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A survey study of mood fluctuation during dysmenorrheal of sports women of I.G.I.P.E.S.S

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Abstract
Mithlesh (2014) conducted a study on―A survey of mood fluctuation during dysmenorrheal of the sports women of I.G.I.P.E.S.S.". To identify the mood fluctuation of the sports woman of I.G.I.P.E.S.S. during painful menstruation cycles (Dysmenorrheal). Dysmenorrheal**,** is the factor which has not studies well as no study was found on concerned subjects. Research scholar has selected the topic with purpose to reveals the dysmenorrheal impact and its tendency. For the purpose of the study; profile of mood states (POMS) by Terry Orlick was administered as this particular questionnaire is widely used to measure an individual mood states in physical education and sports. POMS is considering most appropriate questionnaire for the present study. POMS questionnaire, which has appropriate administrative feasibility to assess mood state, was asked to fill by subject twice in a month, for 4th consecutive months. In a month, first it was administered 2rd or 3rd day of menses and 2nd administration of this questionnaire took place on 12th or 13th day after menstruation i.e. beginning of Lutea Phase. Prior to the administration of the test the subjects were briefed on the objectives and requirement of the selected variable that were to be tested. The study was delimited to female students of I.G.I.P.E.S.S. The age ranges of the subjects were 16 to 26years.The only subjects having painful menstruation were selected for the study. The study has further delimited to the Profile of Mood State Questionnaire developed by Terry Orlick'. To alleys the subject and there measured states descriptive test was implied. To asses mood fluctuation due dysmenorrheal t-test was calculated with level of significant at 0.05. It was also concluded that mood in Luteal Phase i.e. associated with better mood profile. Finding also assist to conclude that sports women may also be associated with painful menstruation.

Keywords: mood fluctuation, dysmenorrheal, sports women, I.G.I.P.E.S.S

Introduction
Menstruation is the periodic discharge of blood and mucosal tissue from the inner lining of the uterus through the vagina. Menstruation, periodic discharge from the vagina of blood, secretions, and disintegrating mucous membrane that had lined the uterus. The biological significance of the process in humans can best be explained by reference to the reproductive function in other mammals. In a number of species of wild sheep, for example, there is only one breeding season in the year; during this season a cycle of changes takes place in the reproductive organs, characterized by ripening and release of ova from the ovaries, increased blood supply to the genital tract, growth of the uterus, and proliferation of its lining. There is a discharge of blood and mucus from the uterus and vagina, and this is the time when coition may take place. Pregnancy normally follows, but if the ewe is not served by the ram the changes retrogress until the next breeding season. This cycle of changes is termed the estrous cycle. In many domesticated sheep there is more than one estrous cycle in the breeding season. If the ewe does not become pregnant in the first cycle there is a short resting phase; then ovulation is repeated and another cycle of activity of the reproductive system takes place. After each breeding period, with its succession of estrous cycles, there is a relatively long resting phase. In most female primates, including women, there is no resting phase; an unbroken series of estrous cycles occurs throughout the year, and pregnancy can occur in any one of them. In some animals a variety of external stimuli act through the central nervous system on the hypothalamic region of the brain. The hypothalamus controls the release from the pituitary gland of hormones that induce ripening of ovarian follicles—ova and the cellular structures that enclose them. These pituitary hormones, called gonad-tropic hormones, are carried to the ovaries by way of the bloodstream. In primates the hypothalamic mechanism normally is independent of external stimuli, and regular discharge of ova into the tubes leading to the uterus occurs even in the absence of coitus. Under the influence of the pituitary gonad-tropic hormones, the ovary produces other hormones, which cause growth and increased vascularity of the uterus and vagina. These hormones are estrogens—chiefly 17 beta-estradiol—and progesterone. It is as though the ovary prepares the uterus for the reception of the ovum that is released in the particular cycle. In many domesticated sheep there is more than one estrous cycle in the breeding season. If the ewe does not become pregnant in the first cycle there is a short resting phase; then ovulation is repeated and another cycle of activity of the reproductive system takes place. After each breeding period, with its succession of estrous cycles, there is a relatively long resting phase. In most female primates, including women, there is no resting phase; an unbroken series of estrous cycles occurs throughout the year, and pregnancy can occur in any one of them.

In some animals a variety of external stimuli act through the central nervous system on the hypothalamic region of the brain. The hypothalamus controls the release from the pituitary gland of hormones that induce ripening of ovarian follicles—ova and the cellular structures that enclose them.

