

## Impact of Dysmenorrhea on Quality of Life of Adolescent Girls of Chandigarh

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### Abstract

**Objective:** A study was conducted to ascertain the impact of dysmenorrhea on quality life of adolescent girls of Chandigarh.

**Methods:** Multistage stratified sampling was done and 5 sectors, 5 villages, 5 slums were selected by lottery method. Then from each area 20 respondents were selected by simple random sampling. A Self-designed interview schedule was used to collect data from 300 Adolescent girls (11-18 years) of Chandigarh during January-May 2012. Demographic & family profile, Menstrual history, symptoms of dysmenorrhea, effect of pain on daily activities, Visual analogue scale (VAS) was used to document severity of pain.

**Results:** Majority of girls 184 (61.33%) reported dysmenorrhea. Some of the girls 50 (27%) told that it interfered with their tolerance to stand for long periods whereas one fourth 45 (24.45%) girls said that dysmenorrhea interfered with going to school/office. VAS scale showed that 271 (90.34%) of the girls felt unhappy during menstruation.

**Conclusion:** Dysmenorrhea profoundly affected the Quality of life of adolescent girls.

**Keywords:** Dysmenorrhea; Adolescent girls; Chandigarh

### Introduction

Painful menstruation, a common gynecologic problem, significantly affects the routine life of most of the affected girls. Most females experience some degree of pain and discomfort during menstrual period, which can impact on their daily activities, and disturb their productivity at home or at their workplace Discomfort of the menstrual pain affects daily as well as professional life the affected women [1]. Dysmenorrhea is one of the common problems experienced by most of the adolescent girl and it is an important issue to deal with because of the following reasons.

- Adolescent girls form an important vulnerable sector of population that constitute about one-tenth of Indian population.
- Dysmenorrhea is a common gynecological condition that is under diagnosed and undertreated.
- Dysmenorrhea is the most common of gynecologic complaints that affects most of female adolescents today and represents the leading cause of periodic college/school absenteeism among that population.

### Objective

To ascertain the impact of dysmenorrhea on routine life of Rural, Urban, Slum girls of Chandigarh.

### Methodology

#### Study population

Adolescent girls (11-18 years) of Chandigarh, who already had their menarche.

#### Study Design

##### Multistage stratified sampling

**Sample size and sampling technique:** A total of 300 respondents was selected, 100 from each area (Sectors, Villages, Slums) as there are 56 sectors out of which 5 were selected by lottery method that are Sector 56, Sector 46, Sector 32, Sector 22, Sector 29, from total 23 villages in Chandigarh, 5 were villages selected from lottery method that were village Daria, Palsora, Khuda Ali Sher, Kajheri, Kaimbala and from 20 slums 5 selected were Colony no.4, Colony no.5, Bapudham, Sanjay Labour Colony, Pandit Colony. Then from each area 20 respondents were selected by simple random sampling.

**Inclusion criterion:** Girls who had attained menarche.

**Exclusion criterion:** In whom menstruation has not started yet, whose parents have not given consent and. Who are mentally handicapped were excluded.

#### Study period

1 January 2012-10 May 2012.

### Data collection tool

Self-designed interview schedule. Which included following parts.

Demographic profile, Family profile, Menstrual history, Symptoms of Dysmenorrhea, Effect of pain on your daily activities, Faces scale, Practices regarding dysmenorrhea, Beliefs about menstruation.

### Pilot Study

A pilot study was conducted on 15 adolescent girls in the age group of 11-18 years, 5 girls from sector, 5 from slum and 5 from village. Results of pilot study are not included in this study.

### Data validation and data analysis

Data validation was conducted for all the data collected. This included crosschecking and matching the data from hard copies in to soft copies. Analysis has been done using percentage, mean, chi square test. Findings of the study has been presented in the form of contingency tables, bar/pie-graph.

### Ethical consent

Informed verbal consent has been taken from the parents/guardians of the girls prior to recruitment in the study and written consent has been taken from the respondent herself. All possible information regarding the study was given. Confidentiality of the study subjects will be maintained.

