

STUDY OF EARLY MENSTRUAL CYCLE AMONG THE FEMALES OF AMRAVATI CITY

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Abstract: The menstrual cycle is a very important indicator of women's reproductive health and of their endocrine function. Menstruation, and the menstrual cycle are characterized by variability in volume, pattern and regularity. The purpose of this study was to determine the age of menarche, age of menopause, source of information regarding menstrual cycle, patterns, and problems faced by the adolescent urban school girls, of Amravati region, during menstruation. For collection of data Self-structured questionnaire based on issues related to menstruation cycle was used. This survey was conducted in Amravati region in some of the Muslim and Hindu areas (community). By using survey method. Average age of menarche for overall sample taken, of adolescent girls of Amravati is 14 years. It was observed that the girls whose age is present in between 12-20, 10 girls show irregularity in age menstrual cycle 4 girls show Oligomenorrhea, 10 girls show Menorrhagia. The girls whose age is present in between 21-30 8 girls show irregularity, 12 girls show Oligomenorrhea, 5 girls show Menorrhagia. The woman's whose age between 31-40, 4 women show irregularity, 3 women show Oligomenorrhea, 4 women show Menorrhagia. Higher percentage of females in Amravati city experience problem during menstruation cycle. Most of the females are suffer from Oligomenorrhea and Menorrhagia due to hormonal imbalance. Intervention program for awareness regarding Menstrual cycle and associated issues for adolescent girls and their parents should be planned so that the problems of the girls can be minimized. The aim of present study is to investigate among females, strategies of menstrual cycle.

Keywords: Menarch, Oligomenorrhea, Menorrhagia, Irregularity.

I. INTRODUCTION:

The menstrual cycle is naturally occurring function in women of reproductive age. The average length of the cycle is 28 days and is comprised of four phases: menstruation, follicular phase, ovulation, luteal phase. The cycle is required for the production of oocytes and for preparation of the uterus for pregnancy. During the menstrual cycle, body undergoes many physiological and hormonal changes. The process begins with brain triggering certain hormones to stimulate egg growth.

Once the egg matures it will release from the ovary and travel through the fallopian tube into the uterus. If the egg is not fertilized by the sperm it will disintegrate and be absorbed. When the egg goes unfertilized hormone levels will drop causing the lining of the uterus to shed and bleed resulting in a discharge through the vagina. Bleeding also known as "Menstruation". The first period usually begins between 12 and 15 years of age, a point in time known as menarch.

The typical length of time between the first day of the next is 21 to 45 days in young women and 21 to 35 days in adult. Bleeding usually lasts around 2 to 7 days. Menstruation stops occurring after menopause which usually occurs between 45 and 55 years of age. Women have common symptoms include acne, tender breasts, bloating, feeling tired, irritability and mood changes. These symptoms interfere with normal life and therefore known as premenstrual syndrome. In follicular phase, increasing amount of estrogen results in discharges of blood (menses) flow stop and the lining of the uterus thickens. Follicles in the ovary begin developing under the influence of a complex interplay of hormones, and after several days one or occasionally two become dominant (non-dominant follicles shrink and die). Approximately mid cycle, 24 to 36 hours after the luteinizing hormone (LH) surges, the dominant follicles releases an ovocyte, the ovocyte only lives for 24 hours or less without fertilization while the remains of the dominant follicle in the ovary become a corpus luteum; this body has a primary function of producing large amounts of progesterone. Under the influence of progesterone, the uterine lining changes to prepare for potential implantation of an embryo to establish a pregnancy, if implantation of the embryo does not occur within 2 weeks, the corpus luteum will involute, causing a

sharp drop in levels of both progesterone and estrogen. The hormone drop causes the uterus to shed its lining in a process termed “menstruation”.

II. MATERIALS AND METHODS :

Aim of the study: This is a descriptive study to investigate among females, strategies of menstrual cycle.

Place of study: This survey was conducted in Amravati region in some of the muslim and hindu areas(community).

A study was conducted from December 2018 to march 2019 in muslim and hindu community of Amravati region among 250 females in the different age groups i.e from (12 to 20)(21 to 30)(31 to 40)(41 to 49). By using survey method.

