

Prevalence of Pelvic Girdle Pain During Menstruation and Its Co-Relation with Menstrual Hygiene Products

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Abstract

Background and Purpose: Menstruation and menstrual hygiene females vary among females. Unhygienic menstrual practices sometimes result in adverse health outcomes during menstruation in women. During menstruation, women have many symptoms. Pelvic girdle pain is one of the musculoskeletal symptoms during menstruation. Pelvic girdle pain affects the activity of daily livings and restricts movement. The purpose of this study is to find out the prevalence of pelvic girdle pain during menstruation and its co-relation with menstrual hygiene products.

Methodology: Total 385 women with age groups between 18-30 years were included in the study. All participants were provided with a questionnaire that includes demographic data, a pre-structured Performa, and a pelvic girdle questionnaire. The most common symptoms of pelvic girdle pain are pain in the pelvic area, shooting, and aching pain that spreads throughout the lower body, including the upper thigh and perineum. The majority of females used disposable sanitary pads. There was a low prevalence of pelvic girdle pain during menstruation and negative co-relation between pelvic girdle pain and menstrual hygiene products.

Conclusion: Prevalence of pelvic girdle pain during menstruation is low among young adult female and participant those having a pain had complain of mild to moderate symptoms and there is a negative correlation between menstrual hygiene products and pelvic girdle pain.

Key Words: Menstruation, Pelvic girdle pain, Menstrual hygiene products.

Introduction

Menstrual cycle is defined as cyclic events that take place in a rhythmic pattern during the reproductive period of a woman's life.⁽¹⁾ Menstruation is the visible manifestation of cyclic physiologic uterine bleeding due to shedding of the endometrium. The first menstrual cycle is known as menarche. Menarche generally begins between ages 11-15 years.⁽²⁻³⁾ Once the menstrual cycle starts it continues cyclically at intervals of usually 28 days till menopause.⁽¹⁻²⁾

During menstruation, women have to maintain and practices good hygiene to prevent adverse health

outcome.⁽⁴⁾ Good menstrual hygienic includes like use of sanitary pad and washing of genital areas as necessary. Women who maintain better hygiene during menstruation will increase the confidence of females in various aspects.⁽⁵⁾

WHO/UNICEF define menstrual hygiene management as women and adolescent girls are using a clean menstrual management material to absorb or collect menstrual blood, that can be changed in privacy as often as mandatory for the duration of a menstrual period, using soap and water for washing the body as required, and having access to facilities to

dispose of used menstrual management materials. ⁽⁶⁾ These practices can be influenced by water sanitation and hygiene (WASH). ⁽⁷⁾

To collect or absorb the menstrual blood flow menstrual hygiene products are used during menstruation. The both types of materials used are disposable and reusable. ⁽⁸⁾ Materials are wool, toilet paper, paper from newspapers or books, and some natural materials such as mud, dung, or leaves, foam from mattress are used to collect menstrual blood during menstruation. ⁽⁹⁾ Some other materials such as sanitary pad (disposable and reusable), menstrual cloth, menstrual cups and tampons are also being used to collect menstrual blood. ⁽⁸⁾

Women must have knowledge about menstrual hygiene and good practice has less risk to reproductive tract infections and its consequences ⁽¹⁰⁾ Poor menstrual hygiene management may increase the risk of women to reproductive tract infections (RTI) and urinary tract infection also psychological stress outcome ^(6,11). Common clinical symptoms of the reproductive tract and urinary infections include backache, lower abdominal pain, genital ulcers, itching in vulva region, swelling, and abnormal discharge from vagina and urinary tract infection symptoms include such as dysuria, increase in urinary frequency without vaginal discharge or irritation. ⁽¹¹⁻¹²⁾ Reproductive tract infections are identified as a major public health problem and ranked as second after maternal mortality and morbidity. Reproductive tract infection can lead to serious complication if left untreated like pelvic inflammatory diseases (PID), infertility, cervical cancer, chronic pelvic pain, ectopic pregnancy, preterm labor, miscarriage, stillbirth, congenital