### Result

Majority of girls 184 (61.33%) reported dysmenorrhea. Out of these 198 girls had regular and 102 had irregular menstrual cycle. There is a statistically significant association between the two variables. (Table 1)

| Dysmenorrhoea        | Present | Absent | Total | P Value |
|----------------------|---------|--------|-------|---------|
| Menstrual regularity |         |        |       |         |
| Regular              | 112     | 86     | 198   | 0.025   |
| Irregular            | 72      | 30     | 102   |         |

**Table 1:** Association between dysmenorrhea and menstrual regularity.

A statistically significant association was also noted between dysmenorrhea and their positive family history (0.0005). The most common physical symptom reported was backache, which was experienced by 107 girls, 22 girls complained of nausea; 17 of anxiety, only 7 of chest pain and 3 for painful breast (Table 2). Backache (39), stomach ache (49), nausea (49), irritability (17), skin disorders (16) are most commonly experienced by the urban adolescent girls. There girls in the slums had diarrhea(9) and anxiety (9) more as compared to that of other areas girls and rural girls have the problem of general body ache(32) and tension(9) more as compared to other areas.

Some of the psychological symptoms experienced by the girl are shown in Table 3. 46 girls said they remain irritated to mild or severe

extent. 16 girls remain tensed because of the limitation to their activity during menstruation because of dysmenorrhea, which affects their routine activities of study and playing etc.

| Physical Symptoms  | Type of area |            |           |
|--------------------|--------------|------------|-----------|
|                    | Urban(100)   | Rural(100) | Slum(100) |
| Headache           | 18           | 14         | 13        |
| Backache           | 39           | 37         | 31        |
| General aches      | 26           | 33         | 21        |
| Stomach cramps     | 49           | 47         | 42        |
| Painful breast     | 1            | 1          | 1         |
| Nausea             | 6            | 4          | 12        |
| Diarrhea           | 7            | 2          | 9         |
| Cold sweats        | 4            | 2          | 3         |
| Hot flashes        | 3            | 2          | 3         |
| Skin disorder      | 12           | 12         | 11        |
| Increased appetite | 2            | 3          | 1         |

**Table 2:** Common physical symptoms of dysmenorrhea experienced by respondents.

| Psychological symptoms      | Type of area |            |           |
|-----------------------------|--------------|------------|-----------|
|                             | Urban(100)   | Rural(100) | Slum(100) |
| Anxiety                     | 5            | 3          | 9         |
| Irritability                | 17           | 11         | 18        |
| Difficulty in concentrating | 3            | 2          | 4         |
| Insomnia                    | 5            | 4          | 2         |
| Forgetfulness               | 1            | —          | 1         |
| Tension                     | 4            | 9          | —         |

**Table 3:** Common psychological symptoms of dysmenorrhea experienced by respondents.

Fifty girls (27%) told that dysmenorrhea interfered with their tolerance to stand for long periods and 24.45% girls said that it interfered with going to school/office (Figure 1).

VAS scale showed that 271 (90.34%) of the girls felt unhappy during menstruation. 29 (9.67%) girls said that they don't feel unhappy because of any problems related to menstruation. When compared the views of girls according to area, in all the three areas maximum number of girls responded in the grade "hurts little bit" (Figure 2).

