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Survey on Effect of Menstrual problems Among Females of Bengaluru population: An approach for well-being of females

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Abstract

Menstrual problems are the major gynaecological problems which occur frequently in majority of female. Menstrual problems affect the physiology, psychology and well-being of a female. By knowing what type of symptoms and when to expect symptoms, help female to schedule her activities. The problems may be due to heredity or hormonal imbalance.

A study was conducted with 125 females of in and around Bengaluru, within the age group of 12-35 years, to understand better about the common menstrual problems faced by female during their menstrual period. The survey identified about menstruation, and limited options for alleviating their menstrual discomfort. The survey revealed that choice of products used to manage menstruation (either cloth or disposable pad) is mostly influenced by cost factors, comfort and habit as well as cultural restrictions. Females are largely not aware of the environmental impact.

Keywords: Gynaecological problems, Menstrual problem, Heredity, Hormonal imbalance, Environmental impact.

1. Introduction

In a life cycle, a women's body is vulnerable to a variety of changes. The cycle of these changes in women every month, positively in pregnancy is called menstrual cycle. When an ovum is unfertilized the uterus lining sheds and leads to hemorrhage, called menstruation. In a girl, menstruation starts from the age of 10-16 when she attains puberty and this beginning is known menarche. The ending of menstruation is known as menopause which takes place at the age range of 50.The first day of bleeding is marked as the first day of menstrual cycle and period from one menstrual cycle to another can vary from 28 to 30 days.

Before discussing the different phases of menstrual cycle, it is important to have a glimpse of female reproductive system and organs involved in the cycle. They mainly include:

1. A pair of ovaries which stores nourishes and releases ova.
2. Uterus (womb) where implantation of a fertilized egg takes place and the fetus develops.
3. Pair of the fallopian tube connecting the ovaries and uterus

The count of the ovum in each ovary is decided and fixed before the birth of the girl. As she reaches puberty, hormones stimulate the development and release of one ovum each month. This continues till menopause. The menstrual cycle is divided into four phases namely:

1. **Menstrual phase**
2. **Follicular phase**
3. **Ovulatory phase**
4. **Luteal phase**

The three stages of the menstrual cycle are described below:

- **DAY 1-5 MENSTRAUL PHASE**
- **DAY 6-14 PROLIFERATIVE PHASE**
- **DAY 15-28 SECRETORY PHASE**

Menstruation is the physiologic shedding of endometrium. It is also called menstrual bleeding or menses, periods or catamenia. Follicular phase, also called proliferative phase during which the ovarian follicles are stimulated to mature. The matured follicle is called Graafian follicle, which undergoes changes to form ovum. Ovulation is a process in which the ovum is released from the ovary. Luteal phase is also called secretary phase, during which the corpus luteum is formed. It secrets several hormones. Menstruation is a slave to certain hormones. Every phase of the menstrual cycle is influenced by a female hormone namely estrogen, progesterone, FSH and LH. Menstrual problems affect physiology, psychology and well-being of women. The problems may be due to heredity or hormonal imbalance. According to the abnormality of the menstrual cycle they are classified as:

Menorrhagia, Metrorrhagia, Menometrorrhagia, Oligomenorrhea, Dysmenorrhea, Amenorrhea, Euromenorrhea.

In 2000, Demier*et.al* performed a study on dysfunctional uterine bleeding and other menstrual problems of secondary school students in Adana, Turkey. Age at menarche and menstrual problems were studied. Dysmenorrhea was experienced by 38.7% of the girls and 41% uses pain killers during menstruation, half of them used the drugs on consultation with their family members, while other half had taken self-medications. Most of the students discussed their menstrual problems with their mothers.

In 2001, Warner *et.al* made a cross sectional survey of symptoms, reasons for referral and management of menstrual problems. Most of the individuals visited the clinics mainly due to menstrual loss. Some have undergone hysterectomy due to heavy bleeding.

In 2003, Sharma and Gupta performed a survey on menstrual pattern and abnormalities in high school girls of Dharan. Majority had spasmodic dysmenorrhea, among which only 20% experiences disturbances in their daily activities. The majority of students are ignorant about abnormal menstruation.

In 2004, Demerath*et.al* studied recent decline in age at menarche. They found that the decline in age at menarche is due to increased Body Mass Index (BMI) during childhood or adolescence.

In 2006, Lee *et.al* did a cross-sectional analysis of menstruation among adolescent school girls in Malaysia, in which 75% of individual's experiences premenstrual syndrome and 69% showed dysmenorrhea.

2. Material and Methods

A survey was carried out to study various menstrual problems experienced by the girls and women with the age group between 12–35 years. A questionnaire was designed and their details were collected.

