and diarrhoea, for which, the data in current study shows that for both symptoms majority of the students had sometimes nausea and diarrhoea that is 70% and 52% respectively. However, previous research only mentions the frequency of nausea and diarrhoea as associated symptoms of dysmenorrhoea that is 90% participants had nausea and 48% participants had diarrhoea along with constipation or both in study done in King Khalid University, Saudi Arabia. [(18)]

Association between symptoms and selected socio-demographic variables

The findings suggested that only pain and family history was significantly associated. The p value for pain and family history was 0.031. Although the other symptoms have no association with socio-demographic variables. The p value being grater that 0.05 for the rest symptoms, it clearly depicted that there is no association.

An association between pain and family history of dysmenorrhoea has also been found in other studies [(i.e., 6,19,20).] Thus, it can be suggested adolescent girls having family history of pain during menstruations have higher chance to suffer from pain during their menstruation cycle.

The current study had its own sets of limitations. Starting with the fact that this study only included the adolescents' girls staying in nursing hostel. The study did not include any factors that might affect the normal menstrual flow which was seen in previous studies like the current research matter. The present study also excluded other symptoms that are associated with dysmenorrhoea like headache, constipation etcetera. However, a proper definition that included all the symptoms of dysmenorrhoea is not yet available Given that the study included the nursing students which is related to medical field, the study did not include the types of coping up remedies into the questionnaires. Considering the above-mentioned limitations, a further cross section study can be conducted that can included these limitations.

CONCLUSION:

The present study shown the proportion of students having symptoms associated with dysmenorrhoea apart from pain. The symptoms that are an unavoidable and caused inference in normal life for a female specially for the students. It also depicted the intensity of the symptoms that each student suffers during their menstruation and how they impact in their daily life like unable to attending college, concentrate in studies and many others. The study revealed that it is important to given health education providing knowledge about the managements of dysmenorrhoea among students, parents and college authorities to throw light on importance of reproductive health of all females both students and staffs.

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The institutional ethical committee of Krishna Institute of medical science "deemed to be university", karad issued an ethical clearance certificate (Ref. No. KIMSDU/IEC/02/21)

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