

Original Research Article

## Assessment and Comparison of Dysmenorrhea Symptoms among Unmarried and Married Women

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### ABSTRACT

Dysmenorrhoea refers to an ill-defined group of symptoms, it is not surprising that estimates of its incidence in women of child-bearing age range from 3 to 90 per cent. Most women experience some abdominal discomfort either immediately before or during menstruation, and the degree of discomfort called dysmenorrhea. The objective of the study was to assess and compare the dysmenorrhea symptoms among unmarried and married women. Non Experimental research approach with comparative survey research design was used. The sample size comprised of 163 women which includes 100 unmarried and 63 married women selected by purposive sampling techniques of selected institutes of M.M. University Mullana. Dysmenorrhea symptoms checklist was used to collect data from unmarried and married women. Majority (82%) of unmarried reported lower backache, 82% had abdominal cramps, 77% had irritability and 73% had pain in anterior thighs and legs whereas for married women it was 92.06% reported abdominal cramps, 84.12% had lower backache, 80.95% had pain in anterior thighs and legs and 65.08% had irritability. More than half of unmarried (56%) and less than half of married (44.44%) had normal bleeding pattern on first day of menstruation. Maximum of unmarried (92%) and married (85.71%) were adopted tea or hot milk as treatment modality for dysmenorrhea. It can be inferred that dysmenorrhea symptoms were more present in unmarried women as compared to married women.

**Key words:** Dysmenorrhea, Dysmenorrhea Symptoms, Unmarried Women, Married Women.

### INTRODUCTION

Menstruation is a normal physiological phenomenon for a woman indicating her capability for procreation. However this normal phenomenon is not an easy one, it is often associated with some degree of sufferings and embarrassment. It is a common observation that every woman experiences one or other type of menstrual problems in her lifetime. The prevalence of menstrual disorders has been recorded as high as 87%.<sup>[1]</sup>

In modern time for many girls physical problem can arise in relation with

menstruation such as dysmenorrhoea, weight gain, headache, backache, breast tenderness, mood swings and depression etc.<sup>[1]</sup>

Dysmenorrhea means painful menstruation. The prevalence of dysmenorrhea is very high and at least 50% of women experience this problem throughout their reproductive years. Like all muscles, the uterus contracts and relaxes. Most uterine contractions are never noticed, but severe ones are painful.<sup>[2]</sup>

The medical term for menstrual pain is primary dysmenorrhea. Primary

dysmenorrhea usually starts 2 - 3 years after the first period, as a woman begins to ovulate regularly. Pain usually starts a day or two before menstrual flow, and may continue through the first 2 days of the period. Often, pain gets better as a woman gets older, or after she has a child. [3]

Dysmenorrhoea refers to an ill-defined group of symptoms, it is not surprising that estimates of its incidence in women of child-bearing age range from 3 to 90 per cent. Most women experience some abdominal discomfort either immediately before or during menstruation, and the degree of discomfort called dysmenorrhoea will depend upon the individual patient's tolerance of pain, the nature of the population examined, and the investigator's criteria and interests. If dysmenorrhoea is defined as a degree of menstrual pain sufficient to interfere with a woman's normal mode of life, estimates of incidence range from about 3 to 17 per cent. [4]

The menstrual period is a natural phenomenon which occurs throughout the reproductive years of every woman. Most female experience some degree of pain and discomfort in their menstrual period. It can be less painstaking and easy for some teens and young women, but for others menstrual period can be heavy and painful with cramps, which may be accompanied by some other symptoms and complications such as nausea, vomiting, diarrhoea, headache, weakness and fainting. [2]

The pain of dysmenorrhea is crampy and usually located in lower abdomen above the pubic bone (the suprapubic region); some women also have severe pain in the back or thighs. The pain usually begins just before or as menstrual bleeding begins, and gradually diminishes over one to three days. Pain usually occurs intermittently, ranging from mild to disabling. Other symptoms that may accompany cramping include nausea, diarrhea, dizziness, fatigue, headache, or a flu-like feeling. [5]

