# Prevalence of Soothagavali (Dysmenorrhea) among female students of Govt. Siddha Medical College, Palayamkottai

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## ABSTRACT

Pain associated with menstruation is termed as Soothagavali in siddha medicine, also referred as dysmenorrhea in modern aspect of medicine. Dysmenorrhea is a major gynecological problem among female adults. Female medical students are no exception .Studies report dysmenorrhea is very common among reproductive age group of women. The objective is to estimate the prevalence of soothagavali (dysmenorrhea) among female students. A total of 268 female UG students were included in the study. A cross sectional study was done during the month of May 2018 to August 2018.A self administered questionnaire was used to collect personal details, food habits, daily habits and menstrual details of the participants. Prevalence of dysmenorrhea is 77.2% with 14.2% mild pain, 46.3% moderate pain and 16.8% severe pain.

Participants who had long menstrual cycle interval, underweight, mixed diets were likely to had dysmenorrhea. Major study participants were not taking medications for dysmenorrhea .**Conclusion:** Dysmenorrhea is common among female students of Govt.Siddha medical college, Palayamkottai. It is very important to spread awareness about the causes and treatment of dysmenorrhea to avoid unwanted health issues and decreased quality of life.

**Keywords:** Dysmenorrhea, Female medical students, Prevalence, Soothagavali

## INTRODUCTION

Menstruation is a basic female physiological process, capable of affecting the several other metabolisms within the body. Every month, one egg leaves from one of the ovaries on its way to the uterus via fallopian tubes. The inner uterine wall known as the endometrium thickens and there is increased blood circulation in the entire reproductive system. Women may face several difficulties during their menstrual flow. In some women the effects are more aggressive than others. And the most worrisome thing is that the symptoms could recur month after month[1]. One of the major physiological changes that take place in adolescent girls is the onset of menarche, which is often associated with problems of irregular menstruation, excessive bleeding and dysmenorrhea. Of these, dysmenorrhea, is a recurrent, cramping lower abdominal pain during menstruation is one of the common problems experienced by many adolescent girls[2]

The term dysmenorrhea is derived from the Greek words dys (difficult, painful or abnormal), meno (month) and rrhea (flow). It is characterized by crampy pelvic pain beginning shortly before or at the onset of menses and lasting 1 to 3 days[3]. It may be associated with headache, dizziness, diarrhea, nausea and vomiting backache and leg pain[4].

Dysmenorrhea may be categorized into two distinct types: primary and secondary.

Primary dysmenorrhea is defined as painful menses in women with normal pelvic anatomy, usually beginning during adolescence. Secondary dysmenorrhea is menstrual pain associated with underlying pathology, and its onset may be years after menarche. It can be caused by any of the disorders such as endometriosis, pelvic inflammatory disease, intra-uterine devices, irregular cycles or infertility problems, ovarian cysts, adenomyosis, uterine myomas or polyps, intra-uterine adhesions or cervical stenosis[5].

**In siddha literatures**, pain associated with menstruation is defined as soothagavali.

Also termed as, a kind of menorrhagia attended with an aching in

the limbs and a painful flow of the catamenial fluid.

Dysmenorrhea, it is of three kinds.1.inflammatory 2.membranous 3.spasmodic. They may be distinguished by their characteristic pains[6].

## SIGNIFICANCE OF THE STUDY

According to British medical authorities report that degree of dysmenorrhea in the year of 2000, 80% of the world women have different degree of dysmenorrhea.

According to Med India journal in the year of 2008, pain during menstruation or dysmenorrhea occurs in 50% of menstrual women and about 10% are incapacitated for 1-3 day each month. In the 1st year after menarche 38% of girls develop dysmenorrhea. In the second and the third year after menarche 20% experience pain related to menstruation, about 80% of women who developed dysmenorrhea do so within 3 years of menarche.

Estimates suggest that around 25-50% of adult women and about 75% of adolescents experience pain with menstruation, and some 5-20% report severe pain that prevents them from carrying on with their usual activities[1].

Studies conducted in the developing countries reported a prevalence ranging from 71% to 75%[6]. Dysmenorrhea affects the physical, psychological, and social status of female adolescents. According to study conducted

in India among female medical students who reported dysmenorrhea, 31.67% and 8.68% were frequently missing college and classes, respectively[7]. Dysmenorrhea appears to have an impact on public and occupational health, but its prevalence is unclear, with studies performed in different populations reporting rates of between 20% and 94%[8].

## AIM

Prevalence of soothagavali (dysmenorrhea) among female students of Govt. Siddha medical college, palayamkottai.

## OBJECTIVE

**Primary**

To estimate the prevalence of soothagavali (dysmenorrhea) among female students of Govt.Siddha medical college, palayamkottai.

**Secondary**

To document the management strategies followed by the students.

To determine the factors associated with menstrual pain.

## MATERIALS AND METHODS

### Study design

Cross sectional study

### Study population

UG female students

### Data collection procedure

This study was conducted between May 2018 to August 2018 in the college after giving consideration to inclusion and exclusion criteria. The study was performed on a total of 268 students who agreed to participate in the project and consent was taken. Ethical approval was obtained from the college council committee/ review board before starting the study.

The data was collected by assessment form, questions were prepared regarding personal details, food habits, daily habits, menstrual characteristics and dysmenorrhea[11] BMI was calculated by measuring participant's height and weight. Pain scale (visual analogue scale) was used for assessment of dysmenorrhea severity.

Prevalence was calculated by dysmenorrhea experienced by the participants for the past 5 months and severity was also noted. The questionnaires were tested by a pilot study and necessary modifications were made in the assessment form before starting the study. The questionnaires were distributed to the 268 students who agreed to participate in the study.

After distributing the questionnaires to students at the college, all the participants were told that participation in the investigation was strictly voluntary and the data would not be used for other purpose except for this research study. They were informed of how the questionnaires were to be filled in and they were requested to make choices applicable to themselves. Completed questionnaires were collected and analyzed in Microsoft excel[3].

## OBSERVATION AND RESULTS

The age of participants was 17-24. Most of them were between the ages of 18-21. The BMI of participants were 46% underweight, 44% normal, 9% overweight, 1% obese. Age of menarche of most participants was   93%- 11 to15 years and after 15 years 7% (table 2). 16% of participants had pelvic pain other than periods.   21% of participants have pcos (Polycystic Ovarian Syndrome). One of the participant has adenomyosis.

