



A STUDY TO ASSESS THE MENSTRUAL ABNORMALITIES, WITH LIFE STYLE PRACTICE AMONG THE WOMEN IN REPRODUCTIVE AGE GROUP IN SELECTED RURAL AREAS, PUDUCHERRY.

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ABSTRACT

Menstrual cycle is an important indicator of women's reproductive health. Menstrual bleeding cessation is one of the most frequent gynecologic disorders among women in reproductive age. Dysmenorrhea is a common gynecological condition with painful menstrual cramps of uterine origin. This study aim was to assess the menstrual abnormalities with life style practices among the women in reproductive age group. The samples 210 women were selected with convenience sampling technique and questionnaire was conducted in different selected rural areas of Puducherry. These questionnaires were based on socioeconomic data, dietary and physical activities, and menstrual abnormalities. The study result shows that age of menarche was 13.5 ± 0.64 years. Dysmenorrhea (62.75%), premenstrual syndrome (PMS) (40.42%), and irregular cycle (28.72%) were observed common problems among adolescent girls. In this study, 140 (39.37%) respondents had good practice of menstrual hygiene. The findings of the study showed a significant positive association between good practices of menstrual hygiene and years of education of the study subject (adjusted odds ratio [AOR] = 9.3, 95% confidence interval [CI]: 4.4–19.5), having a higher socioeconomic status (AOR = 9.27, 95% CI: 4.7–18.03). menstrual variables duration of menstrual pain ($\chi^2=12.937$, $p=0.012$), family history of menstrual related problems ($\chi^2=5.993$, $p=0.050$) and dysmenorrhea ($\chi^2=7.037$, $p=0.030$) had shown statistically significant association with level of lifestyle practice among women in the reproductive age group at $p<0.05$ level respectively and the other menstrual variables had not shown statistically significant association with level of lifestyle practice among women in the reproductive age group. The result showed that dysmenorrhea, PMS, and menstrual irregularities were directly associated with dietary habits and physical activities. Dysmenorrhea was associated with eating junk food (66.10%), and PMS was associated with lacking of physical activities

(78.94%)The result suggests that feeding habit and physical activities directly affecting the menstrual health of adolescent.

Key words: Adolescent Girls, Dysmenorrhea, Menarche, Menstrual abnormalities, Premenstrual syndrome.

CHAPTER - 1

INTRODUCTION

BACKGROUND

Mensuration is a natural, inevitable fact of every woman's life. A woman's menstrual health can act as a reliable and good indicator of a woman's overall health. Due to menstrual's link to the endocrine system, which is responsible for most of the bodily functions information about a woman's. Menstrual cycles can offer a comprehensive insight into her complete health, overarching the obvious reproductive health of that woman. (**Suman Nama, Aswan Gaddala, Rajamoli. 2020**).

Mensuration involving the discharge of blood, occurring at more or less regular monthly intervals during the reproductive life of females. Normal menstruation first occurs in adolescents between 11 and 14 years of age, with a period length of 7 days or less, and a normal cycle length of 21to 45 days with average blood loss of 20-80ml.

Menstrual cycle is an important indicator of women's reproductive health. However, menstruation has a different pattern within a few years after menarche. Menarche is one of the markers of puberty and therefore can be considered as an important event in the life of adolescent girls. Menarche tends to appear earlier in life as the sanitary, nutritional (**Shabnam Fatemeh Nasiri Amiri, and Khyrunnisa Begum 2018**).

Menstrual cycle disorders are a type of physiological disease which can affect pregnancy in women of reproductive age. Oligo menorrhoea is one of the most common types of menstrual bleeding disorders, and an increasing number of patients have sought medical help for this symptom in recent decades. Women with oligo menorrhoea. (**Yilei, Danni Zheng, 2020**).

. Menstrual dysfunction is a common complaint amongst adolescent girls. Approximately 25% of girls had significant menstrual dysfunction affecting life activities and resulting in school absence. Menstrual cycles can be irregular and periods can be heavy (menorrhagia) and/or painful (dysmenorrhea). In addition, girls with learning difficulties and their families may find even normal menstruation difficult to manage due to pain. (**S karger AG, Basel 2012**).

There are various types of menstrual disorders, including dysmenorrhea, premenstrual symptoms, menorrhagia, polymenorrhea, abnormal vaginal bleeding, amenorrhea. Menstrual patterns can be affected by a number of factors, including age, ethnicity, family history, smoking, physical activity, and dietary habits. (**Nazish Rafique, Mona H, Alsheikh. 2018**).

