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INTERFERENCE IN DAILY ACTIVITIES DURING DYSMENORRHEA: A COMPARISON

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ABSTRACT

Dysmenorrhea is a major cause for absenteeism from institutions or restriction of activities and social interaction among 60-90% of adolescents in India. Current study was undertaken with objective to assess and compare the interference in daily activities during dysmenorrhea 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. The content validity and reliability of interference in daily activities checklist (0.92) was established. The study result revealed that majority of unmarried women and married women had interference in go to work or college (85%) and (71.43%), sleeping (84%) and (71.43%), resting (73%) and (71.43%) and getting up (71%) and (63.50%) and least reported interference of daily activities were elimination (22%) and (22.22%), brushing (27%) and (17.46%) and combing (29%) and (15.87%) among unmarried and married women. So, interference in daily activities was much more reported by unmarried as compared to married women.

Key words: Dysmenorrhea, Interference in daily activities, Unmarried Women, Married Women.

INTRODUCTION

Puberty is the period of life in all women generally between the ages of 10 to 15 years [1]. Adolescence is the period of transition from childhood to adulthood. WHO has defined adolescence as the age group of 10 to 19 years [2].

Menstruation is a periodic discharge of blood mucus and epithelial cells from the uterus, it is usually occurs at monthly intervals throughout the reproductive cycle. In modern time for many girls physical problem can arise in relation with menstruation such as dysmenorrhea, weight gain, headache, backache, breast tenderness, mood swings and depression etc [3].

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 [4].

The pain of primary dysmenorrhea and the systemic symptoms that may be associated with it are due to high prostaglandin levels. Prostaglandins are chemicals that are formed in the lining of the uterus during menstruation. These prostaglandins cause muscle contractions in the uterus, which cause pain and decrease blood flow and oxygen to the uterus. The levels of prostaglandin F2α are especially high during the first two days of menstruation in women with severe primary dysmenorrhea. Vasopressin and leuko-triene concentrations have also been found to be higher in women with severe menstrual pains than in women who

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experience mild or no menstrual pain [5].

The global library of women's medicine dedicated to the enhancement of women's healthcare reported that more than 50% of post pubescent menstruating women are affected by dysmenorrhea, with 10–12% of them having severe dysmenorrhea with incapacitation for 1–3 days each month. Women who continue to work or to attend classes have been shown to have lower work output or scores during their dysmenorrhea. 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].

WHO conducted a multi-country population survey of family formation patterns and reproductive health that included questions on menstrual history and menstrual disorders. In menstrual history, menstrual pain in the past three months was collected. The study revealed that many women experience some pain with menstruation. In adult women, pain was reported as 16% to 58% and in adolescent, it was 35% to 78% and among them 3% to 20% of women reported severe dysmenorrhea that prevents them from participating in their usual activities [7].

In India, the incidence of dysmenorrhea was reported 33.5% among adolescent girls and prevalence of dysmenorrhea 87.87%. In 60-90% of adolescent girls in India, dysmenorrhea is a major cause for absenteeism from school or restriction of activities of daily living or social interaction. The reported incidence of dysmenorrhea in Karnataka was 87%, of these 46.69% had severe problems of perceived pain during menstruation [8].

In India, dysmenorrhea is estimated to be present among 40-50% , in that with severe focus giving rise to work or school absenteeism in 15% and mild forms requiring no medication or occasional over the counter analgesics in about 30% [9].

Adolescent girls, almost always, silently suffer the pain by dysmenorrhea and the discomfort associated with it due to lack of knowledge about reproductive health. It is probable that this also affects their academic performance. Due to some cultural and religious restrictions, many unmarried young women in this country lack appropriate and sufficient information regarding dysmenorrhea causing incorrect and unhealthy behaviors during their menstrual period. This burden, unfortunately, has not been taken seriously in terms of its social or hygienic aspects [10].

Most females experience some degree of pain and discomfort in their menstruation period (dysmenorrhea) which could have important impacts on their daily activities, and disturb their productivity at home or at their work place. According to some international reports, the prevalence of dysmenorrhea is very high, and at least 50% of women experiences this problem throughout their years. This problem not only causes fear in approximately one–fifth of the female population but also causes many social, physical, physiological and economic problems for women around the world. The results of recent studies showed that nearly 10% of females with dysmenorrhea experienced an absence rate of 1-3 days per month from work or where unable to do their regular/ daily tasks due to their severe pain. It has been also shown that dysmenorrhea is considered as the main cause of absence from schools and colleges among young girls students [11].