### TABLE 1: DEMOGRAPHIC CHARACTERISTICS OF PARTICIPANTS

| Variables | frequency | Percent |
|---|---|---|
| ACADEMIC YEAR | | |
| First year | 70 | 26% |
| Second year | 72 | 27% |
| Third year | 62 | 23% |
| Final year | 64 | 24% |
| RELIGION | | |
| Hindu | 238 | 89% |
| Muslim | 14 | 5% |
| Christian | 16 | 6% |
| FAMILY MONTHLY INCOME | | |
| High | 2 | 1% |
| Middle | 242 | 90% |
| low | 24 | 9% |
| PLACEOF STAY | | |
| Day scholar | 22 | 8% |
| Hostler | 246 | 92% |
| MARITAL STATUS | | |
| Married | 3 | 1% |
| unmarried | 265 | 99% |

CATAGORIES OF BMI[10]

| | | PAIN SCALE | |
|---|---|---|---|
| Underweight | 15-19.9 | | |
| Normal weight | 20-24.9 | 1-3 | Mild |
| Overweight | 25-29.9 | 4-6 | Moderate |
| Obesity | 30-40/ > 40. | 7-10 | Severe |

## Figure 1 Prolonged constipation
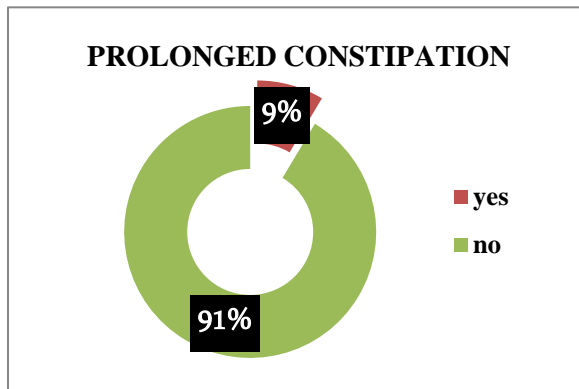


91% of participants has no prolonged constipation

## Figure 2 Urination



77% of participants have normal urination and 15% have increased urination during menstruation.

## Figure 3 Bowel movements



74% of participants have normal bowel movements during menstruation.18% have loose, mushy, watery bowel movements.
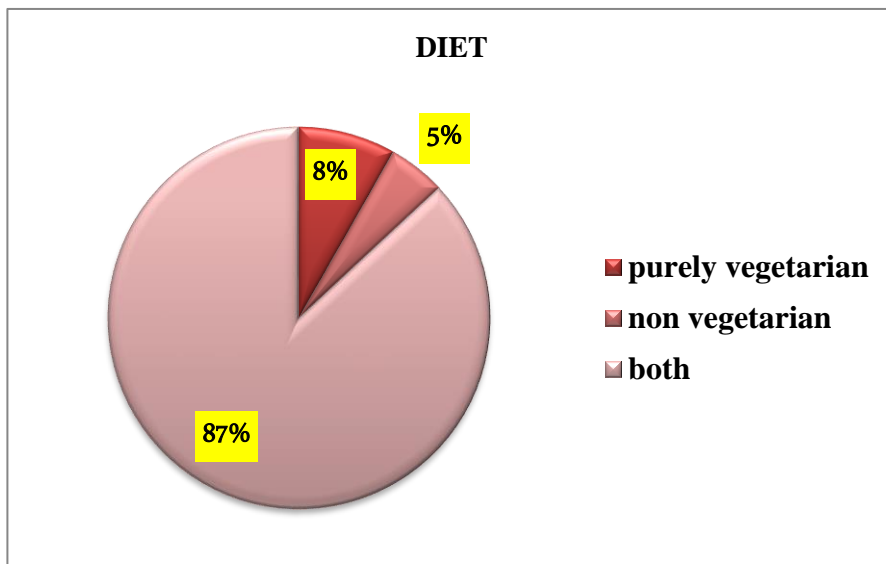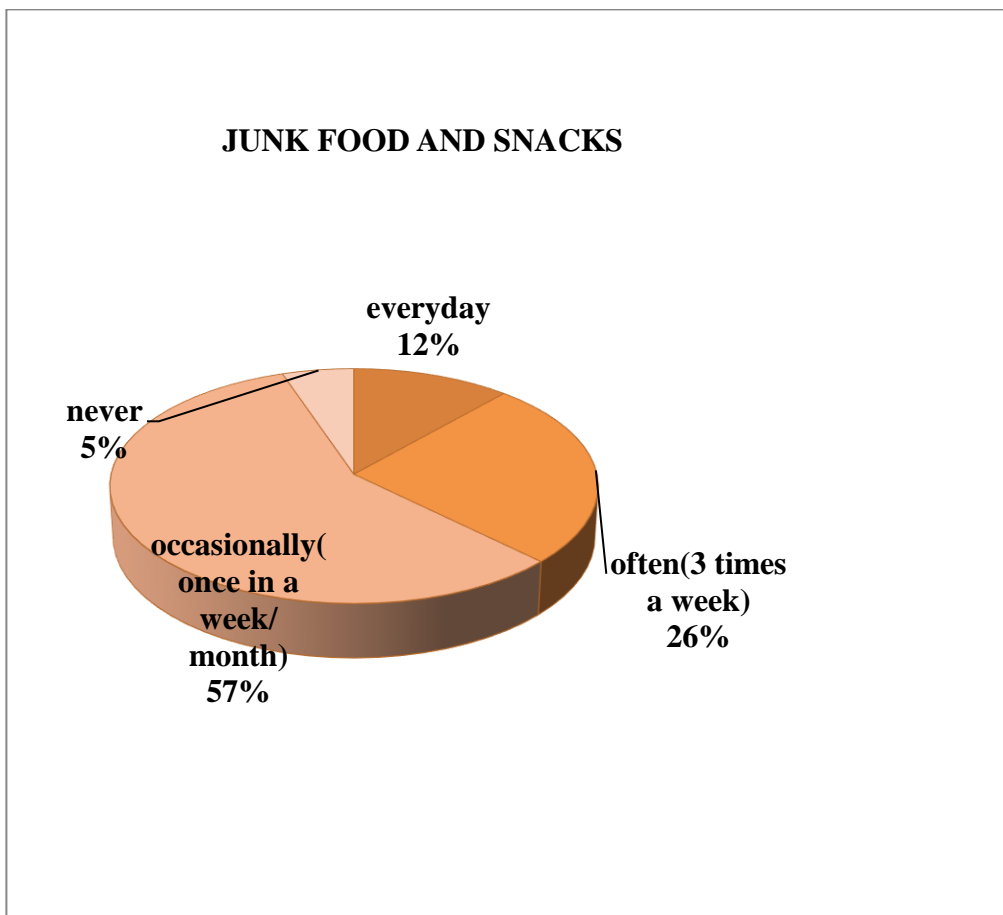
## Figure 4 Awake at night
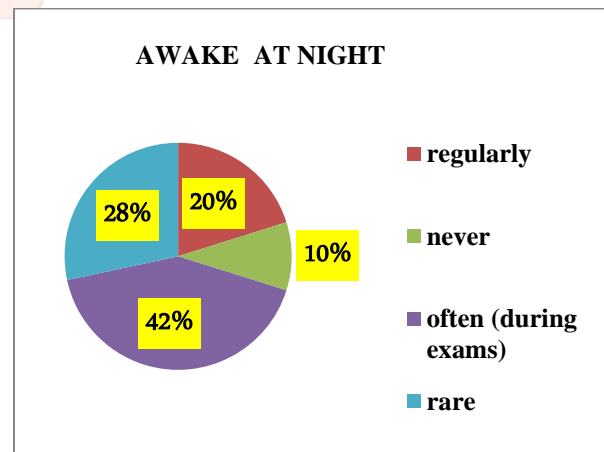


20% of participants were awake regularly up to late night and 40% of participants were awake during exam time.