Place of survey

In and around Bengaluru (Jakkasandra, Kanakpura)

Questionnaire

Name: **Age of Menarche:**

Age: **Marital Status:**

1. Menstrual period: a. Regular b. Irregular
2. If Irregular: a. Twice in a month
   b. Once in three months
   c. Once in six moths
   d. Once in nine moths
   e. Once in a year
3. Days between two successive periods: a. More than 28 b. Less than 28
4. Periods of menses: a. 1-day b. 1-3 days c. 5 days d. 7 days
5. Bleeding: a. Light
   b. Medium
   c. Heavy
   d. Spotting
6. Spotting between periods: a. Yes b. No c. Sometimes
7. Pain during menstrual periods: a. Yes b. No c. Sometimes
8. Stomach pain: a. Intense b. Moderate c. Sometimes
9. Food: a. Vegetarian b. Non-Vegetarian

Physiological condition

10. Anxiety : a. Yes b. No c. Sometimes
11. Confusion : a. Yes b. No c. Sometimes
12. Depression : a. Yes b. No c. Sometimes
13. Forget fullness : a. Yes b. No c. Sometimes
14. Irritability : a. Yes b. No c. Sometimes
15. Difficulty in concentrating : a. Yes b. No c. Sometimes
16. Mood swings : a. Yes b. No c. Sometimes
17. Anger : a. Yes b. No c. Sometimes
18. Sleeplessness : a. Yes b. No c. Sometimes

Treatment

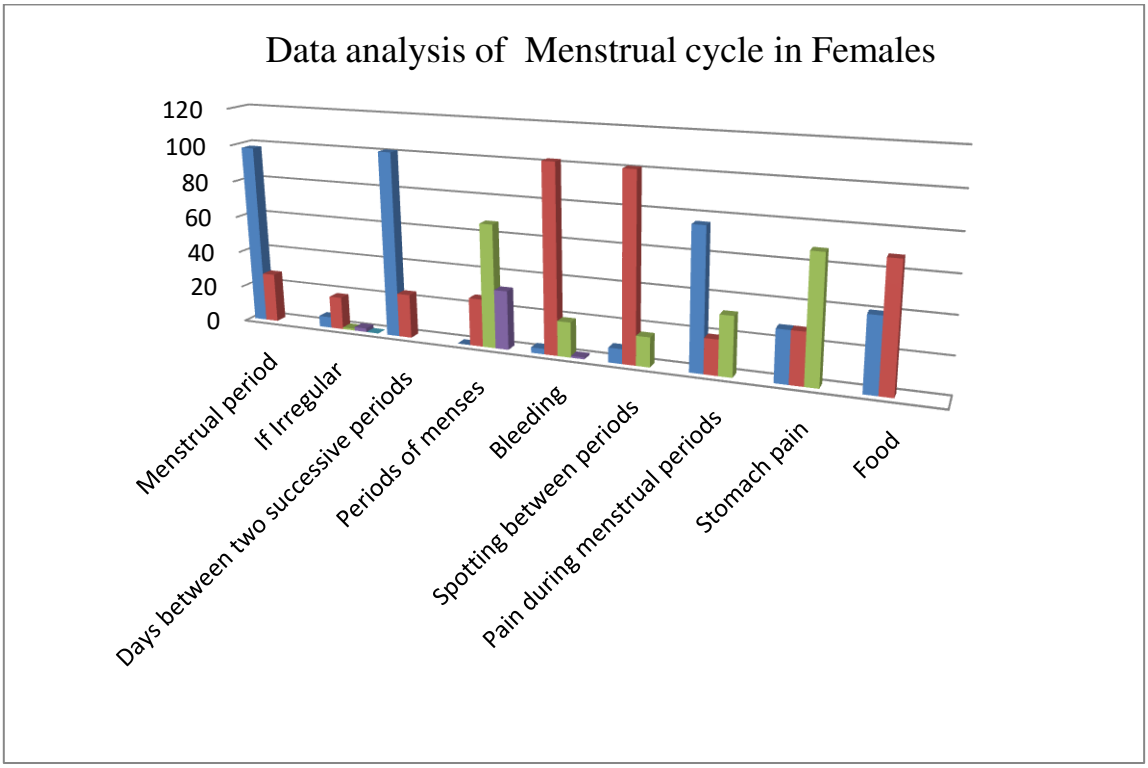
19. Mention the disorder (If any):
20. Taking treatment: a. Yes b. No
21. Type of treatment: a. Drugs b. Hormones c. Others
22. Taking tablets to postpone periods: a. Yes b. No