Severe dysmenorrhea is a cause of recurrent short term school absenteeism in adolescent girls in the United States. Dysmenorrhea and how it effects adolescent girls has not been studied previously in Ghana however records at the gynaecology emergency room at the Korle-Bu Teaching Hospital, Accra, Ghana shows that dysmenorrhea is among the recurring reasons for gynaecological consultations in adolescent girls. These girls are often accompanied to the hospital by a parent, teacher or peers who absent themselves also from work or class [12].

The results of another study revealed that, the prevalence of dysmenorrhea in adolescent girls is 79.67%. Most of them, 37.96%, suffered regularly from dysmenorrhea severity. The three 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. Negative correlation was found between dysmenorrhea and the General Health Status as measured by the Body surface area [13].

Being a gynaecological problem, primary dysmenorrhea is an important health issue concerning public health, occupational health and family practice, since it affects both the quality of life and the National economy due to short-term school and work absenteeism. Estimates of the number of hours of work lost per year in USA from absenteeism due to primary dysmenorrhea varies between 100-600 million. Moreover women who do work when they have dysmenorrhea tend to have

reduced work capacity and lower output. As women constitute an increasingly large percentage (44.6%) of the workforce, the economic impact of dysmenorrhea will continue to exist [14].

MATERIAL 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. 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 interference in daily activities checklist was found to be 0.92 and 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.

Data presented in Table 2 shows that 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 belonged to urban area whereas majority of married women (65.08%) belonged to urban area.

The computed Chi –square was not found to be statistically not 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. The computed chi-square was found to be statistical significant with age at 0.05 level of significance, so group was heterogeneous on the basis of age.

Description of Menstrual Characteristics

Data presented in Table 3 shows that 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.

Description of of Interference in Daily Activities

Data presented in Table 4 shows that on the first day of dysmenorrhea, majority of unmarried women and married women had interference in go to work or college (85%) and (71.43%), sleeping (84%) and (71.43%), resting (73%) and (71.43%) and getting up (71%) and (63.50%) respectively. Least reported interference of daily activities were elimination (22%) and (22.22%), brushing (27%) and (17.46%) and combing (29%) and (15.87%) among unmarried and married women respectively.

On the second day of dysmenorrhea, less than half of unmarried women had interference in sleeping (34%), getting up (29%), go to work or college (28%) and resting (28%) whereas less than half of married women reported interference in sleeping (6.43%), getting up (6.34%) and sexual activity (6.34%). Least reported activities among unmarried were elimination (11%), brushing (10%) and combing (08%) whereas for married it was drinking (1.58%), watching TV (1.58%) and serving food (1.58%).

On the third day of dysmenorrhea, less than half of unmarried women had interference in sleeping (12%), getting up (09%), go to work or college (09%), listening or concentration (08%) and reading books (08%) whereas less than half of married women had interference in sleeping (4.76%); cooking(4.76%), getting up (3.17%) and resting (3.17%). Least reported activities among unmarried were brushing (1%) and combing (1%) whereas for married it was sexual activity (1.58%) and go to work or college (1.58%).

On the fourth day of dysmenorrhea, none of the married women had interference in daily activities whereas for unmarried women, the daily activities disturbed were getting up (01%); bathing (01%); dressing (01%); eating (01%); sleeping (02%); reading books (01%); elimination (01%) and go to work or college (01%). So, interference in daily activities were much more reported by unmarried as compared to married women.

Description of Difference of Level of Interference in Daily Activities among Unmarried and Married Women

Data revealed that on the first, second and third day of dysmenorrhea, the computed chi-square value (2.50), (2.86) and (2.55) of level of interference in daily activities respectively among unmarried and married women was found to be statistically not significant at 0.05 level of significance. So, it can be inferred that there was no significant difference in the level of interference in daily activities among unmarried and married women on

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first, second and third day of dysmenorrhea.

The data presented in Table 5 shows that on the first, second and third day of dysmenorrhea, the mean difference (0.84), (2.97) and (3.93) and the computed 't' value (1.26), (1.56) and (1.44) of interference in daily activities among unmarried and married women was found to be statistically not significant at 0.05 level of significance. Thus, it inferred that there was no significant difference in inference of daily activities on first, second and third day of dysmenorrhea among unmarried and married women.

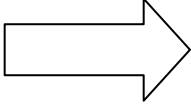**Table 1. Schematic Representation of Research Design**

Phase I		Phase II
The screening of the sample was done by asking questions to know the women who were suffering from dysmenorrhea. Personal variables and menstrual characteristics was filled up by unmarried and married women to collect baseline data and to know expected due date of menstruation.		Two days prior to the expected due date of menstruation, researcher approached the study subjects to know the onset of menstruation. On the actual date of onset of menstruation, investigator approached the study subjects Interference in daily activities checklist was filled up by participants. Researcher approached the study subjects daily for daywise data collection and data was collected till pain subsided.