Instrument for data collection:

The personal interview was taken by the females.

The questionnaire which are specially designed using simple and clear language to elicit precise data required to answer the research questions and achieve the research objectives.

Data of 250 females was collected and analyzed .

The questionnaire on menstrual history enquired about the menstrual regularity, cycle length, blood loss per cycle, history of passage of clots, missed periods, pre-menstrual and post menstrual symptoms, painful periods, heavy periods and use of painkillers (to assess the severity of pain).

Data analysis: I had used tables and graphs for representation of data obtained.

Questions:

- 1) At what age did you have your first period?
- 2) Are your periods regular?
- 3) How many days of bleeding do you usually have each period?
- 4) How heavy is your menstrual flow?
- 5) How many days are there between the start of one period and the start of the next on average?
- 6) Do you have any symptoms when you have a period (pre menstrual symptoms)?
- 7) Do you have post menstrual symptoms?
- 8) Do you take painkillers for pain?
- 9) What is your current weight and age?
- 10) What do you normally use during your periods?
- 11) How is the flow of your periods (viscous or clots)?
- 12) What is a diet daily taken by you (junk foods, vegetarian foods, spicy food, non veg)?
- 13) Do periods effect your personal life?
- 14) Do you have any gland disorders specially thyroid and pituitary gland?
- 15) Do you have any eating disorders: obesity or anorexia nervosa?
- 16) Have you suffered from precocious puberty?
- 17) Do any type of stress effect your periods?
- 18) Hormonal imbalance shows any effect on periods?
- 19) Do you have any disease of uterus?
- 20) How is your Hb levels?
- 21) Are you get pregnant without M C?
- 22) After delivery you missed or not missed the period?
- 23) Do you suffering from Amenorrhea?

III. OBSERVATION AND RESULTS

Table no 1: showing the female irregularity ,stress, oligomenorrhea, menorrhagia in the females of different age groups from the survey of n(250) of females of Amravati region.

Age group	Irregularity	Stress	Oligomenorrhea	Menorrhagia
12 to 20	10	4	4	10
21 to 30	8	2	12	5
31 to 40	4	6	3	4
41 to 49	9	3	10	9

Table no 2: Showing dysmenorrheal, Amenorrhea, Anorexia nervosa, PCOD in different age group of females from a survey of n(250) females in Amravati region.

Age group	Dsymenorrhea	Amenorrhea	Anorexia Nervosa	PCOD
12 to 20	4	5	3	2
21 to 30	2	3	4	2
31 to 40	4	0	1	0
40 to 49	3	2	1	0