Data analysis of menstrual cycle in females					
Menstrual period	Regular			Irregular	
	98			27	
If Irregular	Twice in a month	Once in three months	Once in six moths	Once in nine moths	Once in a year
	6	18	1	2	0

Days between two successive periods	More than 28 days		Less than 28 days	
	101		24	
Periods of menses	1 day	1-3 days	5 days	7 days
	0	26	67	32
Bleeding	Light	Medium	Heavy	Spotting
	3	102	19	1
Spotting between periods	Yes	No	Sometimes	
	8	101	16	
Pain during menstrual periods	Yes	No	Sometimes	
	76	19	32	
Stomach pain	Intense	Moderate	Sometimes	
	28	28	69	
Food	Vegetarian		Non-Vegetarian	
	40		85	

Data Analysis

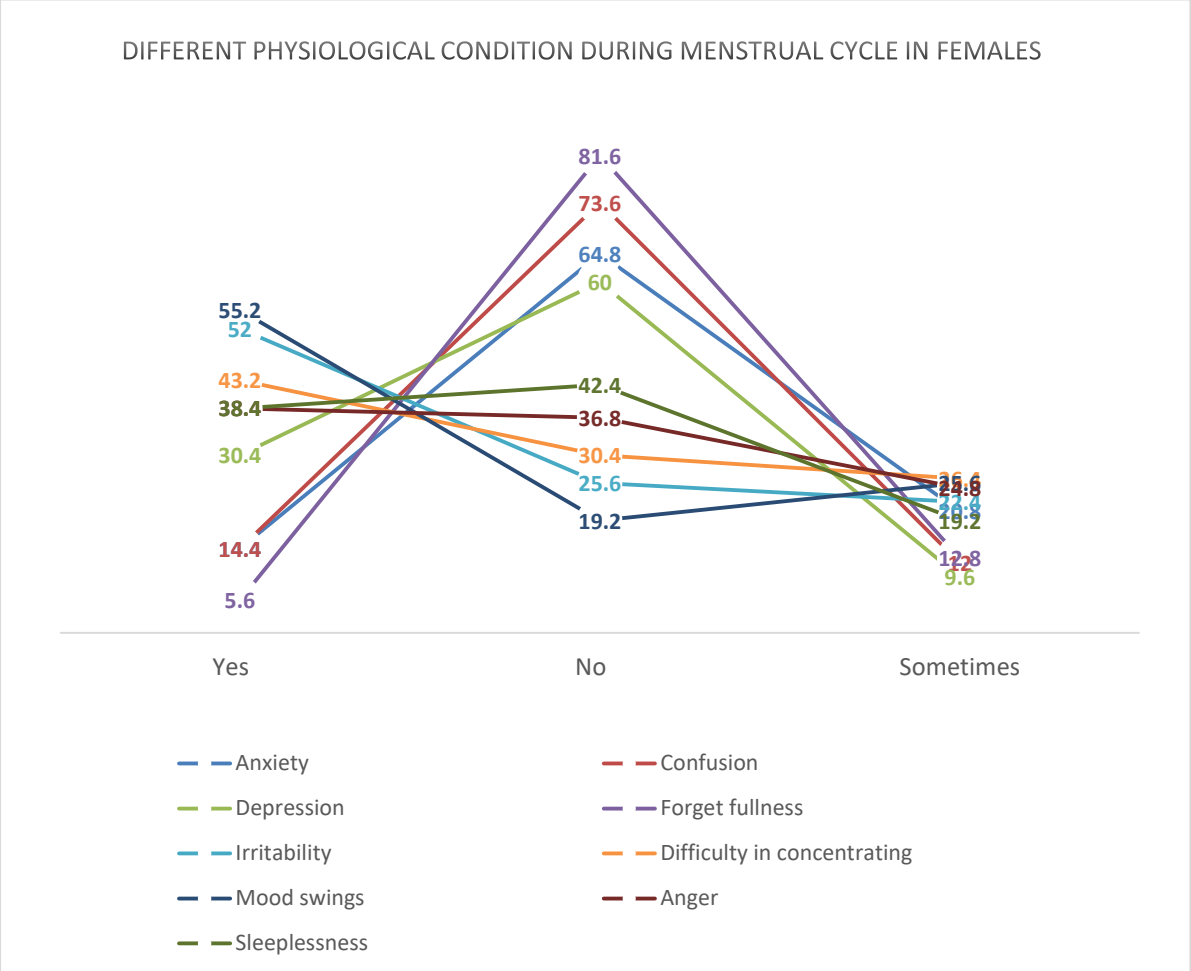
Table.1: Data analysis of menstrual cycle in females.