## Figure 5   Diet

**DIET**



87% of participants take mixed diet (both veg and non veg)

## Figure 6 Junk foods and snacks

**JUNK FOOD AND SNACKS**



57% take junk foods and snacks occasionally and 26% of participants take often.

**Figure 7**



COFFEE CONSUMPTION

- once in a day
- twice in a day
- more than 2 in a day
- often
- never
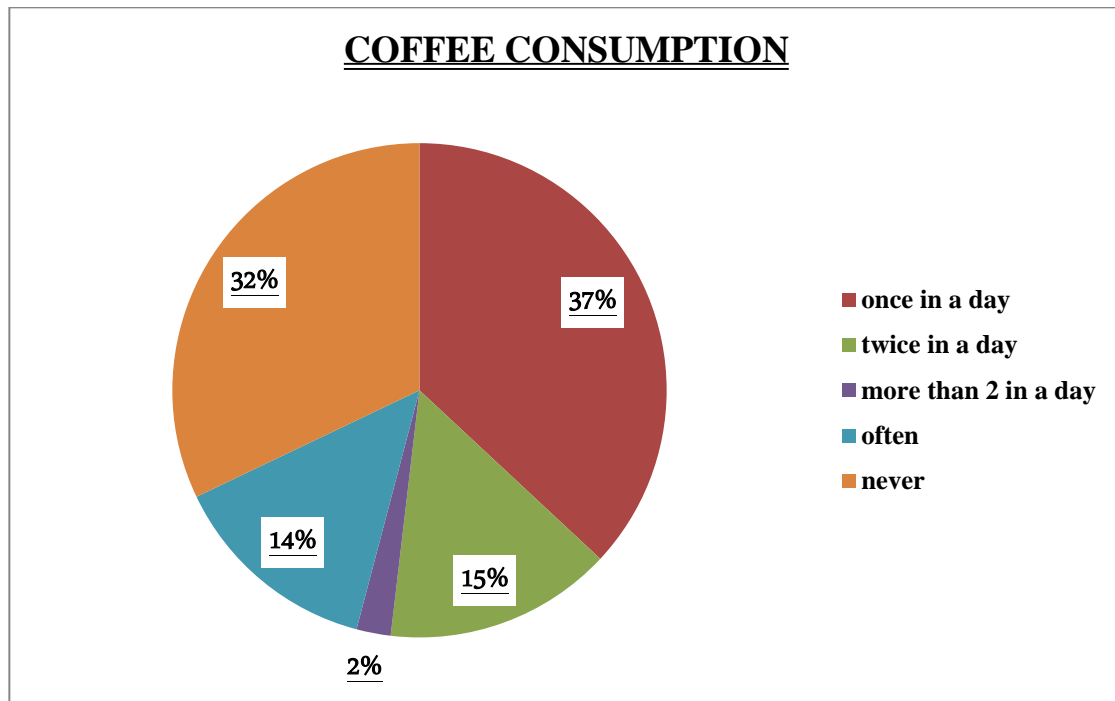
37% of participants consume coffee once in a day. 15% consume twice in a day.14% consume often.2% consume more than 2 in a day

### TABLE 2: MENSTRUAL CHARACTERISTICS OF PARTICIPANTS

| variable | frequency | Percent |
|---|---|---|
| **MENSTRUAL CYCLE** | | |
| **Below 21 days** | 9 | 3% |
| **21-35 days** | 229 | 86% |
| **Above 35 days** | 30 | 11% |
| **PATTERN OF PERIODS** | | |
| **Regular** | 216 | 81% |
| **Irregular** | 52 | 19% |
| **DURATION OF MENSUS** | | |
| **Less than 1 or equal to 2 days** | 32 | 12% |
| **3-7 days** | 231 | 86% |
| **More than 8 or equal to 8 days** | 5 | 2% |
| **MENSTRUAL FLOW** | 30 | 11% |
| **Light** | 218 | 81% |
| **Moderate** | 20 | 8% |
| **Heavy(clots/flooding)** | | |

## Figure 8  Dysmenorrhea
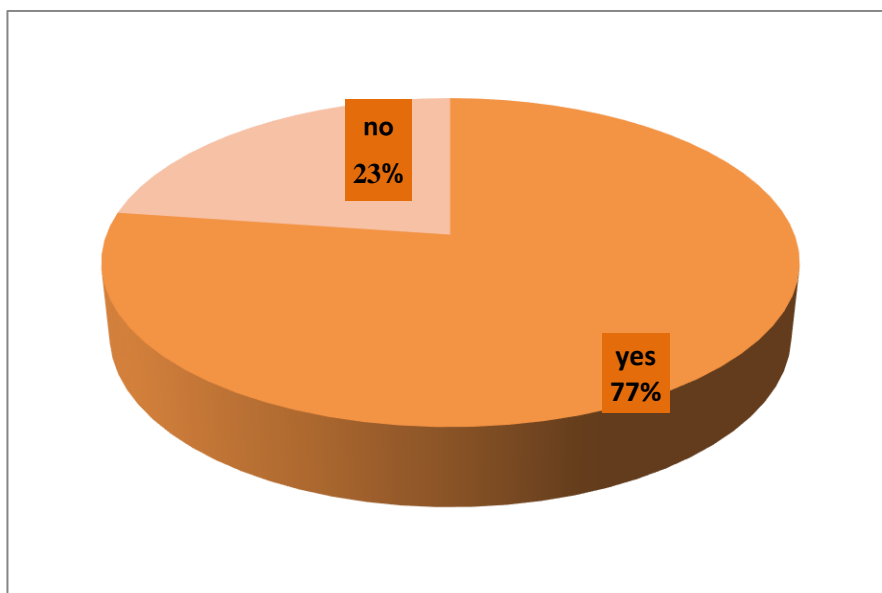


The prevalence of dysmenorrhea was 77 %( 207).

