

Prevalence of Dysmenorrhea among Adolescent Girls in North Gujarat: A Cross Sectional Study

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Abstract: ***Background:** Dysmenorrhea is a common gynecological condition with painful menstrual cramps of uterine origin. It is most common gynecological complaints in adolescence and young women in North Gujarat. **Purpose:** This study was planning to assess knowledge, beliefs and source of information regarding dysmenorrhea. **Materials and Methodology:** A cross sectional study was performed among 500 Adolescent girls in North Gujarat to determine the prevalence of dysmenorrhea. A self – questionnaire was used for the same. **Result:** In this study 300 out of 500 adolescent girls were included for investigate prevalence of dysmenorrhea among adolescent girls in North Gujarat. So according to this study, prevalence of dysmenorrhea among adolescent girls in North Gujarat (94.8%). **Conclusion:** Dysmenorrhea is to be highly prevalent among adolescent girls in North Gujarat. Attempt should be made to final out the factors, which cause dysmenorrhea, and it is necessary for us to clarify these factors to improve their quality of life.*

Keywords: Primary Dysmenorrhea, prevalence, adolescent girls

1. Introduction

Primary dysmenorrhea (PD) is defined as painful menstruation in the absence of a pelvic pathology and is one of the most common complaints in young Women^{1,2} Secondary dysmenorrhea is defined as menstrual pain resulting from underlying pelvic pathologies³ Symptoms of PD include cramping, pain in lower abdominal area which may or may not radiate to the lower back and which is accompanied by headache, nausea, tiredness, vomiting, irritability and an overall feeling discomfort⁴

Dysmenorrhea arises during menstrual bleeding owing to lower abdominal pain brought on by menses, and is not a gynecological disorder.⁵ Dysmenorrhea not only causes physical pain, it also affects mental well being and quality of life, leading to work or study stress, and a significant health burden.⁵ despite its high prevalence rate and effect on daily life, 76.1% of women still believe that dysmenorrhea is a natural part of women's menstrual cycle, and only 14.8% believe that treatment is necessary.⁶

Several risk factors affecting dysmenorrhea are (a) Age: older women are generally less likely to experience dysmenorrhea, although the relationship with marital status or childbirth history remain unclear.⁷ Age at menarche: age at menarche is significantly related to the occurrence of dysmenorrhea, and women who demonstrate an earlier age at menarche are more likely to experience more severe dysmenorrhea.⁸

Duration of menstrual cycle: a Nigerian study noted that longer menstrual flow duration is an important predictive factor of dysmenorrhea. Regularity of menstrual cycle: women with irregular menstrual cycles are more likely to have dysmenorrhea⁹

Painful menstruation has been estimated to affect up to 75 % of women between the ages of 17 to 25 yr.¹⁰ Dysmenorrhea

can be primary, which is define as pain without any clear pathological gynecological origin.¹¹

Hypothesized pathways include endometrial release of large and imbalanced amounts of prostanoids and possibly eicosanoids during the menstrual cycle, which causes the uterus to contract frequently and dysrhythmically ultimately causing pain during menstruation.¹² Secondary dysmenorrhea is caused by obvious underlying pelvic pathology including endometriosis, pelvic inflammatory disease, ovarian cysts, adenomyosis and uterine myomas.¹³

Hygiene related practices of women during menstruation are of considerable importance, as it has a health in terms of increase vulnerability to reproductive tract infections (RTI). The Interplays of socio –economic status, menstrual hygiene practices and RTI and its complications and often the infection is transmitted to the offspring of the pregnant mother.¹⁴

Menstruation is surrounded by various psychological and religious barriers due to lack of knowledge about the scientific process of menstruation.¹⁵ Many girls residing in slum areas are unaware of what actually happens during menstrual cycle. Although menstruation is a natural process. It is linked with several perceptions and practice within the community, which sometimes may result in adverse health outcomes.¹⁶

During menstrual period a woman is regarded most vulnerable for developing any kind of reproductive tract infections, urinary tract infections and various sexually transmitted diseases. Menstrual hygiene management should be an imperative part of healthcare. The united nations define adequate menstrual hygiene management as “women and adolescent girls using a clean menstrual management.

Material to absorb or collect blood that can be changed in privacy as often as necessary for the duration of the menstruation period, using soap and water for washing the

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body as required and having access to facilities to dispose of used menstrual management materials.¹⁷ Fraser and Cooper reported that seventy-five percent (75%) of menstruating women experience dysmenorrhea, making it the leading cause of incapacitation in adolescents. International Association for the Study of Pain posited that dysmenorrhea affects forty to ninety percentage (40-90%) of women.