Dysmenorrhea is most common in women between the ages of 18 and 20 years, with most of the severe episodes

occurring before 21 years of age. Primary dysmenorrhea occurs more frequently in unmarried women than in married women (61% vs. 51%), decreases with age, and does not appear to be related to the type of occupation or physical condition of the woman. Exercise does not appear to have any significant effect on the incidence of dysmenorrhea. Associated factors that increase the risk duration and severity of dysmenorrhea include early menarche, long menstrual periods, overweight. Dysmenorrhea can feature different kinds of pain, including sharp, throbbing, dull, nauseating, burning, or shooting pain. [6]

Nonsteroidal anti inflammatory drugs like ibuprofen and naproxen which block the effects of pain producing prostaglandins and are more effective than other pain killers like acetaminophen. The other treatment for dysmenorrhea includes nutritional supplements, hormonal contraceptives, non drug therapies such as acupuncture, acupressure, use of TENS unit etc, herbal therapies and hormonal treatments. [7]

Dysmenorrhea is the most common gynecologic complaint and the leading cause of recurrent short-term school or work absenteeism among unmarried young women. Despite the high prevalence of dysmenorrhea in unmarried young women, they do not seek medical advice or are under-treated. In one study, a majority (98%) of unmarried young women used non pharmacologic methods such as heat, rest, or distraction to treat dysmenorrhea, with perceived effectiveness of 40% or less. In other studies from different populations, 30-70% of unmarried young women reported at least occasionally self-medicating with over-the-counter (OTC) pain medications. However, 57% of those who self-medicated with OTC preparations used sub-therapeutic. Only 54% of adolescents knew that certain medications could relieve menstrual cramps, and 27% of girls are unable to recognize any of three non-steroidal anti-inflammatory drugs (NSAIDs)

listed as possible treatments for dysmenorrhea.<sup>[8]</sup>

Sudden mood changes (52%), swelling or pain in breasts (43%), anger (31%), headache (30%), tiredness / lethargy (28 %), lower abdominal pain (18%), etc. are common reported problems. Abdominal pain (43.5%) is commonest menstrual problems seen in late teenage girls as compared to early teens (28.5% vs. 15%). Head ache (21%), backache (17%), cramps in thighs and leg muscles (12%), nausea / vomiting (10%) etc. were other problems experienced by these girls. About 20% avoided schools, 12% avoided kitchen / temples and 10% stayed away from friends / relatives.<sup>[9]</sup>

A wide spectrum of pharmacologic and non pharmacologic measures is used for the treatment of dysmenorrhea. Of these it has been widely claimed that exercise and use of complementary and alternative methods are beneficial for dysmenorrhea. Studies have shown that exercise reduced menstrual cramp and improved associated symptoms. Exercise helps in reducing pain, relieving stress, elevating mood and improving health. Women who exercise show less severe dysmenorrhea and greater positive effects than women who are sedentary.<sup>[10]</sup>

## **MATERIALS AND METHODS**

Non Experimental research approach with comparative survey research design was used. The sample size comprised of 163 women which includes 100 unmarried and 63 married women having regular menstrual cycle and were in the age group of 18 -30 years of selected institutes of M.M. University Mullana and selected by purposive sampling techniques. Unmarried and married women with gynecological disorders and undergoing treatment were excluded. Dysmenorrhea symptoms checklist was used to collect data regarding symptoms of dysmenorrhea, bleeding pattern during menstruation in terms of number of pads and treatment modalities adopted during dysmenorrhea like NSAIDs,

AYUSH, exercise, hot milk or tea etc. Content validity of the tools was established by submitted to nine experts. Nine experts included seven experts from Obstetric and gynecological nursing and two from medical surgical nursing. The reliability of dysmenorrhea symptom checklist was found to be 0.86 checked by test and retest method.

Ethical approval was obtained from the Institutional Ethical Committee for conducting the research study. The purpose for carrying out research project was explained to the study subjects and assurance for confidentiality was given. Written informed consent was taken from each subject after explaining the purpose of research project. The data collection for the final study was done in the month of September and October. IN FIRST PHASE, the screening of the sample was done by asking questions to know the women who were suffering from dysmenorrhea. Demographic characteristics, menstrual characteristics was filled up by unmarried and married women to collect baseline data and to know expected due date of menstruation. IN SECOND PHASE, on the day of onset of menstruation, researcher approached the study subjects to explore the onset of dysmenorrhea symptoms.