Table 2. Frequency and Percentage Distribution of Unmarried and Married Women in terms of Personal Variables N-163

S.No.	Personal variables	Unmarried women N-100		Married women N- 63		df	Chi-square/ Yates Correction
		f	%	f	%		
1.	**Age**						
1.1	18- 21 years	47	47	06	9.52		
1.2	21-24 years	30	30	27	42.86	1	**44.22***
1.3	24-27 years	22	22	18	28.57		
1.4	27-30 years	01	01	12	19.05		
2.	**Occupation**						
2.1	Teacher	23	23	16	25.40	2	0.05[NS]
2.2	Student	77	77	47	74.60		
3.	**Religion**						
3.1	Hindu	61	61	43	68.25		
3.2	Sikh	35	35	19	30.16	3	3.90[NS]
3.3	Muslim	01	01	01	1.59		
3.4	Christian	03	03	00	00		
4.	**Dietary habits**						
4.1	Vegetarian	71	71	42	66.66	2	4.10[NS]
4.2	Non- vegetarian	23	23	20	31.75		
4.3	Eggtarian	06	06	01	1.59		
5.	**Native Place**						
5.1	Rural	44	44	22	34.92	1	1.37[NS]
5.2	Urban	56	56	41	65.08		

$\chi^2(1) = 3.84$, $\chi^2(2) = 5.99$, $\chi^2(3) = 7.82$

Table 3. Frequency and Percentage Distribution of Unmarried and Married Women In Terms of Menstrual Characteristics N-163

Menstrual characteristics		Unmarried women n=100		Married women n=63		df	Chi-square/ Yates correction
		f	%	f	%		
1.	**Age at menarche**						
1.1	≥12 years	05	05	10	15.87		

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1.2	12-13 years	42	42	26	41.27		
1.3	14-15 years	43	43	24	38.10		
1.4	16-17 years	10	10	03	4.76	3	6.53[NS]
2.	**Any family history of dysmenorrhea**						
2.1	Yes	39	39	21	33.33		
2.2	No	61	61	42	66.67		
2.3	If yes						
2.3.1	Mother	26	26	11	50	3	1.58[NS]
2.3.2	Sister	18	18	11	50		
3	**Duration of pain**						
3.1	Less than 1 day	10(37.04%)	10	17(62.96%)	26.98		
3.2	1 day	51(57.96%)	51	37(42.04%)	58.74		
3.3	2 day	26(78.79%)	26	07(21.21%)	11.11		
3.4	3 day	11(84.61%)	11	02(15.39%)	3.17		
3.5	More than 3 days	2(100%)	2	00(00)	00	4	**15.60**[NS]
4	**Type of pain**						
4.1	Continuous pain	62	62	29	46		
4.2	Intermittent pain	38	38	34	54	1	3.38[NS]

$\chi^2(1) = 3.84, \chi^2(3) = 7.82, \chi^2(4) = 9.49$

Table 4. Mean Percentage Distribution of Unmarried and Married Women in terms of Interference in Daily Activities N 163
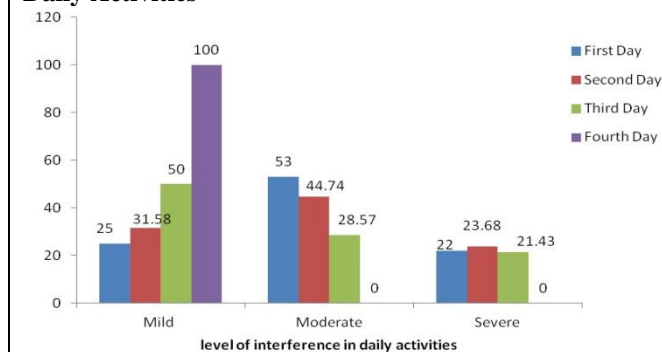
	Interference In Daily Activities	Unmarried group				Married group			
		FIRST DAY N=100	SECOND DAY N=38	THIRD DAY N=14	FOURTH DAY N=6	FIRST DAY N=63	SECOND DAY N=6	THIRD DAY N=3	FOURTH DAY N=0
		Mean %	Mean %	Mean %	Mean %	Mean %	Mean %	Mean %	Mean %
1	Getting up	71	29	09	01	63.50	6.34	3.17	--
2	Brushing	27	10	01	--	17.46	--	--	--
3	Bathing	47	17	02	01	28	4.44	3.17	--
4	Dressing	53	18	04	01	36.51	--	--	--
5	Combing	29	08	01	--	15.87	--	--	--
6	Eating	62	27	04	01	61.90	4.76	--	--
7	Drinking	37	13	03	--	38.09	1.58	--	--
8	Sleeping	84	34	12	02	71.43	6.43	4.76	--
9	Resting	73	28	06	--	71.43	3.17	3.17	--
10	Watching T.V.	31	13	02	--	22.22	1.58	--	--
11	Listening / Concentration	66	23	08	--	52.38	4.76	--	--
12	Reading books	62	20	08	01	61.90	4.76	--	--
13	Go to work or college	85	28	09	01	71.43	4.76	1.58	--
14	Sexual Activity	--	--	--	--	58.73	6.34	1.58	--
15	Elimination	22	11	04	01	22.22	--	--	--
16	Communicating with people	55	23	05	--	31.75	1.58	--	--
17	Exercising	30	13	02	--	42.86	3.17	--	--
18	Shopping/ going to market	58	19	06	--	39.68	3.17	--	--
19	Cooking	50	13	05	--	47.62	4.76	--	--
20	Serving food	45	13	06	--	31.75	1.58	--	--