infection, genital cancer, and risk of HIV infection. ⁽¹²⁻¹³⁾

Pelvic girdle pain is musculoskeletal pain. Pelvic girdle pain is common symptom during and after pregnancy. ⁽¹⁴⁻¹⁵⁾ But, it is also one of the symptoms during menstruation. Pelvic girdle pain is defined as pain experienced between the posterior iliac crest and the gluteal fold, particularly in the vicinity of the sacroiliac joints. The pain may radiate in the thigh at posterior compartment and can also occur in conjunction with/or separately in the symphysis. ⁽¹⁶⁾ most common symptoms of pelvic girdle pain are a pain in the pelvic area, shooting, and aching type of pain and spread over the lower body such as upper thigh and perineum, the pain worsens on weight bearing difficulty in walking and stair climbing ⁽¹⁷⁾ Pelvic girdle pain leads to some dysfunction, emotional stress and reduces health-related quality of life. ⁽¹⁴⁾ Due to pelvic girdle pain women may also face difficulties in performing their activities of daily living (ADLs) such as household work, exercise, implementation, leisure/hobbies, and personal relationships or married life some women cannot walk quickly or cover long distance. ⁽¹⁸⁾ To get information regarding the impact of pelvic girdle pain on general functioning the pelvic girdle questionnaire is a recent condition-specific outcome measure developed for patients with pelvic girdle pain. The questionnaire includes object relating to activity-participation and bodily symptoms. ⁽¹⁹⁾

There are very few evidences on the correlation between menstrual hygiene practice and pelvic girdle pain. Hence, this study was aimed to find correlation among these variables.

Methodology

A cross-sectional study was done on age group between 18-30 years of females. This Study was conducted for 6 months from January 2021 to June 2021 under the reference of South Gujrat Medical and Research Center, Surat. Selections of subjects were based on inclusion and exclusion criteria. Inclusion criteria were regular menstrual cycle and age between 18-30 years, exclusion criteria were polycystic ovarian disease, dysmenorrhea, urinary tract infection, pregnancy, lumbar spine pathologies, history of psychiatric illness, endocrine disorder, mentally unstable patient, and parity. A total 385 women were randomly included in the study. All subject provided with a consent form questionnaire including demographic data, pre structured Performa and pelvic girdle pain questionnaire within the period of data collection questionnaire method was used. Participants were explained prior about the study method, significance, and questionnaire filled.

Result

The mean age of the subjects was 22 years, of which 189 females were between the ages of 22-26 years. Women were working between the 9-14

hours that were 47 women. Most of the women 347 out of 385 were work moderately. The mean age of the menarche of subjects were 13 years, in that 299 women's age of menarche was 13-15 years. Average duration of the menstrual cycle of the females was 4 day, Among 385 women 116 women's duration of menstrual cycle were 1-4 days. Mean of the frequency of the menstrual cycle was 29 days, in which 211 women's frequency of menstrual cycle was between 21-29 days. Pelvic girdle pain of 4% of females was between scores 23-42.

Most of the women that are 94% were used disposable sanitary pads as a hygiene product. Whereas, 7% women were changed their menstrual products more than 4 times. Majority of women that were 160 out of 385 changed their menstrual materials 2 times a day. All the women were wash their hands before and after changing their menstrual materials. Only 3% women were washing their genital area at the end of the period. More than half of the women that 201 were disposed of their used menstrual materials in household rubbish (bin not in latrine). Majority of the females that are 79% females did not face any infection before or after their menstrual period.

Table 1. Mean of the variables

Age	WorkingHours	Age of menarche	Duration of Menstrual Cycle	Frequency of Menstrual Cycle
385	385	385	385	385
21.8675	6.6831	13.6779	4.5714	29.0130

Table2. Age of Menarche

Age	Frequency
10–12	58
13–15	299
16–19	28
Total	385

Table 3. Frequency of menstrual cycle

Days	Frequency
01–04	166
05–08	219
Total	385

Table 4 .PGP Score

	Frequency	Percent
.00	33	8.5
0-9	4	1.0
10-22	8	2.1
23-42	17	4
43-62	6	2
>63	12	3

Table: 5 Correlation

			PGP Score	SanitaryNapkin
Spearman’s	PGPScore	Correlation Coefficient	1.000	-0.059
	Sanitary Napkin	Correlation Coefficient	-0.059	1.000
			0.252	

Discussion

The main purpose of this study was to determine the prevalence of pelvic girdle pain during menstruation and its co-relation with menstrual hygiene products. In the study, the Pelvic Girdle Pain questionnaire was used to evaluate symptoms of pelvic pain, and a pre-structured questionnaire was used to check menstrual hygiene as an outcome measure. To collect data age, Duration of Menstrual cycle, Frequency of Menstrual cycle, Working Hours, Marital status were taken from all participants. The selection of all participants was based on inclusion criteria.