Graph.1: Analysis of menstrual cycle in females.

Different Physiological condition during menstrual cycle in females.						
	Yes	%	No	%	Sometimes	%
Anxiety	18	14.4	81	64.8	26	20.8
Confusion	18	14.4	92	73.6	15	12
Depression	38	30.4	75	60	12	9.6
Forget fullness	7	5.6	102	81.6	16	12.8
Irritability	65	52	32	25.6	28	22.4
Difficulty in concentrating	54	43.2	38	30.4	33	26.4
Mood swings	69	55.2	24	19.2	32	25.6
Anger	48	38.4	46	36.8	31	24.8
Sleeplessness	48	38.4	53	42.4	24	19.2

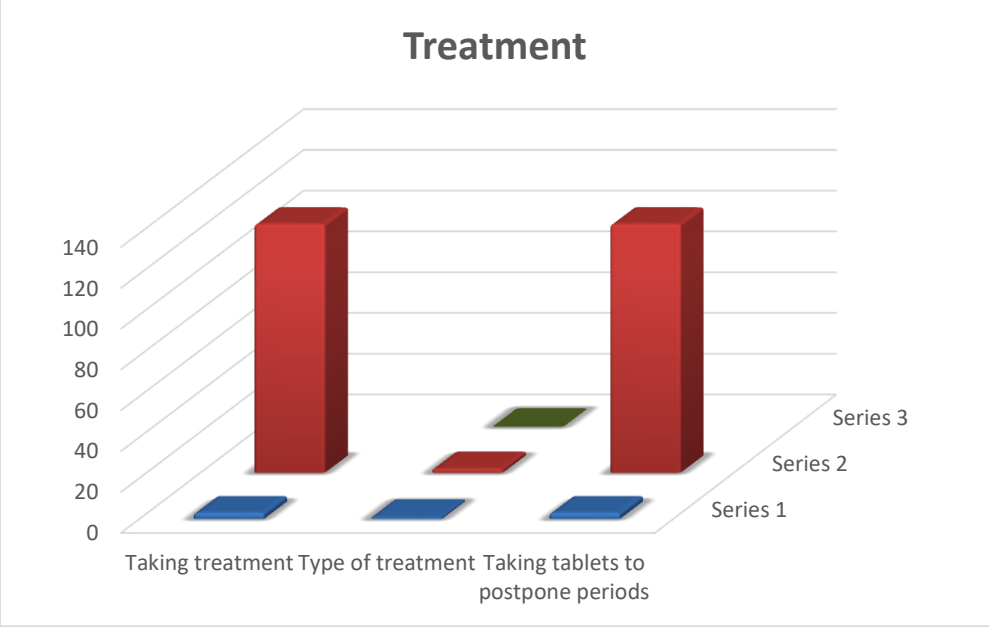
Table.2: Data of different Physiological condition during menstrual cycle in females.



Graph.2: Analysis of different Physiological condition during menstrual cycle in females.

Treatment taken for menstrual cycle by females.			
Taking treatment	Yes	No	
	3	122	
Type of treatment	Drugs	Hormones	Others
	1	2	0
Taking tablets to postpone periods	Yes	No	
	3	122	

Table.3: Data of Treatment taken for menstrual cycle by females.



Graph.3: Analysis of Treatment taken for menstrual cycle by females.

3. Results

A total of 125 members were interviewed randomly in and around the area of Kanakapura village and other places. Among the respondents about 98% of women belong to the age group of 15–35 years.

The age of menarche of these women was studied of which their first menses at the age of 14 and some female's menarche at 16 year and above. The prevalence of irregular menstrual period was too low *i.e.* 21.6% of which about 22.2% women experiences menstrual periods twice in a month, 66.6% have their menses once in 3 months, 3.7% have their menses once in six months and 7.4% have their menses once in nine months. About 78.4% of females have regular menstrual period.

About 80.8% of females have the menstrual cycle of more than 28 days. But only 19.2% of females experience about less than 28 days of menstrual cycle. The period of menses in majority of the respondents is with the period length of 5 days. Only 53.6% have bleeding more than 5 days. The

female's food habit also plays a vital role in menstrual cycle. Among 125 females 32% of female are pure vegetarian and 68% are non-vegetarian.