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Dysmenorrhea

The term dysmenorrhoea comes from the Greek word for difficult monthly flow and describes painful menstruation. Dysmenorrhoea is characterised by cramping lower abdominal pain that may radiate to the lower back and upper thighs, commonly with associated nausea, headache, fatigue and diarrhea. Dysmenorrhea is painful menstruation. It may include pain in the abdomen, back and legs, abdominal cramps, headache, and fatigue. Most women have painful periods at some time in their life. In some women, the pain is severe enough to interfere with normal activities. Dysmenorrhoea is a very common gynecological problem in menstruating women and reported prevalence rate is as high as 90 percent. Many adolescents report limitations on daily activities, such as missing school, sporting events, and other social activities because of dysmenorrhoea. During this phase they experience marked feeling of anxiety and eagerness to know about this natural phenomenon. However, they do not get appropriate knowledge due to lack of proper health educational programmes in schools. There are two types of Dysmenorrhea:

Primary dysmenorrhea-painful regular (ovulatory) menstrual cycles; the pain is caused by utrine muscle contractions caused by high levels of prostaglandins produced in the lining and body of the uterus after ovulation.

Secondary dysmenorrhea-painful periods due to an underlying condition, such as Endometriosis (a condition involving the lining of the uterus or womb) or infection that can begin at any age.

Usually appearing within 6 to 12 months after the menarche, primary dysmenorrhea occurs almost invariably in ovulatory cycles. About 88% of adolescents with dysmenorrhea experience their first painful menstruation within the first 2 years after menarche. Dysmenorrhea occurring more than 2 years after the menarche is more likely to be secondary dysmenorrhea, and the underlying cause should be vigorously sought. Primary dysmenorrhea usually begins a few hours before or just after the onset of menstruation. The cramps are most severe on the first or second day of menstruation. Characteristically, the pains are spasmodic in nature and strongest over the lower abdomen, but they may also radiate to the back and the inner aspects of the thigh, and they are often described as labor-like pains. The cramp is commonly accompanied by one or more systemic symptoms, including nausea and vomiting (89%), fatigue (85%), diarrhea (60%), lower backache (60%), and headache (45%). Nervousness, dizziness, and in some severe cases, syncope and collapse can be associated with primary dysmenorrhea. Lasting a few hours to 1 day, the symptoms seldom persist for more than 2 to 3 days.

Procedure and methodology

All sports women of I.G.I.P.E.S.S. were selected for the present study. The subjects selected were associated with different sports. Their age of the subjects were ranging from 16 to 25 years. Initially these subjects were asked to fill up the questionnaire (shown in appendix A) that describes their current menstruation states. With the help of that form they were divide into 4 category that is regular painful, irregular painful, regular non painful, irregular non painful. To fulfill the object of the study, mood fluctuation in dysmenorrheal (only subject having, painful menstruation irrespective of regular or non-regular menstruation), were considered best suitable subject for the study and were selected.

Analysis of data and findings of the study

The objective of the study was to determine dysmenorrheal fluctuation in mood. The Research scholar undertook this study in order to describe the effect of dysamennoria on mood. It was hypothesized that there was significant deference in mood level exists between Dysmenorrheal and beginning of luteal phase**.**

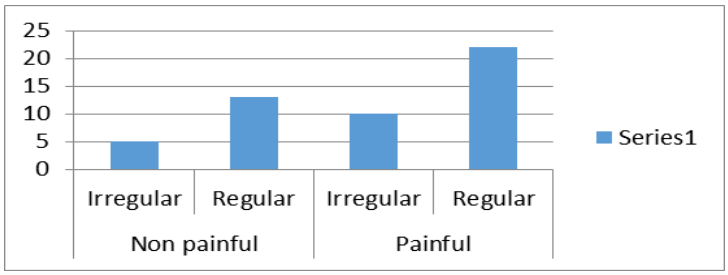
Initially, Research scholar divided all subjects into different category painful regular, painful regular, non-painful regular, non-painful regular subject under category painful regular, painful regular were selected as subject to the study. The detail is described in table 1.

The selected subject having painful menstruation was asked to fill POMS questionnaire at two different phases in a month. The first phase is the menstruation phase subjects were asked to fill the form on 2nd and 3rd day of beginning of menstruation and another phase the form was filled by subject on 12th and 13th day at end of menstruation. The same procedure was continued for 4 months.