In the current study, the mean age of the participants was 22 years. The majority of women were working for more than 6 hours per day and the nature of work can be identified as moderate work.⁽²⁰⁾ The majority of females were unmarried.

In the study mean age of menarche was 13 years. Previously a study was done by Teklemariam Gultie et al. to find the mean age of menarche and the study concluded that the age of menarche was 14 years. That indicates that the age of menarche can be in between 13-14 years.⁽²¹⁾ Shekhar Chauhan et.al. found that adolescent aged girls between 15-19 years were more likely to use a sanitary pad.⁽²²⁾ That co-relate with this study that, 94% of participants were using sanitary pad; findings suggest most commonly used menstrual material by the female was a disposable sanitary pad. Only 1% of females have used tampons and menstrual cups which show females are having limited awareness regarding advanced menstrual hygiene products.

To check for menstrual hygiene few questions were asked to every participant regarding material being used, disposal of used material, changing frequency of used material, genital wash, hand wash, and infection. In this study, women changed their menstrual product brands for better hygiene practices

and 49% of women changed their menstrual product brands sometimes. A large number of women did not change their menstrual hygiene products frequently and uses the same product brand.

In the current study, 160 females change their menstrual materials 2 times a day maintain menstrual hygiene whereas hardly 20 females among 385 females change more than 4 times in a day. In the present study 62%, women wash their genital area more than 3 times a day and wash their hands every time before or after changing their used menstrual material to practice good hygiene. The majority of females included in the study disposed of their menstrual material in household rubbish by wrapping it in a plastic bag or by cover around a pad. For storing materials most of the females stored them in a cupboard or drawer by wrapping them in a plastic bag.

21% of female participants have faced reproductive infection before or after a period. If females do not maintain proper hygiene during menstruation, then the chances of reproductive tract infection and urinary tract infection increase. These infections can lead to other side effects in women such as lower abdominal pain, abnormal vaginal discharge, inguinal swelling, to genital ulcers, and pelvic girdle pain.^(6, 11, 12) These are some of the most prevalent problems caused by infection, and the goal of this research is to look at the effects of these infections on pelvic girdle pain.

Pelvic girdle pain may experience between the sacroiliac joint and the gluteal fold or in the symphysis pubic.⁽²³⁾ In pelvic girdle pain, symptoms can be moderate to severe pain which affects daily activities such as getting up from a chair, bending, and walking.⁽²³⁾ In this study majority of women were having mild to moderate symptoms of pelvic girdle pain and only a few women detected severe symptoms during menstruation.

In this study, a pelvic girdle pain questionnaire was used as an outcome measure to find out pelvic girdle pain. One study was done by Margreth Gorotle et al. on reliability and construct validity of pelvic girdle questionnaire the study concluded that this is a valid and reliable tool to measure pelvic girdle pain. ⁽²⁴⁾ In study findings prevalence of pelvic girdle pain during menstruation is low. Pelvic girdle pain is one of the most commonly reported during pregnancy. ⁽²³⁾ However, during pregnancy, the female body is exposed to certain factors that have an impact on the dynamic stability of the pelvis. One important factor is the effect of the relaxin hormone which may provide a combined effect with other hormones and affects the laxity of ligaments in the pelvic girdle as well as other ligaments of the body. ⁽²⁵⁾

In a present study based on results, the prevalence of pelvic girdle pain is low and the majority of females practices good menstrual hygiene during menstruation. No positive correlation was found between the menstrual hygiene products and pelvic girdle pain. This may be due to; several factors that affect pelvic girdle pain but only one factor was focused on.

The study states that the prevalence of pelvic girdle pain during menstruation in young adult females age between 18-30 years is 33% and there is a negative correlation between pelvic girdle pain and menstrual hygiene products.

Conclusion

Prevalence of pelvic girdle pain during menstruation is low among young adult females and participant those having a pain had complain of mild to moderate symptoms and there is a negative co-relation between menstrual hygiene products and pelvic girdle pain.

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