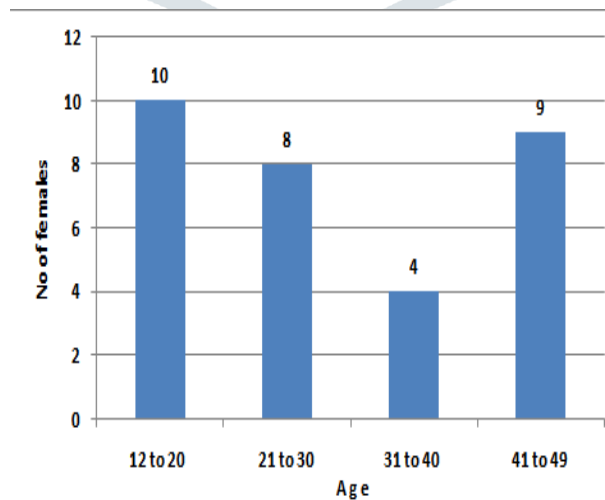


Fig-Graph showing menstrual Irregularity in females

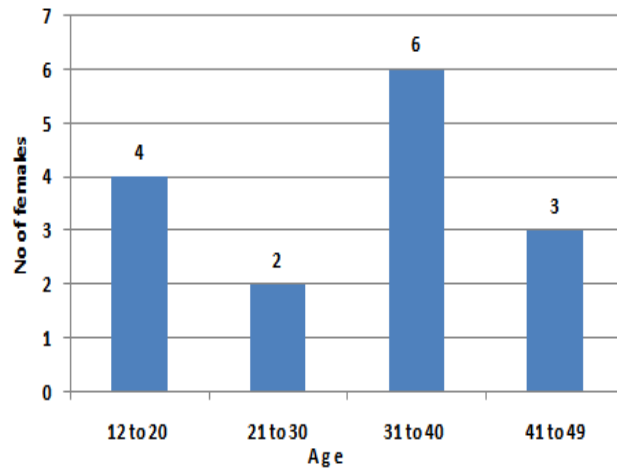


Fig-Graph showing stress effecting menstrual cycle

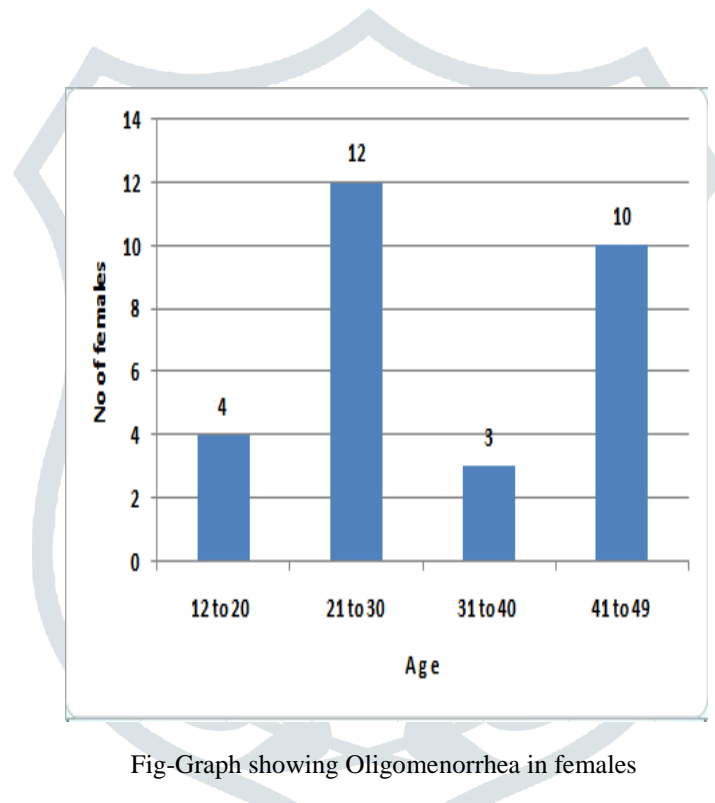


Fig-Graph showing Oligomenorrhea in females

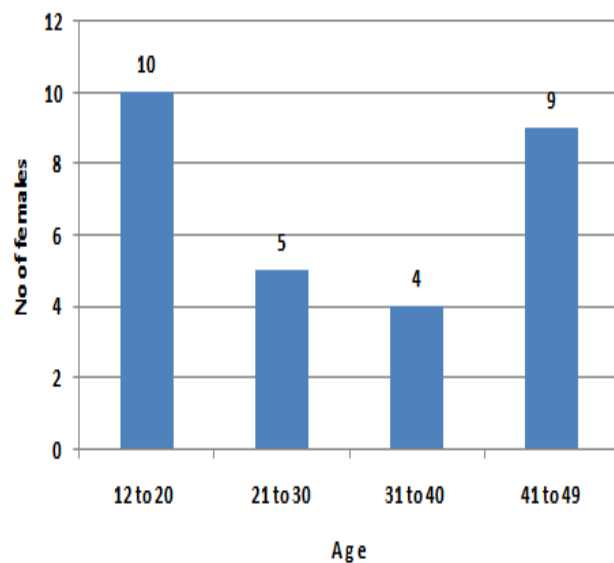


Fig- Graph showing menorrhagia in females

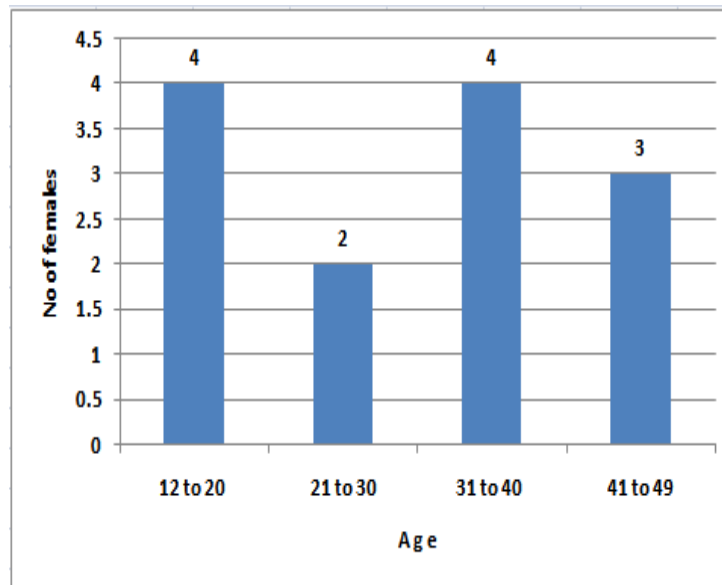


Fig – Graph showing Dysmenorrhoea in females

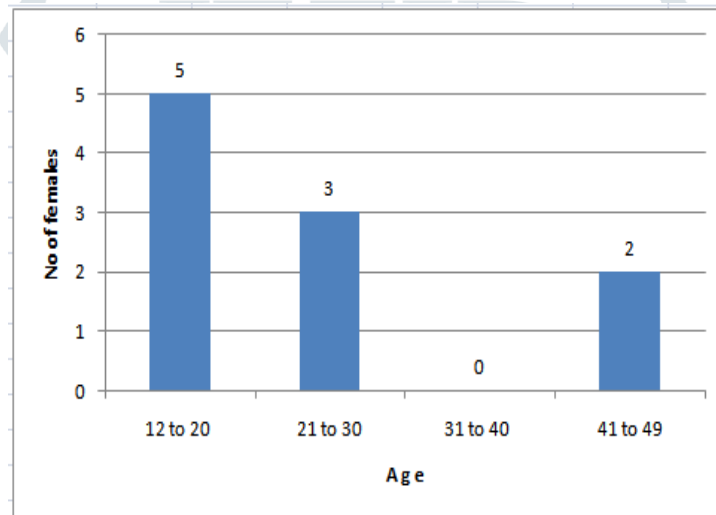


Fig – Graph showing Amenorrhea in females

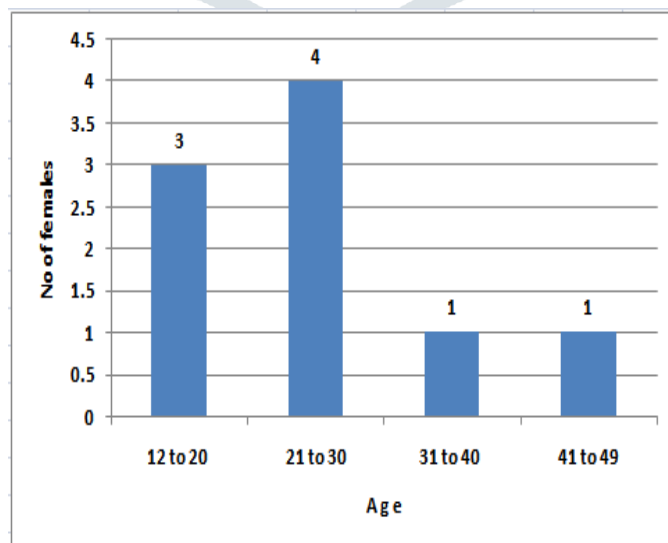


Fig –Graph showing Anorexia nervosa in females

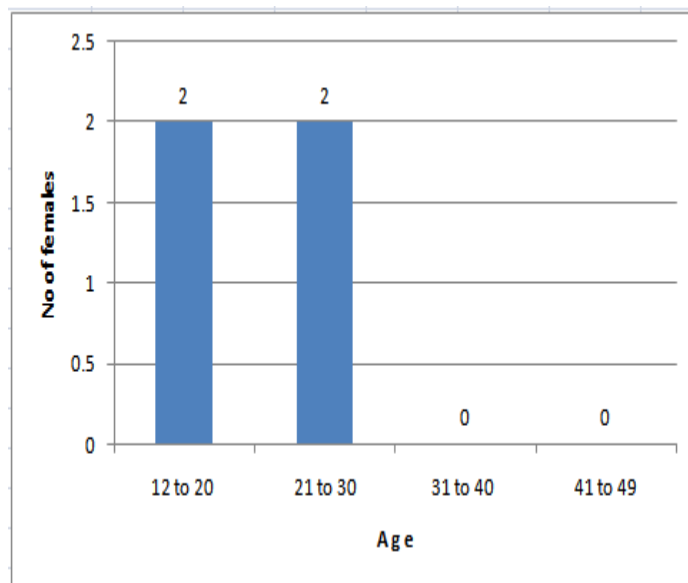


Fig- Graph showing PCOD in females

In survey on the causes or reasons of hormonal disturbances in young females, I asked 250 females facing irregular periods about their food intake practice. According to the survey of 250 females, total 10 took junk foods ,100 are taking vegetarian foods, 60 are taking spicy food and 80 are taking all type foods.

Hormonal imbalance

Type of food intake	
Junk	vegetarian
10	100

spicy	all types
60	80

Impact of stress on menstrual cycle:

On comparing the females as literate and illiterate, workers and housewives, it was seen. That there were no major differences in their level of stress. But the higher percent of workers or employs perceived more than the average level of stress ,as compare to housewives.

Menorrhagia :