## **RESULTS**

### **Demographic characteristics**

Data shows nearly half (47%) of unmarried were in the age group of 18- 21 years whereas less than half (42.86%) of married women were in the age group of 21- 24 years. Most of the unmarried (77%) and married women (74.60%) were students. Majority of unmarried (61%) and married women (68.25%) belonged to Hindu religion. Most of unmarried (71%) and married women (66.66%) were vegetarian. More than half (56%) of unmarried and majority of married women (65.08%) belonged to urban area. The computed Chi - square was not found to be statistically significant with occupation, religion, dietary habits and native place at 0.05 level of

significance, so group was homogeneous on the basis of occupation, religion, dietary habits and native place whereas the computed Chi-square was found to be statistically significant with age at 0.05 level of significance, so group was heterogeneous on the basis of age.

### **Menstrual Characteristics**

Data shows less than half (43%) of unmarried women attained their menarche at the age of 14-15 years whereas for married women (41.27%) it was 12-13 years. Majority of unmarried (61%) and married women (66.67%) were having no family history of dysmenorrhea. Half (51%) of unmarried and more than half (58.74%) of married women were reported to have pain for one day. The computed Chi-square value (15.60) of duration of pain was found to be statistically significant at 0.05 level of significance. So, it is inferred that among married women pain was less than 1 day whereas unmarried reported to have pain more than 3 days. Therefore, there was significant difference in the duration of pain between unmarried and married women. Majority (62%) of unmarried women were having continuous pain whereas more than half (54%) of married women were having intermittent pain.

### **Frequency and Percentage of Dysmenorrhea Symptoms**

The data presented in Table 1 shows day wise frequency and percentage distribution of symptoms of dysmenorrhea, bleeding pattern and treatment modalities adopted for dysmenorrhea.

**On the first day of dysmenorrhea,** majority (82%) of unmarried reported lower backache, 82% had abdominal cramps, 77% had irritability and 73% had pain in anterior thighs and legs whereas for married women, 92.06% reported abdominal cramps, 84.12% had lower backache, 80.95% had pain in anterior thighs and legs and 65.08% had irritability. More than half of unmarried (56%) and married (44.44%) had normal bleeding pattern, 27% of unmarried and married (31.74%) had scanty bleeding pattern, 15% of unmarried and 20.63% of

married had moderate bleeding pattern and only 2% of unmarried women and 3.17% of married had heavy bleeding pattern. Maximum of unmarried (92%) and majority of married (85.71%) were adopted tea or hot milk as treatment modality for dysmenorrhea, followed by 52% of unmarried and 68.25% of married using hot application and 48% of unmarried and 33.33% of married were utilizing NSAIDs.

**On the second day of dysmenorrhea,** majority (81.58%) of unmarried reported pain in anterior thighs and legs, 78.95% had abdominal cramps and 71.05% had lower backache and irritability whereas majority (83.33%) of married women had lower backache and 66.67% had pain in anterior thighs and legs. Majority of unmarried (63.16%) had normal bleeding pattern, 18.42% had moderate bleeding pattern, 13.16% had scanty bleeding pattern and only 5.26% had heavy bleeding pattern whereas half (50%) of married women had moderate bleeding pattern, 33.33% had scanty bleeding pattern and 16.67% had normal bleeding pattern. Majority of unmarried (81.58%) and 83.33% of married adopted tea or hot milk as treatment modality, half (50%) of unmarried and married were using hot application and less than half of unmarried (47.37%) and 33.33% of married were utilizing NSAIDs.

**On the third day of dysmenorrhea,** majority (71.43%) of unmarried reported abdominal cramps and lower backache and 57.14% had irritability and pain in anterior thighs and legs whereas majority (100%) of married women reported abdominal cramps, lower backache and pain in anterior thighs and legs. Half of unmarried (50%) had normal bleeding pattern, 21.43% had moderate and scanty bleeding pattern and only 7.14% had heavy bleeding pattern whereas majority (66.67%) of married women had scanty bleeding pattern and 33.33% had normal bleeding pattern. Majority (85.71%) of unmarried and maximum (100%) of married adopted tea or hot milk as treatment modality for dysmenorrhea followed by less than half

(42.86%) of unmarried and majority (66.67%) of married were using hot application.