## Table3 Severity of dysmenorrhea

| Severity of  dysmenorrhea | N=207(%) |
|---|---|
| Mild | 38 (14%) |
| Moderate | 124(46%) |
| Severe | 45(17%) |

## Figure 9  Family history of dysmenorrhea
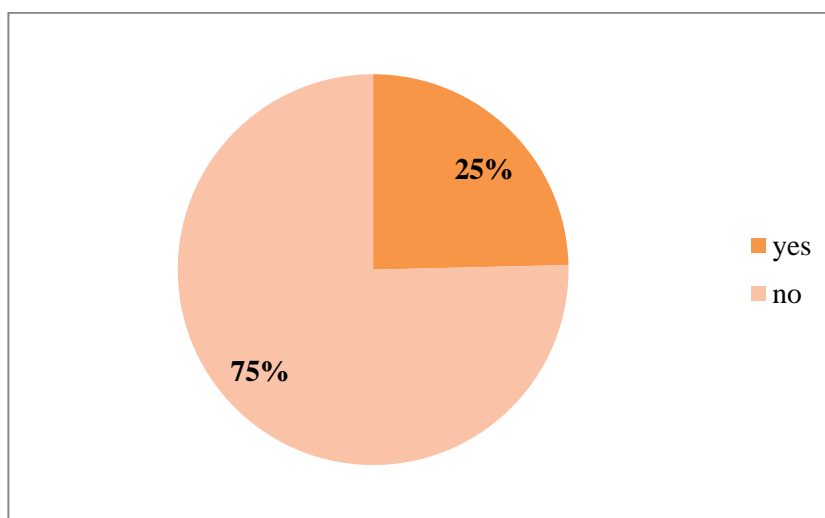
25% of participants reported family history of dysmenorrhea.
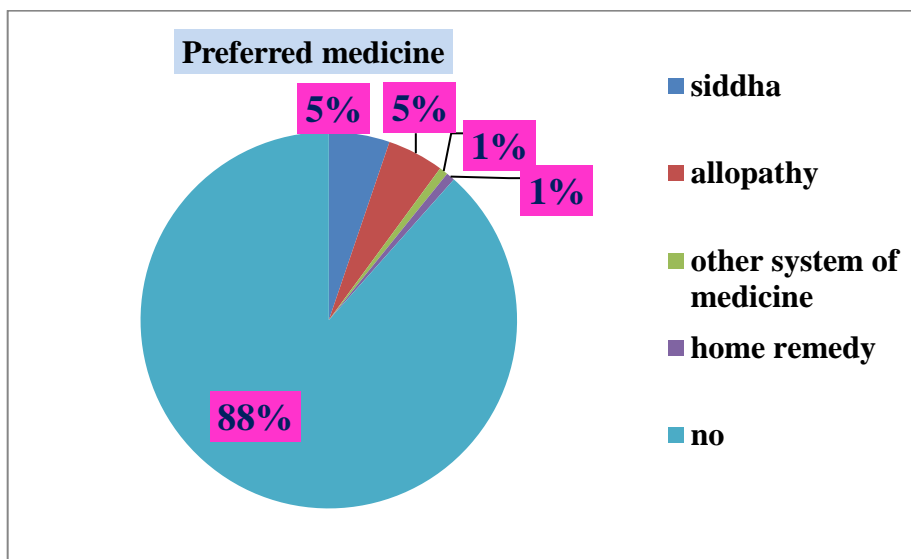
## Figure 10 Positive family history
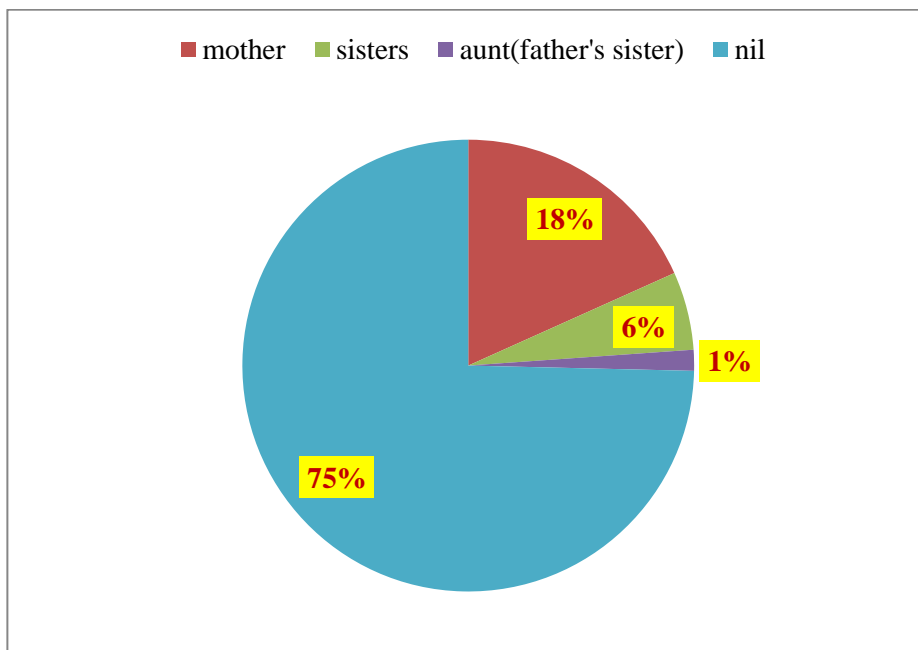


18% -for mother, 6% -for sisters, 1%aunt (father's sister).

## Figure 11 Medicine in take
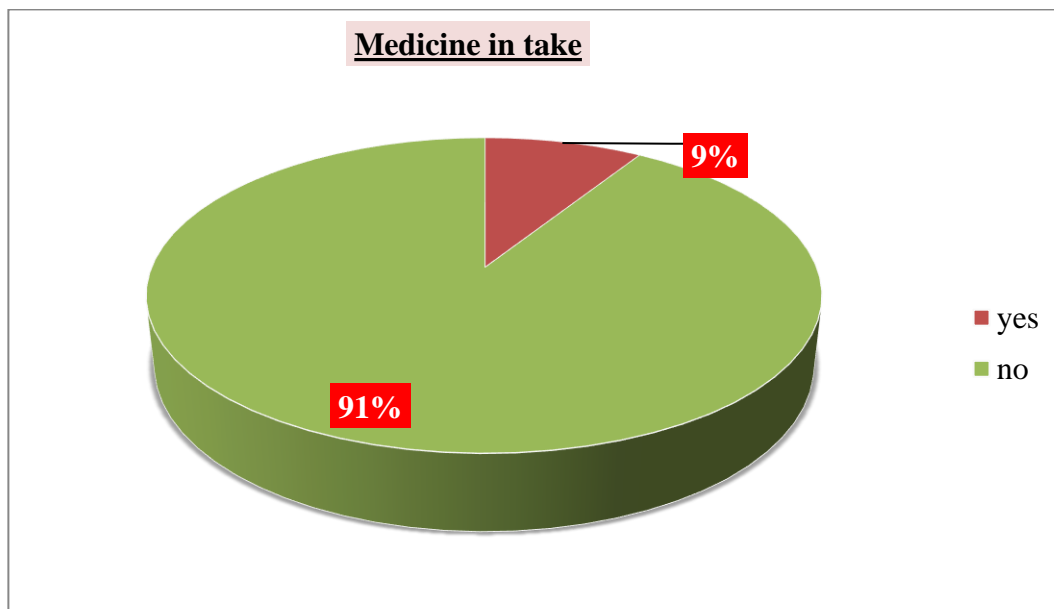


91% of participants were not taken medicines for dysmennorhea.9% have taken medicine for dysmenorrhea.