The obtained data were analyzed by descriptive statistic i.e. Mean, Standard Deviation, Minimum, Maximum score to describe the status of the subjects with Dysamennoria effect was assessed by applying depend t- test were level of significant was determined at 0.05 level.

Table 1

Non Painful		Painful	
Irregular	Regular	Irregular	Regular
5	13	10	22

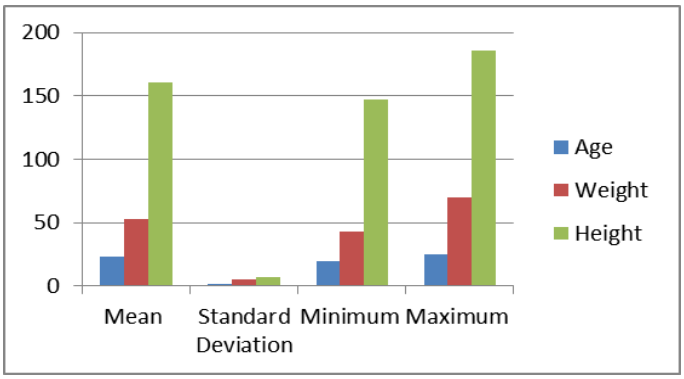


Graph 4.1: Division of subjects on the basis of their Menstrual Trend

Here, it was found that majority of I.G.I.P.E.S.S. female students are dysmenorrheal as they were having painful menstruation. The total numbers of subject accounted under dysmenorrheal category were found to be 32. Remaining 18 were having non painful menstruation. The graph 4.1 also reveals that majority of subjects were having regular menstruation with 30 subjects. 20 subjects left were having irregular menstruation.

Table 2

	Mean	Standard Deviation	Minimum	Maximum
Age	22.86	1.44	20	25
Weight	53.06	4.90	43	70
Height	160.4	7.14	147	185.5



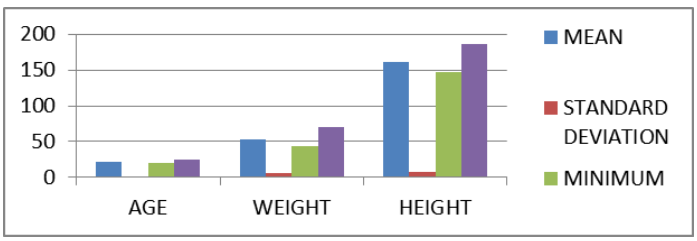
Graph 4.2: Mean, Standard Deviation, Minimum and Maximum for Age, Height and Weight of all subjects.

Table 2 has shown the value of mean, standard deviation with the minimum and maximum range for age (years), weight (kilogram), height (centimeter). The table clearly shows the mean value for the age that is 22.86 ± 1.44 with minimum value is 20 and maximum is 25. For weight, the values were found to be 53.06 ± 4.90 and minimum and maximum were 43 and 70 respectively. Furthermore mean and standard deviation values for height were 160.4 ± 7.14 along with 147 and 185.5 as minimum and maximum value.

Table 3

	Mean	Standard Deviation	Minimum	Maximum
Age	22.37	1.47	20	25
Weight	53.21	5.60	43	70
Height	160.90	8.41	147	185.5

Table 3 has accounted the value of mean, standard deviation with the minimum and maximum range for age (years), weight (kilogram), height (centimeter). The table clearly shows the mean value for the age that is 22.37 ± 1.47 with minimum value is 20 and maximum is 25. For weight, the values were found to be 53.21 ± 5.60 and minimum and maximum were 43 and 70 respectively. Furthermore mean and standard deviation values for height were 160.90 ± 8.41 along with 147 and 185.5 as minimum and maximum value.



Graph 4.3: Graphical representations of descriptive statistics of Dysmenorrheal subjects.

Table 4

		All subjects	Dysmenorrheal
Mean	Age	22.86	22.37
	Weight	53.06	53.21
	Height	160.4	160.90
Standard deviation	Age	1.44	1.47
	Weight	4.90	5.60
	Height	7.14	8.41

Though, out of 50 subjects only 32 were selected for the current study. There was no significant change were found in term of descriptive statistics in their age, height and weight. That means the selected subjects were having similar description as whole subjects. Table 4 clearly shows the mean and standard deviation values on age, weight and height of both the groups. Here we see the mean value for both groups on age were found to be 22.86 ± 1.44 and 22.37 ± 1.47 for all subjects and dysmenorrheal subject respectively. Similar values for weight were found to be 53.06 ± 4.90 and 53.21 ± 5.60 for both the groups. In last, all subjects mean and standard deviation value were found to be quite similar to dysmenorrheal subject as value for both the groups were found to be 160.4 ± 7.14 and 160.90 ± 8.41 respectively. The described values reveals the homogeneity in both the groups. All this description has also shown in figure 4.4.