In the survey of Amravati region, I had found the duration of Menorrhagia complaints as follows:

In the age groups from (12 to 20= 10) (21 to 30= 5) (31 to 40= 4) (41 to 49= 9)

Dsymenorrhoea:

Among the (n= 250) 13 females are suffering from painful menses. All the duration of pain,7 females reported that they experience pain only on first day of menstruation. 4 females first 3 days while 2 reported that they experience pain throughout the period of menstrual.

Amenorrhea in Anorexia Nervosa:

Among 250 females amenorrhea because of anorexia nervosa was found in 9 Females. Within 1 year females who remain amenorrhea are due to their body weight. Remaining 10 subjects who remained amenorrhea at 1 year had lower levels of LH and FSH.

Oligomenorrhea:

In a survey it had been reported that 10 females are hypothyroidism of age group 20 to 30 .And suffering from oligomenorrhea because of hypothyroidism. Females presenting with weight gain, cold, intolerance, fatigue, weakness, irritability, muscle cramps, decrease libido, hairfall. Then 2 females are suffering from hyperthyroidism of age 20 to 30 years. Suffering from oligomenorrhea because of hyperthyroidism. From (n=250), (n=10) are hypothyroid females and (n=2)are hyperthyroid females. Remaining (n=17) females are suffering from uterine bleeding occurring at intervals. Between 35 days or 3 to 6 months .Hence, total number of (n=29) are oligomenorrhea females are observed.

PCOD:

In the survey of (n=250), (n=4) females are affected by PCOD from childbearing age from the age group 12 to 20 and 21 to 30.

IV. DISCUSSION AND CONCLUSION:

A community based cross – sectional study was governed in December 2018 to march 2019 in urban areas of Amravati regions. The survey was conducted among school girls, college girls, married, unmarried, workers, housewives, literate, illiterate females of different age groups by using the survey method. Data was collected by personal interviews and questionnaire.

Why it is necessary to survey on menstrual cycle in females?

Because women plays important role not only in maintaining the family but also in building society .the major problem among adult girls and women is menstrual problem and its plays vital role in health. Most of the menstrual health related issues are due to lack of awareness and unhealthy sanitation. Menstruation is natural biological process that every women undergoes during a most important stage of their life. Every womens spends around 20 to 25 years in menstruating during their life time.

The study mainly concentrated toward the young challenging womens in Amravati. This study is to encourage consciousness among the adult girls, women and their families about the importance of women health and menstrual hygiene.

This research focuses on females menstrual irregularities. Investigations showed the main causes of irregular menstrual cycle in females.