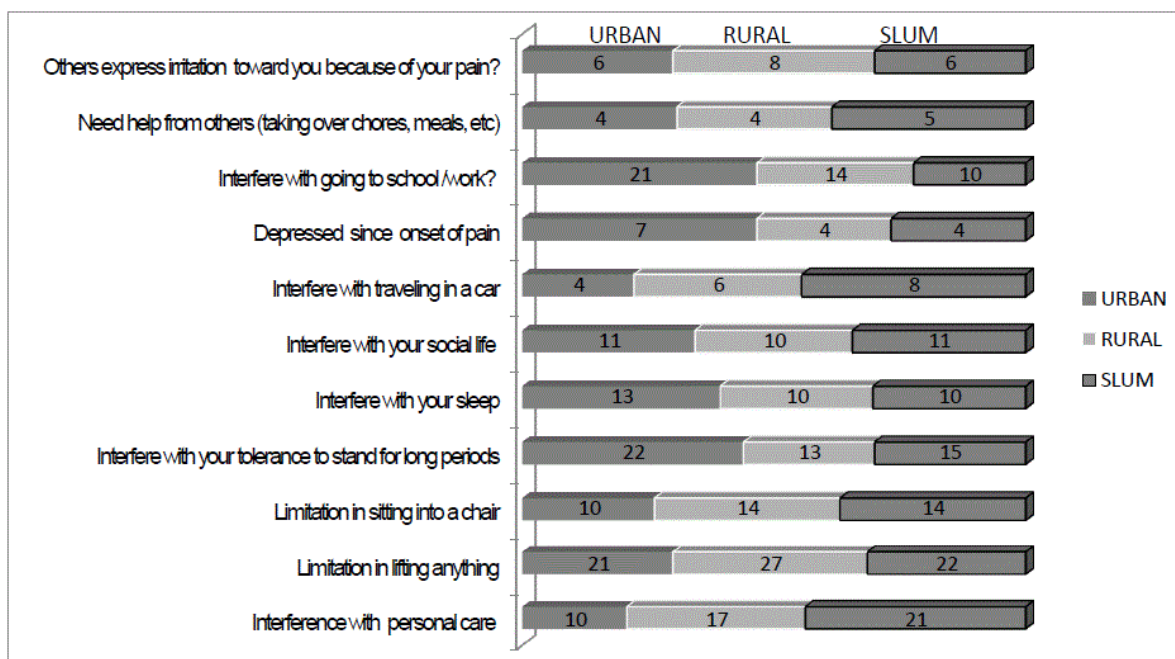


Figure 1: Interference with daily activity due to dysmenorrhea.

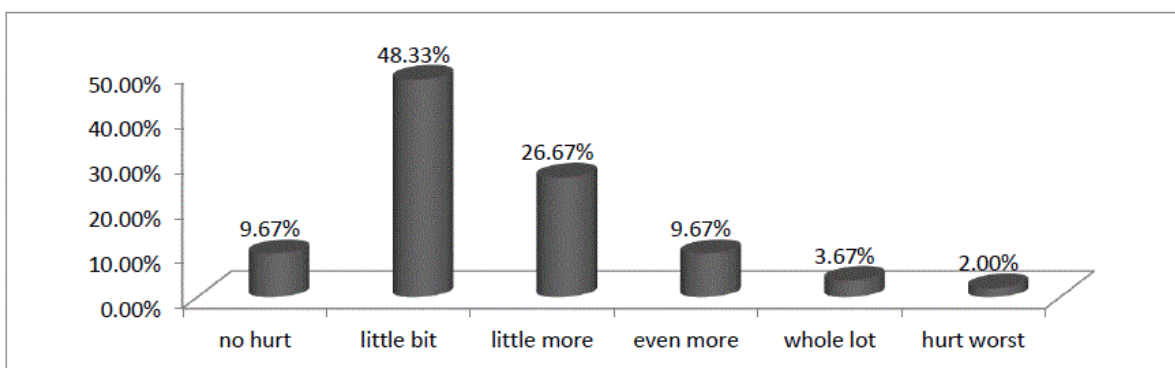


Figure 2: Grading of dysmenorrhea on faces scale.

## Discussion

Dysmenorrhoea is one of the most common problems affecting majority of adolescent girls. It substantially compromises the overall quality of life of sufferers almost like a chronic illness added to the constant embarrassment and disruption of routine life. Present study showed an overall prevalence of 184 (61.33%) for dysmenorrhea in girls aged 11-18 years. The finding is comparable to prevalence of 59.7%, 65% [2,3] but higher than that done by Avarsala and Panchangam in India that was 54% [4].

In Our study whereas some girls had similar degree of pain sensation in following cycles, the nature of pain of some of the girls had changed in the following cycles. Views of the few of the girls' regarding change in the sensation of pain reflect these aspects. Quite

vidently, one of the girl said that “shuru shuru mein to bahut taklif hoti thi, main inn dino school bhi ni jati thi na hi kahi bahar jati thi prr ab utna dard ni hota”. In stating pain was so severe that I used to avoid going to school or some other places (outside) but now pain is not that much.

There was a statistical significant association between dysmenorrhea and positive family history (p value=0.00014). Our study reported that there was a statistically significant correlation between type of area and interference with personal care (0.033). Frequency of restriction of activity like lifting a heavy material was in 70 (38%), sitting in to a chair in 38 (20%) travelling in a bus, car in 18 (9.78%), standing for long hours were in 50 (27%), interference with going to school in 45 (24.45%), interference with social life in 32 (17.39%). It was found that activity limitation due to pain is more among the urban and rural girls

as compared to slum girls, which is comparable to a similar study by Avarsala et al. [4] which stated total sickness absenteeism (28-48%), socio economic losses, and perceived quality of life losses are more prevalent among girls in urban areas than in girls in rural areas. Girls in rural areas resort to physical labor and other natural methods to obtain relief while the girls in urban areas are mainly depending on medications. Study done by Sharma et al. [5] reported similar frequency of school or work abstinence that was 17.24% from school and 25% from work.

However some studies reported high frequency of abstinence in a range of 34-47.9% Sundell et al. [6] respectively. Study conducted by Al Kindi et al. [7] reported a high frequency of school absenteeism in 45%, limited social activities in 25% respondents.