**On the fourth day of menstruation,** none of married women reported any dysmenorrhea symptoms whereas for unmarried women, less than half (33.33%) reported irritability and pain in anterior thighs. Hence abdominal cramps, pain in anterior thighs and legs, irritability and lower backache were most reported dysmenorrhea symptoms among unmarried

and married women. Majority (66.67%) of unmarried women had scanty bleeding pattern and 33.33% had normal bleeding pattern. Hence, most of unmarried and married women had normal bleeding pattern during menstruation. Majority (66.67%) of unmarried women adopted hot milk or tea, hot application and NSAIDs as treatment modalities. Hence, tea or hot milk was most preferred treatment modalities followed by hot application and NSAIDs among unmarried and married women.

**TABLE 1. Frequency and Percentage Distribution of Unmarried and Married Women in terms of Dysmenorrhea Symptoms Checklist. N-163**

Symptoms of dysmenorrhea		Unmarried women								Married women							
		First Day n=100		Second Day n=38		Third Day n=14		Fourth Day n=3		First day n=63		Second day n=6		Third day n=3		Fourth day n=0	
		f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
<b>1.1</b>	Nausea	50	50	17	44.74	05	35.71	01	16.67	30	47.61	03	50	01	33.33	-	-
<b>1.2</b>	Vomiting	31	31	11	28.95	03	21.43	01	16.67	11	17.46	-	-	-	-	-	-
<b>1.3</b>	Diarrhea	29	29	08	21.05	02	14.28	-	-	16	25.39	01	16.67	-	-	-	-
<b>1.4</b>	Headache	26	26	11	28.95	03	21.43	-	-	19	30.16	02	33.33	01	33.33	-	-
<b>1.5</b>	Irritability	77	77	27	71.05	08	57.14	02	33.33	41	65.08	03	50	02	66.67	-	-
<b>1.6</b>	Constipation	16	16	11	28.95	02	14.28	01	16.67	16	25.39	01	16.67	-	-	-	-
<b>1.7</b>	Lower back ache	82	82	27	71.05	10	71.43	01	16.67	53	84.12	05	83.33	03	100	-	-
<b>1.8</b>	Dizziness	39	39	13	34.21	05	35.71	-	-	17	26.98	02	33.33	01	33.33	-	-
<b>1.9</b>	Abdominal cramps	82	82	30	78.95	10	71.43	01	16.67	58	92.06	03	50	03	100	-	-
<b>1.10</b>	Pain in anterior thighs and legs	73	73	31	81.58	08	57.14	02	33.33	51	80.95	04	66.67	03	100	-	-
<b>1.11</b>	Any other, if yes then specify	04		-	-	-	-	-	-	01	100	-	-	-	-	-	-
	Hot flushes	01	25														
	Vaginal pain	02	50														
	Breast heaviness	01	25														
<b>2</b>	<b>Bleeding pattern during menstruation ( number of pads changed per day )</b>																
<b>2.1</b>	Heavy bleeding ( $\geq$ 7 pads/ day)	02	02	02	5.26	01	7.14	-	-	02	3.17	-	-	-	-	-	-
<b>2.2</b>	Moderate bleeding ( 4-6 pads/day)	15	15	07	18.42	03	21.43	-	-	13	20.63	03	50	-	-	-	-
<b>2.3</b>	Normal bleeding ( 3-4 pads/day)	56	56	24	63.16	07	50	01	33.3	28	44.44	01	16.67	01	33.33	-	-
<b>2.4</b>	Scanty bleeding ( $\leq$ 3pads/day)	27	27	05	13.16	03	21.43	02	66.67	20	31.74	02	33.33	02	66.67	-	-
<b>3.</b>	<b>Treatment modalities adopted for dysmenorrhea</b>																
<b>3.1</b>	NSAIDs	48	48	18	47.37	05	35.71	02	66.67	21	33.33	02	33.33	-	-	-	-
<b>3.2</b>	NSAIDs with Vitamin B <sub>1</sub>	-	-	02	5.26	-	-	-	-	01	1.59	-	-	-	-	-	-
<b>3.3</b>	NSAIDs with Vitamin E	-	-	01	2.63	-	-	-	-	-	-	-	-	-	-	-	-
<b>3.4</b>	Exercise	-	-	-	-	-	-	-	-	02	3.17	-	-	-	-	-	-
<b>3.5</b>	Hot application	52	52	19	50	06	42.86	02	66.67	43	68.25	03	50	02	66.67	-	-
<b>3.6</b>	Acupressure	01	01	01	2.63	-	-	-	-	01	1.59	01	16.67	-	-	-	-
<b>3.7</b>	Low fat vegetarian diet	22	22	06	15.79	03	21.43	-	-	11	17.46	-	-	01	33.33	-	-
<b>3.8</b>	Fish oil supplements	03	03	01	2.63	-	-	-	-	03	4.76	-	-	-	-	-	-
<b>3.9</b>	Hot milk or tea	92	92	31	81.58	12	85.71	02	66.67	54	85.71	05	83.33	03	100	-	-
<b>3.10</b>	Any treatment from Ayush if yes then specify	02	02	01	2.63	-	-	-	-								
	homeopathy	01	50														
	chocolates	01	50	01	100												