Menstrua abnormalities are common in adolescent and can lead to stressful conditions. Dietary habits are directly related with individual quality of life and adolescence is a potential group to view the rapid growth and maturation which requests extra nutrients and energy-rich food. Menstrual pattern concerned duration of the most recent menstrual intervals, average days of bleeding, and regarding menstrual problem and their frequency with menstrual abnormalities. (**Priyanka Negi, Aprajita Mishra, and Pramesh Lakhernain 2015**).

Amenorrhea is the absence of menstrual bleeding. In the absence of pregnancy, the challenge is to determine the exact cause of absent menses. Primary amenorrhea is the failure of menses to occur by age 16 years, in the presence of normal growth and secondary sexual characteristics. If by age 13 menses has not occurred and the onset of puberty, such as breast development, is absent, a workup for primary amenorrhea should start. (**Kristi A Tough DeSapri, & Richard Scott Lucidi, 2019**).

Amenorrhea is often the sign of a treatable condition. With treatment regular menstrual cycle will usually resume. There are times when not supposed to get period, such as before puberty, during pregnancy and after menopause. If amenorrhea lasts for more than three months, it should be investigated (**Richard scott Lucidi,2018**).

Dysmenorrhea is a common gynecological condition with painful menstrual cramps of uterine origin. Primary dysmenorrhea refers to menstrual pain without any pelvic pathology. These symptoms

have underlying cause of elevated endometrial prostaglandins and their metabolites. Primary dysmenorrhea is an important clinical as well as social problem affecting more than 50% of menstruating women. (**Kural, MoolRaj Noor, Naziya Nagori, Pandit, Deepa,Joshi, Tulika,Patil, Anjali.2015.**)

Dysmenorrhea and associated symptoms are very common in young women <25 years. This time corresponds with a significant stage in adolescents and young women's academic lives at both school and in higher education. Dysmenorrhea may cause absenteeism from class or result in reduced classroom concentration and performance. Owing to cultural and economic differences, any impact may vary by country. (**Narendra monohar, smith 2019).**

Dysmenorrhea often accompanied by sweating, tachycardia, headache, nausea, vomiting, diarrhea, and tremulousness occurring just before or during the menses Since the pain results from uterine vasoconstriction and contractions mediated by prostaglandins, the most reliable and effective treatment of dysmenorrhea is to inhibit prostaglandin synthesis using nonsteroidal anti-inflammatory drugs. Sometimes combined oral contraceptive pills for three menstrual cycles can be tried (**Teshager Aklilu Yesuf, and Eskinder Ayalew. Robert gaspar 2018).**

Menorrhagia is the medical term for menstrual periods with abnormally heavy or prolonged bleeding. Although heavy menstrual bleeding is a common concern, most women don't experience blood loss severe enough to be defined as menorrhagia. With menorrhagia, everyone can't maintain usual activities, because so much blood loss and cramping (**Danni zheng2020).**

Menstrual bleeding cessation is one of the most frequent gynecologic disorders among women in reproductive age. The treatment is based on hormone therapy. Due to the increasing request for alternative medicine remedies in the field of women's diseases medicinal plants used to treat oligomenorrhea and amenorrhea according to the pharmaceutical textbooks of traditional medicine and review the evidence in the conventional medicine. (**Arezoo Moini Kobra and Ramin Nasimi Doost Azgom2017)**

Menstrual hygiene management has not been sufficiently addressed in developing countries. In many Nepalese societies, menstrual practices are still surrounded by sociocultural restrictions and taboos resulting in adverse health outcomes for adolescent girls. (**diego A.S. silva-2020)**

The most striking change in adolescent girls is the onset of menstruation. In the Indian context the age of onset of menstruation or menarche is generally between 11-15 years. Slight variations in the age of menarche may occur according to the nutritional status, hereditary pattern, and climate difference. (**Rupa vani k, veena k.S Subitha L, Hemanth kumar V. R,Bupathy A.2013**)

Premenstrual symptoms (PMS) are defined as a constellation of physical, emotional, and behavioral symptoms which occurred premenstrual and remitted after the onset of bleeding. Physical symptoms include abdominal pain, headache, nausea, skin disorders, abdominal bloating, breast tenderness, and swelling of extremities. Emotional symptoms include irritability, anger, depression, and tension. Behavior symptoms include increased or decreased food intake, hypersomnia, lethargy, and marked lack of energy. (**Rupa vani K, Veena K.S, Subitha L, Hemanth kumarV.R, Bupathy A 2013**).