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Table 5. Mean, Standard Deviation, Mean Difference, Standard Error Difference and t value of Interference in Daily Activities during Dysmenorrhea among Unmarried and Married Women N-163

Day	Group	Mean	Standard Deviation	Mean Difference	Standard Error Difference	t value	p value
First	Unmarried	9.87	4.03	0.84	0.69	1.26	0.21
	Married	9.03	4.30				
Second	Unmarried	9.47	4.37	2.97	3.49	1.56	0.13
	Married	6.50	4.09				
Third	Unmarried	6.93	4.57	3.93	2.22	1.44	0.17
	Married	3.00	1.73				

$t(161) = 1.97, t(42) = 2.02, t(15) = 2$. Significant ($p \leq 0.05$)

Fig 1. Bar Graph Showing Percentage Distribution of Unmarried Women in terms of Level of Interference in Daily Activities

Fig 2. Bar Graph Showing Percentage Distribution of Married Women in terms of Level of Interference in Daily Activities
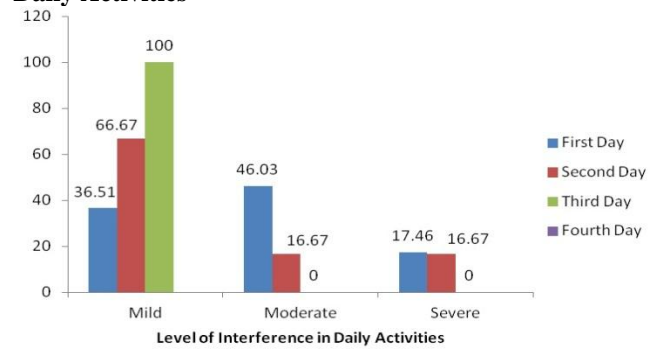
DISCUSSION

The findings of the present study showed that majority of unmarried and married women had interference in go to work or college, sleeping, resting, concentration and reading books during dysmenorrhea. The study findings were consistent with the findings of the study conducted [10] where dysmenorrhea was reported as a major cause for absenteeism from school or restriction of activities of daily living or social interaction. A similar study was done [15] where results revealed that dysmenorrhea was the cause of limited sports activities in 81%, decreased class room concentration in 75%, restricted home work in 50%, school absenteeism in 45%, limited social activities in 25% and decreased academic performance in 8% of the affected student. The study findings were consistent with the findings of the study done [16] which showed that nearly 10% of females with dysmenorrhea experienced an absence rate of 1-3 days per month from work or where unable to do their regular/ daily tasks due to their severe pain. It has been also shown that dysmenorrhea is considered as the main cause of absence from schools and colleges among young girls students.

A similar study was conducted which was reported that 38% of students missing classes due to dysmenorrhea, during 3 months prior to the study and 33% reported missing individual classes. Activities affected by dysmenorrhea included class concentration (59%), sports (51%), class participation (50%), socialization (46%), homework (35%), test-taking skills (36%), and grades (29%). Menstrual pain was significantly associated with school absenteeism, decreased academic performance, sport participation and socialization with peers (P<01).

CONCLUSION

The study concluded that both the group were homogeneous on the basis of occupation, religion, dietary habits and native place but the both group was heterogeneous on the basis of age. There was no significant difference in the level of interference in daily activities among unmarried and married women on first, second and third day of dysmenorrhea. Majority of unmarried women and married women had interference in go to work or college (85%) and (71.43%), sleeping (84%) and (71.43%), resting (73%) and (71.43%) and getting up (71%) and (63.50%) whereas elimination (22%) and (22.22%), brushing (27%) and (17.46%) and combing (29%) and (15.87%) were least reported interference of daily activities were among unmarried and married women [17].

STATEMENT OF HUMAN AND ANIMAL RIGHTS

All procedures performed in human participants were in accordance with theethical standards of the institutional research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethicalstandards. This article does not contain any studies with animals performed by any of the authors.

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