## Figure 12 Prefered medicine



88% of participants don't prefer medicines.5% prefer siddha and allopathy medicines respectively.1% prefer other system of medicines and home remedies

## Figure 13 Dysmenorrhea associated symptoms
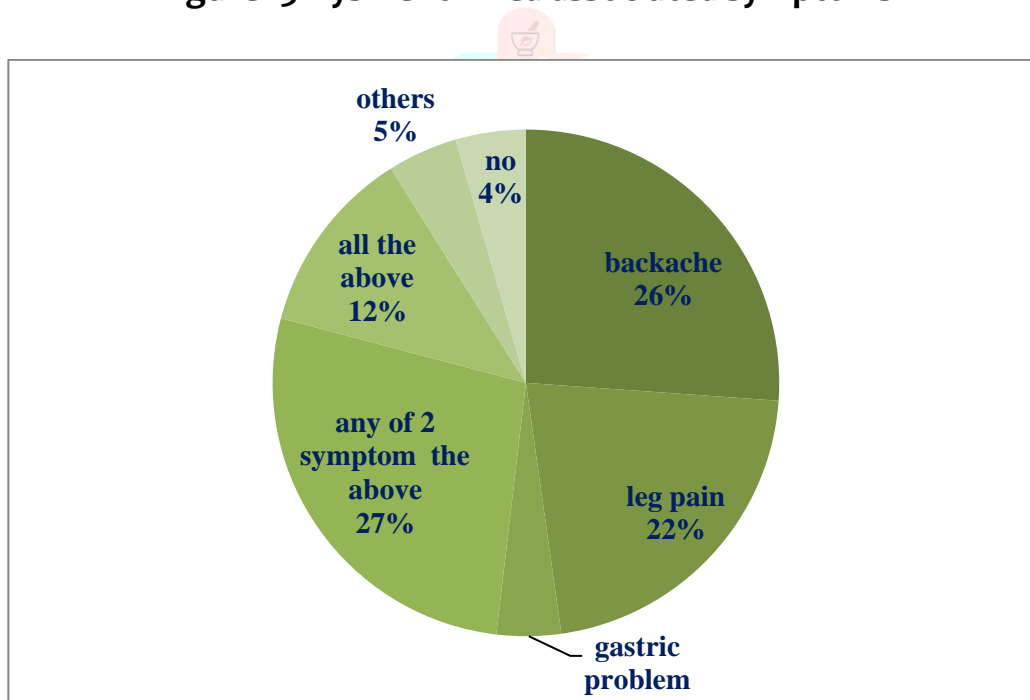


Other than pain during menstruation , 26% of participants have back ache,22% have leg pain,4% have gastric problem,27% reported any 1 or 2 symptom of the above,12% have all the symptoms i.e., back ache, leg pain, gastric problem.

## Figure 14 Aggravating factor
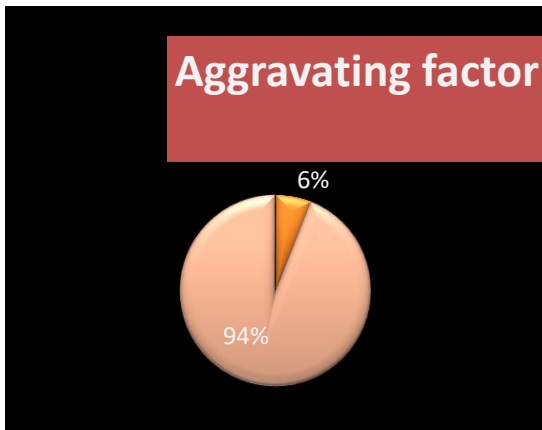


94% participants reported there were no aggravating factors.6% participants reported oily spicy foods, sweets and chocolates, doing physical work, long standing, irritability, over thinking, crying, being anger, intake of chicken increases or induces pain.

## Figure 15 Disturbance in going to classes or doing other activities
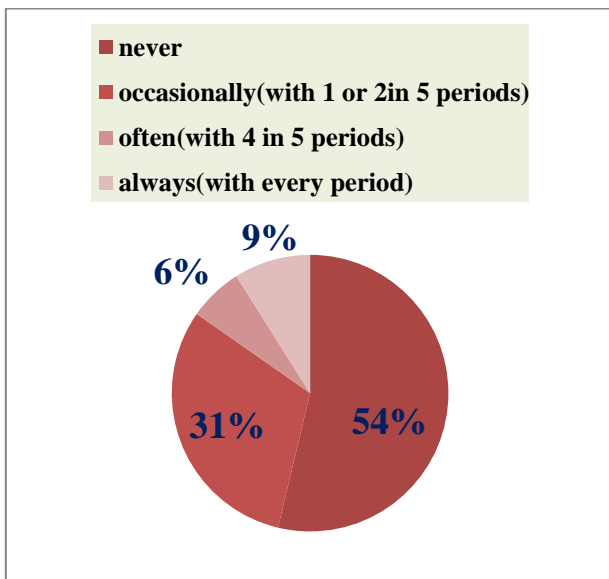


31% of participants reported occasionally, 9% of participants reported with every periods disturbed from going to classes or doing other activities.

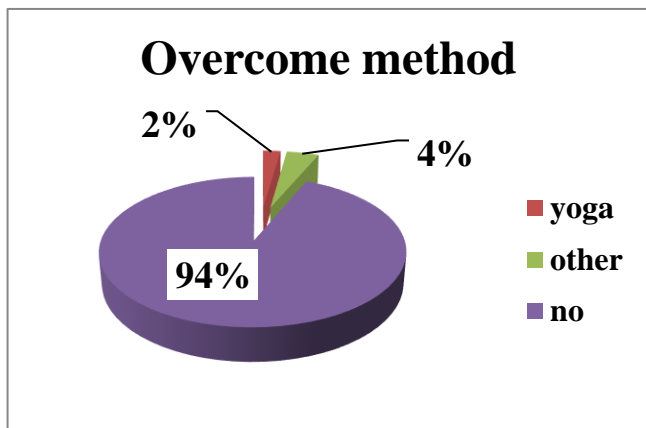## Figure 16: To lie down for any part of the day or longer
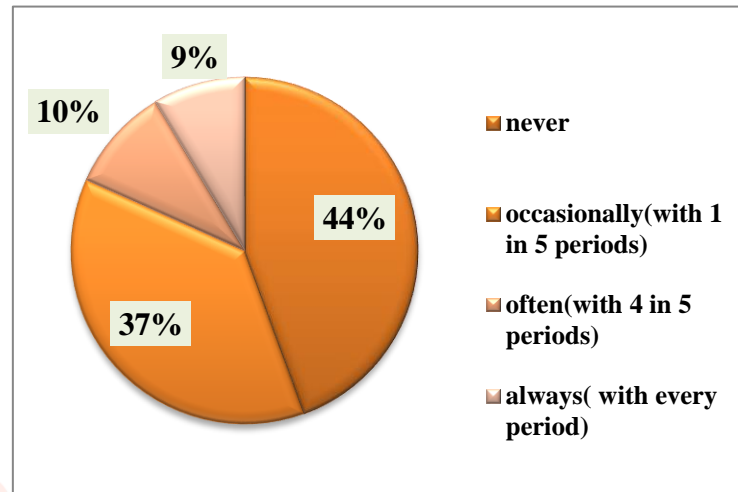


44% reported never and 37% reported occasionally to lie down for any part of the day or longer.