Menstrual disorders such as dysmenorrhea, menorrhagia, and irregular cycles are common among women in reproductive age group and they are responsible for physical, behavioural and emotional changes around the time of menstruation these disorders affect the normal functioning and social life of women limit their daily activities. They are also an important cause of college /school absenteeism among adolescents. (**yoonjung kim, 2019**).

Irregular menstruation can have various health implications, The prevalence of irregular menstruation varies from 5% to 35.6% depending on age, occupation and the country of residence. Women with menstrual problems such as irregular menses, menorrhagia, amenorrhea, dysmenorrhoea and premenstrual symptoms report a significantly poorer health status. Menstrual problems are considered important health indicators among working women as an abnormal menstruation cycle is associated with health related anxiety and dissatisfaction. (**yeunhee Kwak, kyoung Ah Baek 2019**).

Irregular menstruation has a negative effect on work productivity. Menstrual cycle disturbances are a result of hormonal imbalances, which occur due to exposure to environmental stress like changes in energy balance, exposure to pollutants and psychosocial stress. Menstrual irregularity defined as an irregular menstrual cycle is a form of abnormal menstruation that results from various causes, such as the presence of a disease such as endometriosis, and type 2 diabetes mellitus.

The onset of menstruation or menarche is a hallmark of female pubertal development. Menstrual disorders are a common presentation. By late adolescents 75% of girls experience some problems associated with menstruation. Delayed, irregular, painful, and heavy menstrual bleeding are leading reasons for physician office visits by adolescents. (**Leel k, chenpsy, Leekk, kaur 2016**).

Adolescence is a critical period characterized by significant physical, emotional, cognitive, and social changes, including the monthly occurrence of menstruation of adolescent girls. Menstruation and menstrual blood as taboos and impure. Such consideration prevents many adolescent girls from proper health education and information related to menstrual health, which forces them to develop their ways of managing the event. (**Md.abu talk ha,md.zakiul alam.(2022)**).

NEED FOR THE STUDY:

Mensuration is a fundamental physiological phenomenon of normal sexual and reproductive function. After menarche third year onwards the episode of interval between bleeding periods is in the range of 21-34 days with a flow lasting from 3 to 7 days and a mean menstrual blood loss around 35 ml (range 5-80ml). However, in the abnormal menstrual patterns it might vary in interval duration of flow and quantity of blood flow with different conditions named from amenorrhea, oligomenorrhea, heavy menstrual bleeding, frequent menstrual cycles, irregular cycle, pain and premenstrual symptoms. (**Sreelakshmi U, V. Tushara Bindu, Subhashini T, K. Saritha 2019**)

Adolescents (10-19 years) constitute 21.3% nearly 1/5th of total population of India. Adolescence in girls has been recognized as a special period which signifies the transition from girl hood to womanhood. This traditional period is marked with the onset of menarche, an important biological milestone. Majority of the girls lack scientific knowledge about menstruation and puberty. (**Sheetu M K Jailkhani, Naik J D, Thakur M S, Langre SD, pandey 2014**).

Prevalence of primary dysmenorrhea is not yet clearly studied in central India. Primary dysmenorrhea is an important clinical as well as social problem affecting more than 50% of menstruating women. The prevalence of dysmenorrhea is difficult to determine because of different definitions of the

condition, the estimates varying from 45% to 95%. (**MoolRaj Kural, Nazyia Nagori Noor, and Anjali Patil-2015.**)

One quarter of the global population is of menstruating age, yet menstruation is shrouded in discrimination and taboos. Disability also carries stigma, so disabled people may face layers of discrimination when they are menstruating. Women and adolescent girls using a clean menstrual management material to absorb or collect blood that can be changed in privacy as often as necessary for the duration of the menstruation period, using soap and water for washing the body as required, and having access to facilities (**Jane wilbur, belen toronda.2019).**

Menstrual problems frequently affect the quality of life of adolescent girls and young adult women and may indirectly affect on quality of life of family members, social life and economy as well. However early identification and sorting of etiologies in relation to abnormal menstruation in women's health is mostly neglected by primary health care. So the investigator felt that need to identify personal abnormalities as early as possible in order to minimize the possible consequences and to promote proper health information.

STATEMENT OF THE PROBLEM

A study to assess the menstrual abnormalities with life style practices among the women in reproductive age group in selected rural areas, Puducherry.

Objectives:

- To assess the menstrual abnormalities among the women in reproductive age group at selected rural area, Puducherry.
- To assess the life style practices on menstrual abnormalities among the women in reproductive age group at selected rural area, Puducherry.
- To findout association between menstrual abnormalities with selected demographic variables among in the women in reproductive age group.