The bleeding range is also medium in majority of the respondents 81.6%. The light bleeding is about 2.4% and heavy bleeding is 15.2%. The spotting between periods was experienced by 6.4% of females while 12.8% of the females experienced spotting sometimes and 80.8% of them did not experience spotting at all. Prevalence of pain was studied among the women of which majority 60.8% of them experiences pain during their menstrual periods. Chest pain is found in very less cases and stomach and hip pain was found to be more common followed by pain in arms and legs and the days of severe pain seems to be on the 1st day of the menses, which was 22.4% of cases, 15.2% of females were free from pain during menstrual cycle and 25.6% of them were having pain only sometimes. Some of the other physiological symptoms such as confusion, anger, irritabilities, are also studied of which irritability 52% and is more prevalent are compared to other symptoms. Among the psychological symptoms, 14.4% experiences anxiety, 14.4% have a confused condition during their menses. Depression was seen in 30.4% of cases, 5.6% reported to have forgetfulness, 52% experiences irritability, followed by difficulty in concentrating 43.2% and mood swing 55.2%. Of which the most prevalent symptoms are anger which is reported in 38.4% of individuals. Sleeplessness was seen in 38.4% of cases.

In the present survey, 80.8% have been showing a menstrual cycle of more than 28 days and 19.2% with 28 days cycle and less percentage have been showing a short cycle.

In the present work 20.8% were reported to be having the period of menses for 1-3 days and 53.6% for 5 days and 0 % has the period of 1 day and 25.6% have all the seven days. The duration between two successive periods is more than 28 days for 80.8% females. Some treatment taken during menstrual cycle was surveyed. About 97.6% of females are not taking any treatment whereas only 2.4% of female are treated with some drugs to postpone the menses during busy schedule.

4. Discussion

Menstrual disorders were found to be more common among majority of females. Especially the disorders are prevalent among young girls which were mainly due to the immaturity of the hypothalamic–pituitary gonadal axis. Age of menarche is another critical factor that brings forth several irregularities. From the studies it was found that the age of menarche has been lowered very much for the past 40 to 50 years. According to World Health Organization International and Multicentre study of 3073 girls, the median length of the first cycle after menarche was 34 days with 38% of cycle lengths exceeding 40 days. So, the irregular menstrual cycle in young girls may not be taken in account, since they vary from 34 days to even more than 60 days followed by their first and second menses. According to National Health Interview Survey (NHIS) both the premenstrual and menstrual effects produced emotional distress among 19% of the surveyed individuals. Abnormal menstruation is seen significantly more common females who practices dieting and those who did not perform physical exercise. Abnormal menstrual flow and irregular periods are more common among girls who have smoking habit. The girls with the age group of 14 to 20 years tend to lose weight with menstrual irregularity and menstrual pain. This study reported that about 7% of adolescents have symptoms which were severe enough for them to be absent from school. Age of women have a significant relationship ($P<0.05$) with period of menses, bleeding, pain during the period, hip pain, pain in legs and depression. Whereas age has no significant effect on other menstrual problems like irregular periods, stomach pain, pain in arms & joints, chest pain head ache, fatigue, dizziness, constipation, fainting, indigestion, confusion, irritability, mood swing and anger.

Thyroid dysfunction is associated with a range of menstrual abnormalities. The connection between thyroid hormone levels and the menstrual cycle is mainly mediated by Thyrotropin Releasing Hormone (TRH), which has a direct effect on the ovary. Heavy smoking may lead to shortening of the follicular phase. Segments of exsmokers with ten or more pack-years of exposure were more likely to be short and have shorter luteal phases than those of never smokers. Alcohol both directly and indirectly affects your menstrual cycle. A small amount of alcohol may only temporarily increase estrogens levels in your body, causing an irregularity in ovulation. Yet, the amount of alcohol intake would have to be drastic to alter hormones significantly. Alcohol can prolong menstrual disorders. While having one drink a day will not make any permanent impact on your menstrual cycle, more than seven drinks in a week for a woman can offset the natural hormonal dance the female body goes through. Consumption of excess alcohol increases in r chance for irregular menstrual cycles and even early menopause. After becoming sexually active, some girls may notice that their menstrual cycles have changed. It triggers the release of a large amount of oxytocin. This is not mandatory for conception, but necessary for regulating female hormone fluctuations, reducing stress, and managing the menstrual cycle. Sexual activity also changes the levels of various hormones that affect the cycle, making it regular and the premenstrual syndrome symptoms less pronounced. The dietary needs are about the same during your period as they are the rest of the month, but in case of heavy blood flow, there is need for some extra iron. For meat-eater can obtain high content of iron, but if a vegetarian or vegan diet, there might want to take an iron supplement.

Due to urbanization as in case of kanakapura area there is a national highway construction which is indirectly affecting the quality of females living in that area.

This work can be carried out, still in large population, factors like pollution or excessive work or diet can be studied. The role of exercise and yoga, role of stress, effect of hormone level in blood etc. can be studied

Fig.1: Collection of Data.

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