## DISCUSSION

In the current study, nearly half of unmarried and married women were reported to have pain for one day and having intermittent pain. The study findings were consistent with the findings of the study conducted by Rogers P Smith, MD Andrew et.al<sup>[11]</sup> which revealed that the pain usually begins just before or as menstrual bleeding begins, and gradually diminishes over one to three days. Pain usually occurs intermittently, ranging from mild to disabling.

Findings further showed that dysmenorrhea symptoms were lower backache, abdominal cramps, irritability, pain in anterior thighs and legs which were consistent with the findings done by Rogers P Smith, MD Andrew et.al<sup>[11]</sup> which reported that the pain of dysmenorrhea is crampy and usually located in lower abdomen above the pubic bone (the suprapubic region); some women also have severe pain in the back or thighs. Other symptoms that may accompany cramping include nausea, diarrhea, dizziness, fatigue, headache, or a flu-like feeling. The study findings were inconsistent with the findings done by Barnard K, Frayne SM et.al<sup>[12]</sup> where results revealed that sudden mood changes (52%), swelling or pain in breasts (43%), anger (31%), headache (30%), tiredness / lethargy (28 %), lower abdominal pain (18%), etc. are common reported problems during dysmenorrheal. A similar study was consistent with the findings done by The study findings was inconsistent with the findings of the study conducted by Anil K Aggarwal, Anju Agarwal<sup>[13]</sup> where reported that most common symptoms present on both days, that is, day before and first day of menstruation were lethargy and tiredness (first), depression (second) and inability to concentrate in work (third), whereas the ranking of these symptoms on the day after the stoppage of menstruation showed depression as the first common symptoms.

The findings of the study was inconsistent with the findings of Shabnam

Omidvar and Khyrunnisa Begum<sup>[14]</sup> which was reported that the most prevalent menstrual symptoms were tiredness (47.9%), backache (38.3%), and anger (34.5%) whereas another study conducted by A. Titilayo, O.M. Agunbiade, O. Banjo and A. Lawani<sup>[15]</sup> where the commonest dysmenorrhea symptoms were dizziness, headache, depression and irritation among females.

## CONCLUSION

The study concluded that majority of unmarried and married women had lower backache, abdominal cramps, irritability and pain in anterior thighs and legs. Most of unmarried and married women had normal bleeding pattern. Majority of unmarried and married women adopted hot milk or tea, hot application and NSAIDs as treatment modalities.

## Recommendations

The researcher further recommended that the study can be replicated on larger sample to validate the findings and make generalizations, to assess the impact of dysmenorrhea symptoms on quality of life among females and experimental study may be conducted to evaluate the effectiveness of alternative and complementary therapies for dysmenorrhea symptoms.

## IMPLICATIONS

The finding of the study can be implemented to teach the nursing students regarding causes, sign and symptoms and treatment modalities of dysmenorrhea symptoms to enhance the knowledge and skills to manage the client who are suffering from dysmenorrhea symptoms, develop health education material like informational booklet, pamphlets and video on home remedies, exercises, yoga, meditation etc. for females which will give an awareness regarding dysmenorrhea symptoms. The community health nurse should be involved in increasing the awareness among adolescents and mothers regarding onset of menarche, menstrual hygiene through the use of various awareness programme on

treatment modalities for dysmenorrhea and by providing health education.

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