- To findout association between menstrual abnormalities with life style practice among the women in reproductive age group.

OPERATIONAL DEFINITION

ASSESS:

It refers to the level of age at menarche, duration of Mensuration, menstrual pain, frequency of menstruation, mensural cycle regularity, amount of bleeding, dysmenorrhoea among the women in reproductive age group in selected rural area Puducherry.

MENTURAL ABNORMALITIES:

In this study it refers to periods that occur less than 21 days or more than 35 days apart, missing three or more periods in row, and menstrual flow that is much heavier or lighter than usual.

LIFE STLYE PRACTICE

It refers to Set of habits or customs are influenced by life long process among menstrual irregularities of women.

REPRODUCTIVE AGE GROUP

In this study it refers to population of women of reproductive age (15-49 years) in a particular, area or region.

DELIMITATION

- The study setting was limited to rural area, Puducherry.
- The period of data collection was limited to one month
- The sample size was limited to two hundred and ten.

CHAPTER-II

REVIEW OF LITERATURE

A literature review examines books, academic papers, and any sources related to a certain subject, field of study, or theory, and give a description, overview, and critical assessment of these works in connection to the study problem under consideration.

The review of literature is organized and presented under the following headings:

SECTION A: Literature related to General information on Mensural abnormalities, Dysmenorrhea, Amenorrhea and Oligo menorrhea heavy bleeding ,pain and premenstrual syndrome.

SECTION B: Literature related to life style practices an intervention on menstrual abnormalities, Dysmenorrhea ,Amenorrhea and oligomenorrhea.

SECTION A:

Literature related to General InformationonMensural abnormalities, Dysmenorrhea, Amenorrhea, Oligo menorrhea, heavy bleeding, pain in premenstrual Syndrome.

J E Chavarro, Harvard (2020) conducted a prospective cohort study to assess the Menstrual cycle regularity and length across the reproductive lifespan and risk of premature mortality with aim of evaluate whether irregular or long menstrual cycles throughout the life course are associated with all cause and cause specific premature mortality (age <70 years). Main outcome measures Hazard ratios and 95% confidence intervals for all cause and specific premature mortality were estimated from multivariable The crude mortality rate per 1000 person years of follow-up for women reporting very regular cycles and women reporting always irregular cycles were 1.05 and 1.23 for cycle characteristics at ages 14-17 years, 1.00 and 1.37 for cycle characteristics at ages 18-22 years, and 1.00 and 1.68 for cycle characteristics at ages 29-46 years.

(Gisella Newberry, Mekala Neelakantan, Maria Demma Cabral, Hatim Omar 2019)

Amenorrhea is the absence of spontaneous menstruation in women of reproductive age. Understanding the normal menstrual physiology and regulatory processes is important in differentiating etiologies when evaluating amenorrhea. In adolescents, amenorrhea may warrant investigation, and pregnancy should

always be ruled out. In young female adolescents, amenorrhea can be the presenting symptom of different conditions such as polycystic ovary syndrome, eating disorders, or female athlete triad. focuses on primary and secondary amenorrhea and the best practical approach in evaluating and managing affected adolescent females.



Emmanuel Ansong, Samuel Kofi Arhin (2019) conducted a prospective cohort study Menstrual characteristics, disorders and associated risk factors among female international students. 500 Participants were participated. Almost half of our respondents (49.1%) reported varying changes in their menstrual pattern after arrival to China. Although, menstrual regularity, normal menstrual length (21-35 days) and duration of flow (3–7 days) remained fairly normal among most of the respondents, disorders like premenstrual symptoms (PMS) (33.82%); abnormal amount (17.97%) and dysmenorrhea (16.38%) were prevalent. There was a significant association between high stress (PSS > 20) and menstrual change OR = 1.636, 95% CI 1.051–2.547, p = 0.029 and dysmenorhea (p = 0.037). Common stressors included languagebarrier 81(25.88%), food 64(20.45%), and loneliness 56(17.89%). Menstrual disorders are high among international students in China.