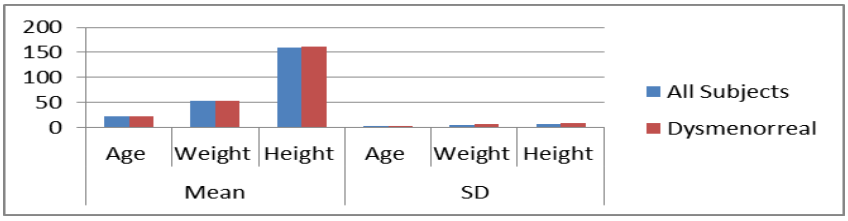


Fig 4.4: Compressions of Age, Height and Weight between All Subjects and Dysmenorrheal Subjects

Table 5: Paired Sample Statistics of Selected Subjects

	Mean	N	Standard deviation	%	T
Pair 1 Dysmenorrhea	76.03	32	15.56		3.34*
Luteal Phase	60.53	32	19.49	25.60	

*significant at 0.05 level

Selected 32 subjects were asked to fill POMS questionnaire to describe the mood state during Menses and during Luteal Phase in order to assess the fluctuation in the mood due to dysmenorrheal. For this, a compareson were made between both the phases and values were presented in table 5. The table describe the mean and standard deviation value for Luteal Phase are 60.53 ± 90.49 against dysmenorrheal which accounted the same value as 76.03 ± 15.56.

Here we can see the significant difference between the mean values of Luteal Phase and Dysmenorrheal Phase.

The percentile calculation shows the mood disturbance giving menstruations in selected subjects were found to be 25.60 %. It means mood during menses significantly decreases from the time there are no menses.

The table 5 also accounted the "t" test value is 3.346 which is significant at α =0.05 level of significant. So, there exists enough evidence to conclude that there is difference in the mean population indexes for the two phases of menstrual cycle.

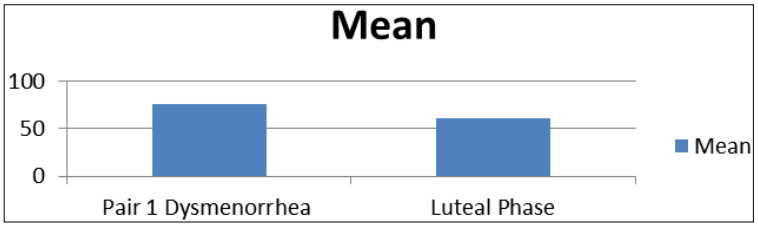


Fig 4.5: Mean of Dysmenorrheal and Luteal phase

Discussion of Findings

Dysmenorrheal is described as painful menstruation that may limit the daily activities due to pain in abdomen back to head had and may also accompanied by abdominal cramp, nausea, diarrhea and fatigue. It may also include some psychological problem such as anxiety and depression. Though, most women experiences painful periods at some time in their life, some have pain severe enough to interfere with normal activities. It was hypothesized that there is significant difference exists between dysmenorrheal phases (2^{nd} - 3^{rd} day), and the Luteal Phases (12^{th} - 13^{th} day after menses) of selected subjects from I.G.I.P.E.S.S. University of Delhi. Table 4.1 shown the finding that majority of the females who are somehow associated with one or another games/sports, are having painful menstruation. However, finding also reveals that majority are having regular menstruation. Analysis of data in

table 4.2, 4.3 and 4.4 proves the homogeneity in selected subjects and total subject participated in the study. In table 4.5, calculated "t" value of dysmenorrheal subject was 3.346 which was significant at 0.05 level of significant where mean value for Luteal Phase decreases to 60.53 from Dysmenorrheal Phase mean value which was calculated 76.03.

There was a 25.6% change in the mean value of Luteal Phase which is quite significant. The "t" value obtain was also defer significantly in term of critical value which was 2.04.

Hence, the hypothesis stated as there is significant difference in Dysmenorrheal Phase and Luteal Phase is accepted.

Conclusion

1. It was concluding that dysmenorrheal phase is significantly has lower mood state
2. It was also concluded that mood in Luteal Phase i.e. associated with better mood profile.
3. Finding also assist to conclude that sports women may also be associated with painful menstruation.

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