## Figure 17 Admitted in hospitals
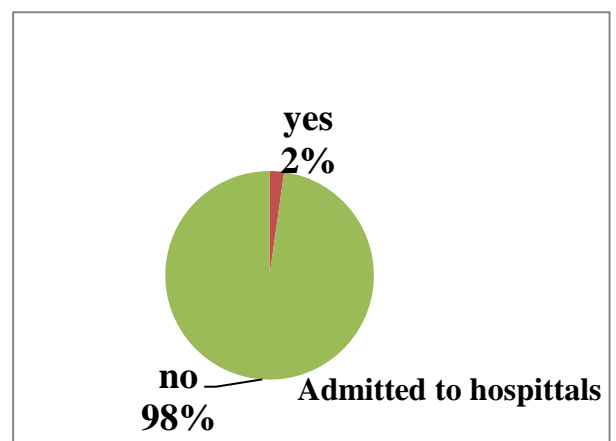


Only 2% participants were admitted to hospitals for dysmenorrhea.

**Figure 18 Overcome method**



Overcome method

- yoga 2%
- other 4%
- no 94%

2% of participants practice yoga to overcome dysmenorrhea. 4% of participants follow application of castor oil / sesame oil, placing hot water soaked cloth over abdomen, intake of fenugreeks seeds in hot water ,drinking lemon juice to overcome dysmenorrhea.

## DISCUSSION
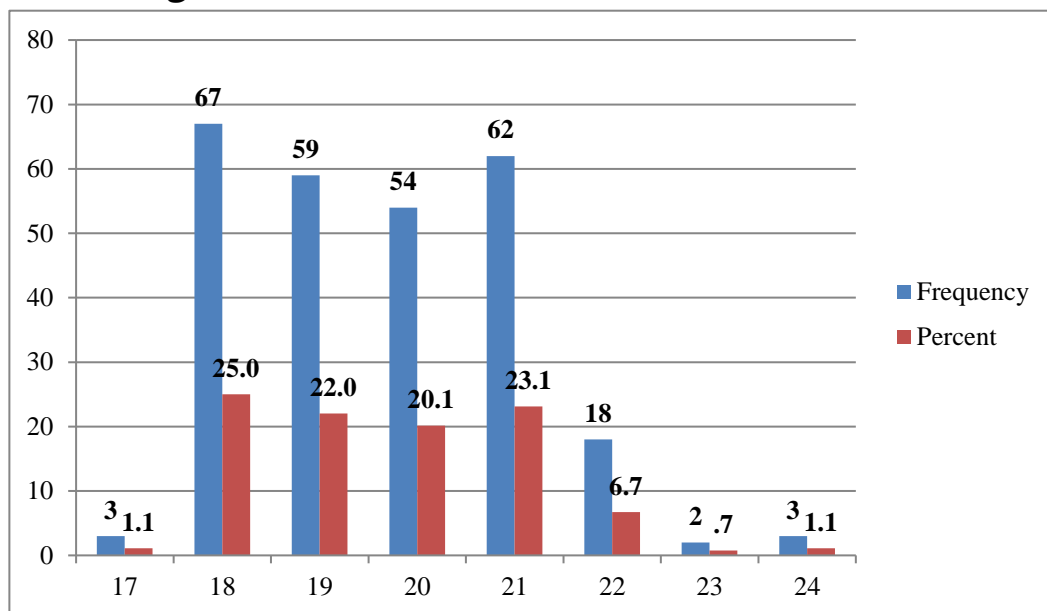
**Figure1: DISTRIBUTION OF AGE GROUPS STUDIED**



**Figure 2 : DISTRIBUTION OF DYSMENORRHEA AMONG AGE GROUPS STUDIED**
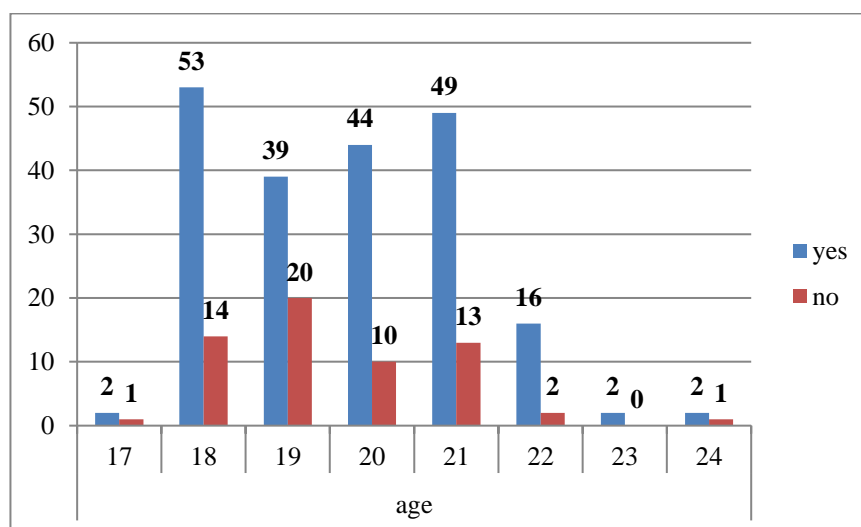
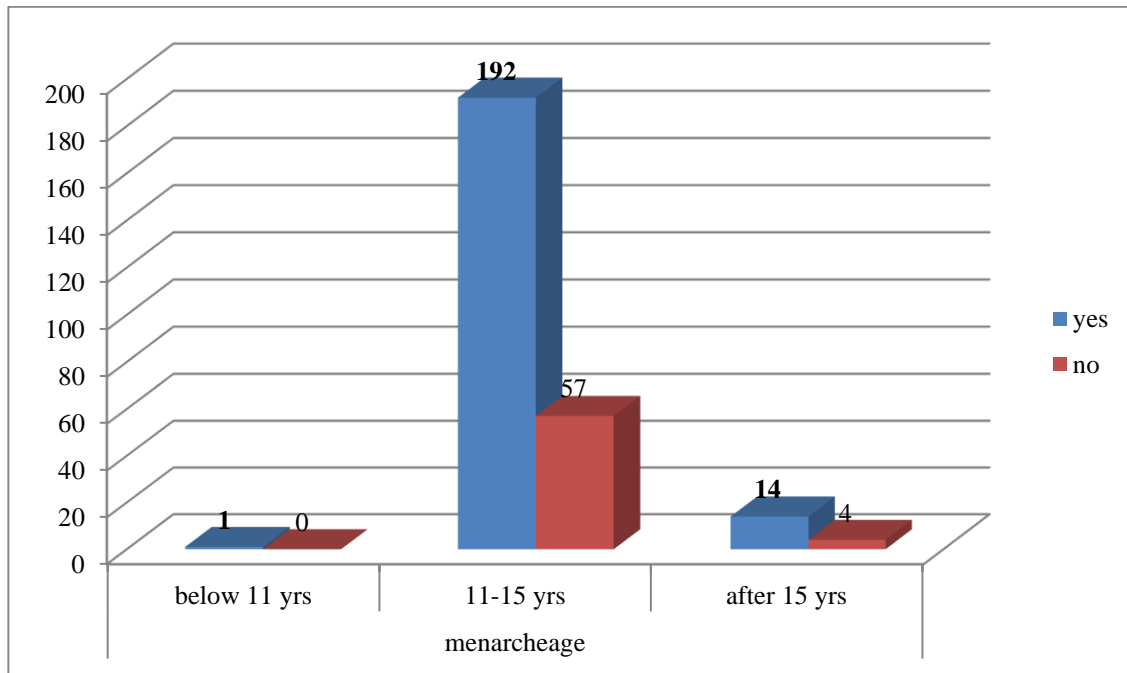## Figure 3: ASSOCIATION BETWEEN DYSMENORRHEA  AND MENARCHE AGE