Dysmenorrhea is a symptoms complex which affects quality of life and reduces productivity of women.¹⁸ Fifty percentage (50%) of females missed school or work at least once due to pain associated with menstruation.¹⁹

Primary dysmenorrhea affected women experience sharp intermittent spasmodic pain usually concentrated in the supra pubic area. Pain may radiate to the back of the legs or the lower back, mood changes, fatigue, headache, nausea and edema during menstruation are reported with dysmenorrhea (20-25). Negative consequences of dysmenorrhea may include impaired quality of personal and social life, mood disorder, sleep disturbance and limitation of daily activities (23, 24-26). Pain usually begins somewhere between several hours before and a few hours after the onset of menstrual bleeding. Symptoms peak with maximum blood flow and usually last less than one day, but pain may continue up to 2 to 3 days (23, 24-26). Symptoms are comparatively reproducible from one menstrual period to the other (27, 28).

The exact cause of the disorder is not completely understood. However, there are many known factors that play significant roles in the pathogenesis of dysmenorrhea. The most important are: excessive uterine contractility, disturbance in uterine blood supply, increased synthesis of prostaglandins in (PG) and anatomical abnormalities of the female reproductive tract (29-30).

2. Materials and Methodology

Inclusion Criteria (Primary Dysmenorrhea)

- Girls aged 17-25 years
- Onset of pain within 6-12 hours after onset of menses
- Lower back pain.
- Medial and anterior thigh pain
- Individuals who follow the commands
- Cramping in lower abdomen
- Pain radiating down the legs
- Nausea, vomiting, diarrhea, fatigue, mood swings

Exclusion Criteria

- Girls having any endocrine disorders
- Girls having any chronic disease
- Girls undergone major surgery

Procedure of Data Collection

A cross sectional study was conducted after the ethical approval for this study was taken from the institutional committee of Nootan College of Physiotherapy, Sankalchand Patel University, Visnagar, Gujarat. The study was conducted was 500 adolescent girls in North Gujarat. 17 to 25 years of age adolescent girls were included in the study for digital and quickly collection of the information,

questionnaire was prepared in Gujarati and English both languages with the help of Google form.

In this study Google Form was used. Google form link was shared through social media like facebook, whatsapp and instagram. It comprised 15 questions and some personal information which included consent form and aimed at collecting data from adolescent girls from North Gujarat. Participants who were willing to participate in the study and those with age between 17-25 years were included who also having primary dysmenorrhea symptoms.

3. Result

Total 300 subjects participated in this study out of 500, data analysis of all the 300 Subjects had been carried out as per the procedure. 69% of graduate girls, 13.3% high secondary school girls, 12.7 % post graduate female and only 5 % secondary school girls participate in this study. Were 77.7 % unmarried girls, and 22.3% married females willingly participate in this study.

25% of girls having sometimes, 22% of girls having often, 21% of girls having always, 13% of girls having never, 19% of girls having rarely, feeling irritable, easily, agitated, and an impatient a few days before period. 35% of girls having always, 31% of girls having often, 17% of girls having rarely, 17% of girls having sometimes, cramps that begin on the first day of period.

23% of girls having sometimes, 22% of girls having often, 19% of girls having always, 19% of girls having never, 17% of girls having rarely, feeling depressed for several days before periods. 38% of girls having often, 28% of girls having always, 12% of girls having rarely, 22% of girls having sometimes, abdominal pain or discomfort which begins one day before period.

27% of girls having often, 12% of girls having always, 33% of girls having never, 16% of girls having rarely, 12% of girls having sometimes during the first day of period and feel like curling up in bed, using a hot water bottle on abdomen, or taking a hot bath. 34% of girls having often, 14% of girls having always, 16% of girls having never, 13% of girls having rarely, 23% of girls having sometimes, beginning on the first day of my period and have pain which may diminish or disappear for several minutes and then reappear.

51% of girls having never, 23% of girls having rarely, 13% of girls having sometimes, 8% of girls having often, 5% of girls having always, headache for a few days before period.

45% of girls having often, 18% of girls having always, 13% of girls having never, 11% of girls having rarely, 13 % of girls sometimes, acne /mood swings before/during period. 33% of girls having often, 15% of girls having always, 16% of girls having never, 16% of girls having rarely, 20% of girls having sometimes, the pain and period are not intense but continuous dull aching.

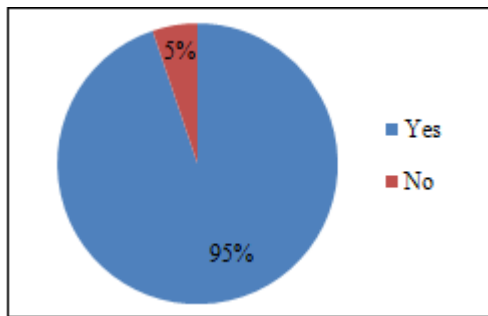


Figure 1: Prevalence of Dysmenorrhea

Present study shows that, prevalence of dysmenorrhea among adolescent girls in North Gujarat is 94.8%. Fig.1 Out of which (94.8%) adolescent girls were having a menstrual pain and only 5.2% adolescent we're not having menstrual pain. They were not suffering from menstrual pain.