- Hormonal Imbalance
- Extreme exercise or dieting
- Stress may be physical, mental or financial
- Polycystic Ovary Syndrome
- Pregnancy or breast feeding
- Over active thyroid (hyperthyroidism)
- Under active thyroid (hypothyroidism)

Impact of stress on menstrual cycle:

In this study we tried to elucidate the differences between the illiterate and literate, workers and housewives regarding their perception of stress and manifestations of menstrual irregularities. All the females who had been survey are not the housewives, some of them are the workers also with base line characteristics. A significant association of increased stress scores with

painful periods, passage of cloths was observed. Nepomnaschy et al., have suggested that stress scores causes activation of the hypothalamic-pituitary-adrenal (HPA) axis which inhibits hypothalamic pituitary gonadal (HPG) axis. Researchers have shown that psychological responses such as activation of CRH which affects Menstrual functions. Stress have consistently been associated with variation in the length and duration of the M.C, ovulation and amount of menstrual bleeding. Our study has also demonstrated significantly positive association of stress. Among 250 females,15 females having irregular cycles reported higher stress of the age group (12 to 20 =4) (21 to 30=2) (31 to 40=6) (41 to 49=3). Dysmenorrhoea (pain during periods) was reported to be the commonest menstrual Problem and premenstrual symptoms as the most distressing problem associated with menstrual cycle. Various studies has reported a wide range variation in the incidence of dsymenorrhoea. In a Amravati region between the ranges of age groups:(12 to 20=4) (21 to 30=2) (31 to 40=4) (40 to 49=3). In the study 13 enrolled subjects complained of dysmenorrhoea.

Menorrhagia: Is considered to be one of the most significant causes of ill health in females. One in 20 women aged between 12 to 20 or 30 to 49 years consults her general practitioner each year with heavy menstrual loss. Studies shows that although menorrhagia rarely threatens life, it have negative effects on woman's personal, family, social, and work life and decreases quality of life. In the present study we had survey (n=250)females of Amravati region of different age groups :(12 to 20=10) (21 to 30=4) (31 to 40 =5) (41 to 49=9) had severe menstruation And reported to have negative effects on their quality of life.(n=28) females in this study stated that their clothes, bed linens and furniture got dirty, and they experienced more pain parallel to increase in bleeding. They also state that they used more than one product at same time.

Survey was conducted (december-2018 to march -2019) of 250 number of the females. I had concluded the following points:

- Hormonal imbalances has relation with food intake ,because of which females are facing irregular periods.
- The problems suffered by females regarding their reproductive cycle are due to psychological stress, anxiety and depression.
- Menorrhagia has significant effect on personal , social ,family and work life of women.it is also responsible for the iron deficiency anemia and have negative impact on women's quality of life.
- Most of the females experience pain for first day or first 3 day of menstrual cycle. Few of them experience pain throughout menstrual period. There was no significant relationship between age and pain intensity.
- Thyroid dysfunction is closely related to menstrual disorders. Oligomenorrhea is most common symptom in thyroid disorders has been noted.
- PCOD is most common cause of anovulatory infertility. Anxiety, depression, stress, and personal dissatisfaction reported by the females found in survey who are living with PCOD and may be aggravated by the image body change for consequence of weight gain.
- Resumption of menses required restoration of hypothalamic pituitary ovarian function and the body weight.

Recommendations of future research:

Researchers could conduct a survey on a large populations, aiming towards menstruation among the females.

Perhaps this females attitudes toward menstruation will change, as they will have a stronger need or desire to know about menstrual, to track their ovulation and menstrual cycles and they could begin to feel more comfortable .

A future study with larger and random data collection should be done in every region with various backgrounds of ethnicities, sexual orientations and social economic statuses would be needed to make generalizable conclusions.

The collected data should also include more respondents who are biological females, who are pregnant, who have irregular periods, heavy bleeding or absence of bleeding, who also have menstrual related disorders.

Future research should include a survey similar to this study with additional questions that ask the respondents their reliability and awareness of menstrual cycle.

The survey could include a sample of biological females with regular or irregular periods as well as people of different ages, genders, sexes and education levels to explore their attitude toward menstrual cycle and compare the finding with this study.

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