## Figure 4: ASSOCIATION BETWEEN DYSMENORRHEA AND FAMILY HISTORY
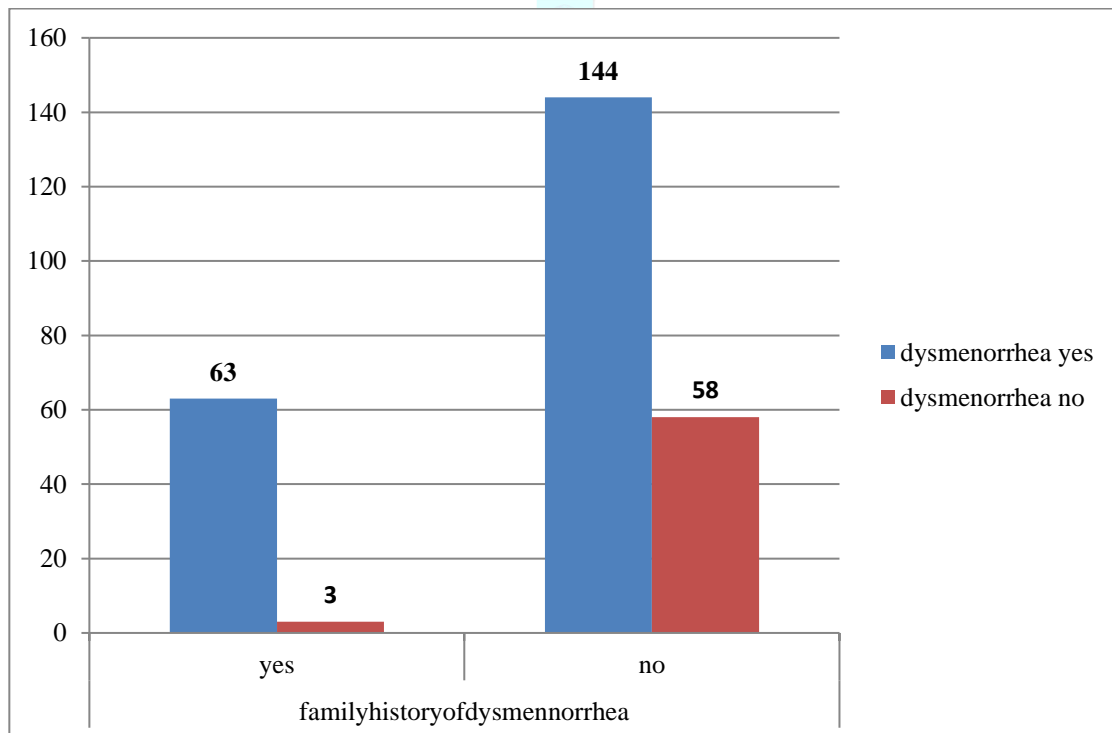
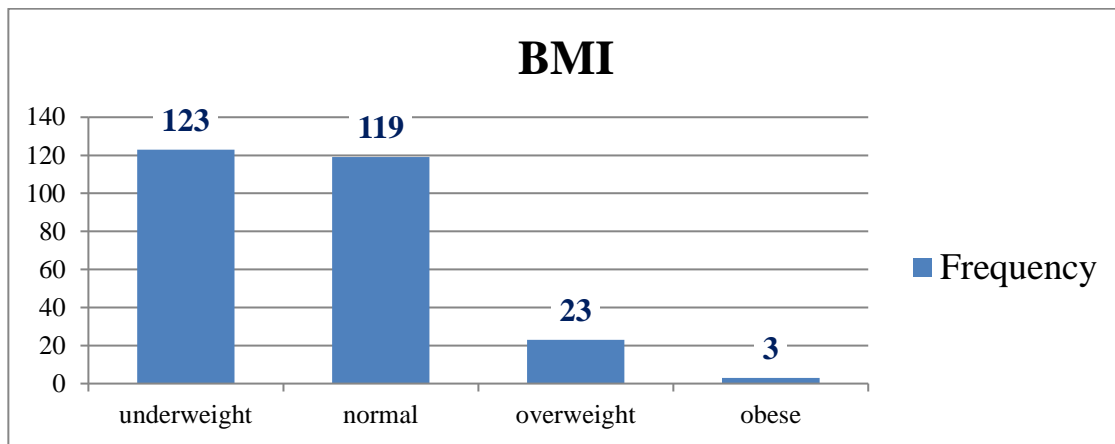## Figure 5: FREQUENCY OF BMI IN THE STUDIED POPULATION