4. Discussion

This study showed that it was a common health complaint among adolescent girls. It was consistent with previous studies that also reported that primary dysmenorrhea was a common problem⁽³¹⁾ (Akhavanakbari&Ahangar – Davoudi, 2010; Nazarpour, 2010; Omidvar and Begun, 2012; Ortiz, 2010; polat et al,2009). A cross sectional descriptive survey was conducted by Dhruvi Patel (Intern of Nootan college of Physiotherapy) in North Gujarat on 500 Adolescent girls, to evaluate the menstrual characteristics.⁽³²⁻³⁴⁾

The study finding showed that most of the participants (60 %) 300 had started menstruating between 17 to 25 years of age.⁽³⁵⁾ Our observation is consistent with previous studies reporting dysmenorrhea occurrence between 45 to 85 % from India and other countries.⁽³⁶⁻³⁸⁾ (Loto2008, okusanya, 2009; Agarwal & Agarwal, 2010; Alaettin, 2010; Yasir, 2014).

Majority of the Adolescent girls under study had experienced dysmenorrhea, that is 300 out of 500 (60%) as show in my study. thus it is most common problem in adolescent girls.⁽³⁹⁾ Results of the current study showed that higher intensity of dysmenorrhea was associated with younger ages, and some previous studies confirmed that the intensity of Primary Dysmenorrhea decrease as age increase⁽⁴⁰⁻⁴¹⁾ (Juang et al.,2006; Lindh et al.,2012; Okoro et al.,2013; Tavallaee et al., 2011).

Meanwhile, results of cross-sectional study on 17 to 25 years old North Gujarat adolescent girls showed significant positive association between heaviness of primary dysmenorrhea symptoms.⁽⁴²⁻⁴³⁾ According to the results of this study include history of primary dysmenorrhea, age, education, marital status and factor affecting of primary dysmenorrhea.⁽⁴⁴⁾ As with all studies, present study has some limitations for instance due to the cross-sectional design, it is not possible to make the casual inferences about the association between independent variables and intensity of primary dysmenorrhea.⁽⁴⁵⁻⁴⁸⁾

The 15 items questionnaire first underwent a correlation analysis to examine the reliability of the items over the 2-week period of time.⁽⁴⁹⁾ All items yielded reliability coefficient equal to or greater than 0.600. On the all 15 items

were instructed to indicate the degree to which type experience the symptoms by selecting one of five response choices. [Never (N) , Rarely (R), Sometimes (S) , Often (O), Always (A)].⁽³⁰⁻³⁵⁾

On the 15 items are characteristic of primary dysmenorrhea. The type of dysmenorrhea indicates the order of scoring for each item. On the 15 items were instructed to read the descriptions of menstrual discomfort and select the most closely first their experience.

Several research results suggested that most adolescent with dysmenorrhea do not consult a doctor .our finding was not different which showed only 8.7% of adolescent with dysmenorrhea reported to have consulted a physician for their menstrual pain and taken medication prescribe by physician.⁽³⁶⁻³⁸⁾ Finally an earlier study reported that the treatments of dysmenorrhea includes but not limited to the use of a heating pad, which supports our finding where 27.3% of the dysmenorrheic adolescents use a hot application.⁽³⁹⁾

Majority (60%) of the participants experienced menstrual pain. The quality of life during dysmenorrhea is comparatively poor among dysmenorrheic girls, loss of physical activity and work satisfaction, personal relationships, confidence& concentration at work also suffers.⁽⁴⁰⁾

5. Conclusion

The prevalence of primary dysmenorrhea was high and age, education, marital status, 15 items are characteristics of primary dysmenorrhea among adolescent girls of North Gujarat.

Researcher and healthcare providers should consider primary dysmenorrhea as a highly prevalent gynecological complaint studies should give due attention to the prevalence of primary dysmenorrhea in adolescent girls.

Primary dysmenorrhea was a common problem among adolescent girls and brought a number of physical and emotional symptoms. Majority of girls were suffering from pre –menstrual symptoms indicating the magnitude of problem and thus, need an appropriate intervention through a change in lifestyle. Dysmenorrhea has a negative effect on health-related quality of life. It is leading cause of school and college absenteeism. Attempt should be made to final out the factors, which cause dysmenorrhea, and its necessary for us to clarify these factors to improve their quality of life.

Appropriate counseling and management should be instituted among adolescent to improve their performance. Information, education, support should also be extended to parents, school peer, leaders, and hostel administrators in order to address the reproductive health needs to prevent unnecessary suffering of the students during menstruation.

Further recommendations of the study:

- 1) Carry out the study with a large sample size.
- 2) To increase the age group.
- 3) Further study with secondary dysmenorrhea.

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