Present study revealed that 23 (7.6%) girls seek help from others for carrying out some activities (taking meal, lifting heavy weight etc. Restriction of above activities was caused mainly by two factors-physical discomforts and physiological stress. Among the physical symptoms were stomach ache 138 (46%), nausea 128 (42.66%), backache 107 (35.66%), general aches 79 (26.33%), headache 45 (15%), skin disorders 42 (14%), diarrhea 17 (5.6%).

Psychologically the girls suffered from a wide spectrum of symptoms ranging from irritability 141 (47%), tension 16 (5.33%) and anxiety, 17 (5.6%). Our result indicates that variations are common in symptoms appearing in dysmenorrhea. Dysmenorrhoea manifesting as abdominal pain or discomfort has been found as the commonest medical problem, the finding being consistent with some other studies Narayan et al. [8]. However, the study reported a high frequency of most common symptoms stomach cramp (78.0%), backache (58.9%) and mood change (56.9%).

Many girls in present study reported having been absent from school due to a cause related to menstruation. Some of the girls added that changing sanitary napkins in the school is embarrassing, and they avoid going to school those days. More than physical absence during menstruation, this study pointed out an important aspect that can affect school performance equally—the quality of presence at school, particularly the attention and concentration in the curricular activities. Lack of small things required for maintaining the menstrual hygiene, like privacy, water supply and waste disposal, have been found as major reasons for absenteeism, though abnormal physical conditions (pain, discomfort, heavy bleeding) are also one. Lack of privacy has been pointed out by other studies also as a major problem El-Gilany et al. [9] and there's conclusive evidence that girls' attendance at school is increased through improved sanitation [10].

Faces scale showed that 271(90.34%) of the girls feel unhappy during menstruation. Even after this only 4.89 (1.63%) girls ever visited physician due to any problem related to menstruation this is because of reason that menstruation, though a natural process, has often been dealt with secrecy. Hence, knowledge and information about reproductive functioning and reproductive health problems amongst the adolescent is poor [11].

However a study on dysmenorrhea in Haryana reported that only 5.3% consulted a physician for menstrual symptoms and 22% self-treated with over-the-counter medicines, 52% reported self-treatment and 7.7% used complementary medicines. Present study showed that only 51(17%) girls presently take some sort of medicine, most commonly being preferred was Mefenamic acid. 99 (33%) girls don't use sanitary pad because of high cost and some sort of allergy from it. Few girls told that it cannot control the heavy flow they have during

menstruation. Similar observation that poverty, high cost of disposable sanitary pads and to some extent ignorance dissuaded the adolescent girls from using the menstrual absorbents available in the market was made in an Indian study [12].

It was found that those who knew about the sanitary pads are likely to use them instead of cloth if they could access and afford it. The disposable pads usually have better absorption, are meant for single use and, hence are considered sanitary. However, with the cloths there is a tendency towards reuse and have the potential of harbouring infection agents that can cause pelvic infections. Proper washing and drying of re-used cloth does minimize the chance of infection, but it was explicit in the study that the drying practices were not optimal as they had to hide the cloth from others view.

There was a Low consultation rate 33 (11.33%) and the time lag in consultation because girls thought that dysmenorrhea gets cured naturally. Women have been found to consider health related morbidities especially reproductive, to be normal and part of their destiny. To this adds on culture of shame and silence. This whole cycle in turn leads to compromising with their health related morbidities in women and affecting their qualitative life in nut shell.

## Conclusion

Discomfort related to menstruation due to pain has a strong impact on their routine life. Backache, stomach ache, nausea, irritability, skin disorders, diarrhea, anxiety, body ache and tension were the common symptoms experienced by the adolescent girls in the study population. They avoid many routine activities e.g. going to school, playing, restriction on diet which all has a effect on their qualitative life. However activity limitation due to pain is more among the urban and rural girls as compared to slum girls. It is therefore justified to say that dysmenorrhea has an impact on quality life of adolescent girls [13-15].

## Limitation

VAS scale was used in questionnaire however more precise methods like menstrual disorder Questionnaire (MDQ) may be used in future study.

## Recommendations

- Hot water bottle use has been found to help a lot in dysmenorrhea, Formal as well as informal channels of communication, such as mothers and peers, need to be emphasized for the delivery of such information
- Further studies are needed to explore more at the qualitative aspects of the effect on the daily activities around menstruation, particularly school attendance.

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