## Figure 6: EFFECT OF DYSMENORRHEA ON ROUTINE ACTIVITIES
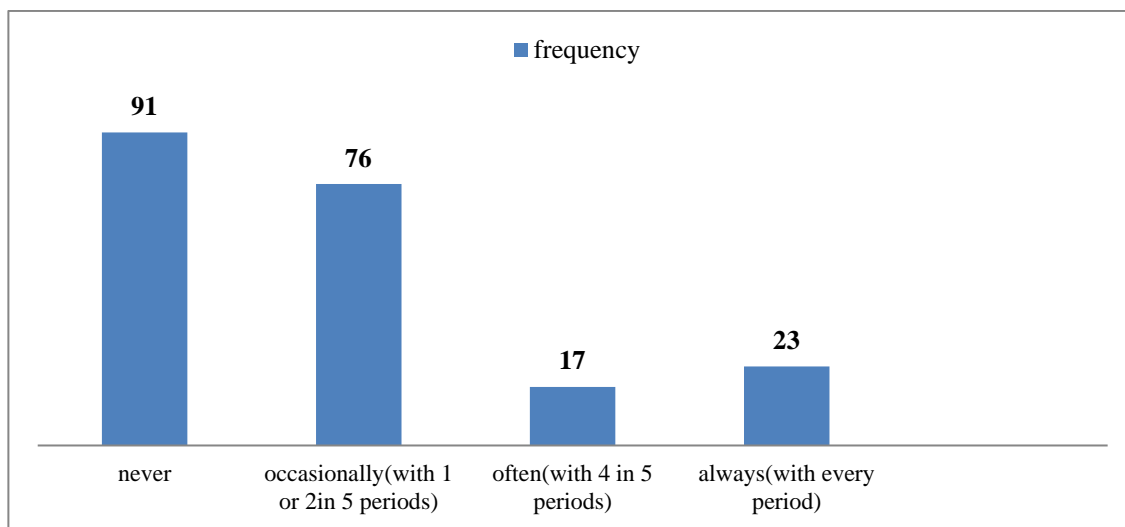


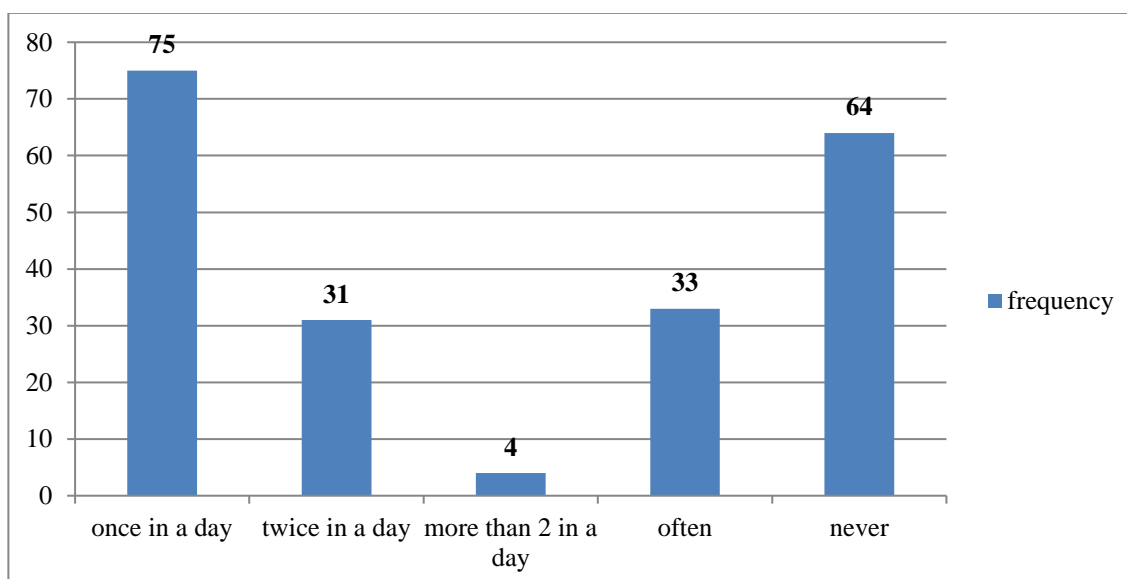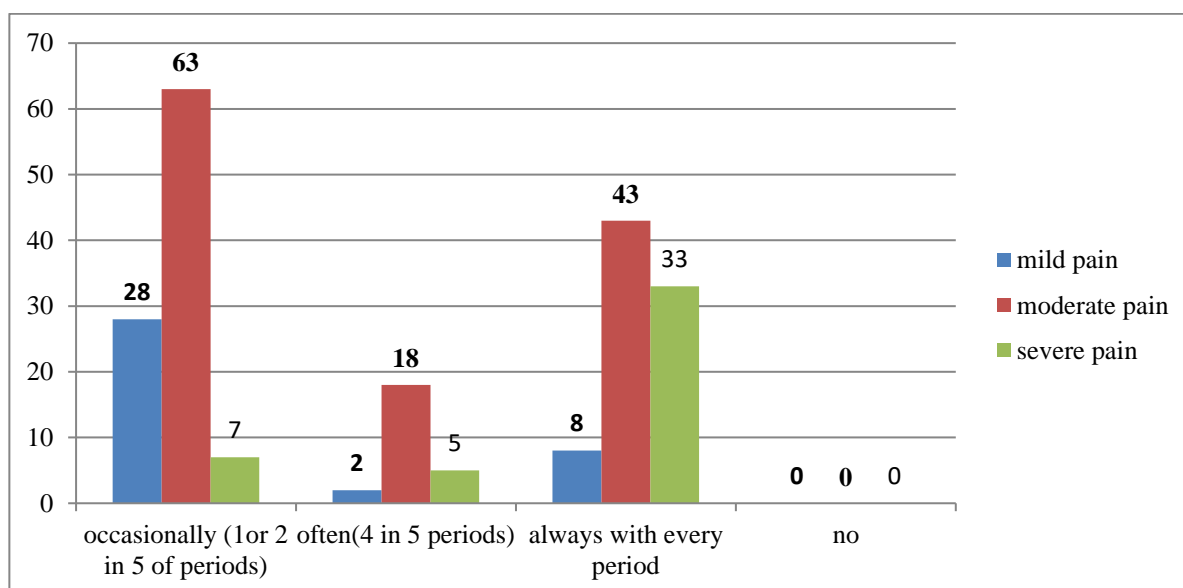## Figure 6: ASSOCIATION BETWEEN DYSMENORRHEA AND COFFEE CONSUMPTION

**Figure7: ASSOCIATION BETWEEN SEVERITY OF PAIN AND FREQUENCY OF PAIN**



In this study, the total prevalence of dysmenorrhea was high 77%.

The prevalence of dysmenorrhea were found to be 71.2%,79%,65%,67.5%,76.30% respectively in various studies done in India. Thus prevalence of dysmenorrhea is high and the finding of this study was in accordance with others[3]. To measure pain, pain was divided into mild, moderate, and severe .In this study, it was revealed that 14% .46%, 17% of students had mild, moderate and severe pain respectively.

In this Study, participants with age of 18 -21 likely to had prevalence of dysmenorrhea. Participants menarche ages of 11-15 were found to had dysmenorrhea high. There is some association between family history, age of menarche, coffee consumption and dysmenorrhea. Participants who had long menstrual cycle interval, underweight, mixed diet were likely to had dysmenorrhea.

Major study participants were not taking medications for dysmenorrhea. As siddha medical students 5% of participants prefer siddha medicines and allopathy medicines equally.1% prefer home remedy. 2% of participants practice yoga to overcome dysmenorrhea. 4% of participants follow application of castor

oil / sesame oil, placing hot water soaked cloth over abdomen, intake of fenugreeks seeds in hot water, drinking lemon juice to overcome dysmenorrhea.

The study reveals that adolescent girls should be made aware of dysmenenorrhea and complete knowledge, information must be given. Awareness programs and camps must be made about dysmenorrhea describing the causes, risks and treatment[9].

## CONCLUSION

Dysmenorrhea is common among female students of Govt.Siddha medical college, Palayamkottai. It is very important to spread awareness about the causes and treatment of dysmenorrhea to avoid unwanted health issues and decreased quality of life.

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