Priyanka Negi, Aprajita Mishra, and Pramesh Lakhera (2018) conducted a study tried to find out the prevalence of menstrual abnormalities in adolescent girls and their association with dietary and exercise pattern in Garhwal region of India. cross-sectional questionnaires survey was conducted in different schools of Garhwal. These questionnaires were based on socioeconomic data, dietary and physical activities, and menstrual abnormalities. The age of menarche was 13.5 ± 0.64 years. Dysmenorrhea (62.75%), premenstrual syndrome (PMS) (40.42%), and irregular cycle (28.72%) were observed common problems among adolescent girls. The result showed that dysmenorrhea, PMS, and menstrual irregularities were directly associated with dietary habits and physical activities. Dysmenorrhea was associated with eating junk food (66.10%), and PMS was associated with lacking of physical activities (78.94%). The result suggests that feeding habit and physical activities directly affecting the menstrual health of adolescent girls.

Shabnam Omidvar, Fatemeh Nasiri Amiri, and Khyrunnisa Begum 2018) conducted a study on menstruation of Indian adolescent girls in an urban area of South India. Menstrual cycle is an important

indicator of women's reproductive health. Menstruation has a different pattern within a few years after menarche, which might not be well understood by many adolescent girls. A cross-sectional study was conducted on 536 healthy menstruating females aged 10–19 years. Study Result shows Mean age of menarche was 13 ± 1.1 years with wide variations, i.e., 10–17 years. 73.1% had cycle duration of 21–35 days. More than half of them reported 5–6 days' duration of menstrual blood flow and 12% of the participants had >7 days of flow. Long blood flow duration was more prevalent in early than in late adolescence. 30.1% reported abundant blood loss. 66.8% had dysmenorrhea and no difference was observed between early and late adolescents. Menstrual cycles tend to be shorter in early adolescence period. Conclusion is comprehensive school education program on menarche and menstrual problems may help girls to cope better.

Fitzgeraly, Janeni-dezembro (2015) The study concluded that the Irregular and long menstrual cycles in adolescence and adulthood are associated with a greater risk of premature mortality (age <70 years). A cross-sectional study was conducted on 536 healthy menstruating females aged 10–19 years. Mean age of menarche was 13 ± 1.1 years with wide variations, i.e., 10–17 years. 73.1% had cycle duration of 21–35 days. More than half of them reported 5–6 days' duration of menstrual blood flow and 12% of the participants had >7 days of flow. Long blood flow duration was more prevalent in early than in late adolescence. 30.1% reported abundant blood loss. 66.8% had dysmenorrhea and no difference was observed between early and late adolescents. Menstrual cycles tend to be shorter in early adolescence period.

Nazish Rafique, and Mona H. Al-Sheikh,2015) conducted a study to identify the prevalence of various menstrual problems in young females studying health sciences and to identify their association with academic stress. Seven hundred and thirty-eight female students aged 18-25 years anonymously completed menstrual problem identification and perceived stress scale questionnaire. The different menstrual problems reported, and their incidences included irregular menstruation (27%), abnormal vaginal bleeding (9.3%), amenorrhea (9.2%), menorrhagia (3.4%), dysmenorrhea (89.7%), and premenstrual symptoms (46.7%). High perceived stress (HPS) was identified in 39% of the students. A significant positive correlation was found between HPS and menstrual problems. Students with HPS had

4 times, 2 times, and 2.8 times increased odds ratio for experiencing amenorrhea, dysmenorrhea, and premenstrual syndrome ($p<0.05$).

Melaku yalew, Kefel Mitin, Elsabeth Addisu (2015). study aimed to assess the pooled prevalence of menstrual hygiene and its association with knowledge about menstrual hygiene among female adolescents in Ethiopia. The prevalence of poor menstrual hygiene practice was 48.98% [95% CI: (36.42, 61.53)]. Those female adolescents who had poor knowledge were 2.6 times more likely to have poor menstrual hygiene practice as compared to counterparts [AOR = 2.61, 95% CI: (1.45, 4.72)].

The prevalence of poor menstrual hygiene practice was high and knowledge regarding menstrual hygiene was significantly associated with poor menstrual hygiene practice. Information education communication and behavioral change communication at all levels of education should be the primary focus area of the government.

Shabnam Omidvar, Fatemeh Nasiri Amiri, and Khyrunnisa Begum (2016) conducted a study on menstruation of Indian adolescent girls in an urban area of South India. Samples were 536 healthy menstruating females aged 10–19 years. The result Mean age of menarche was 13 ± 1.1 years with wide variations, i.e., 10–17 years. 73.1% had cycle duration of 21–35 days. More than half of them reported 5–6 days' duration of menstrual blood flow and 12% of the participants had >7 days of flow. Long blood flow duration was more prevalent in early than in late adolescence. 30.1% reported abundant blood loss. 66.8% had dysmenorrhea and no difference was observed between early and late adolescents. Menstrual cycles tend to be shorter in early adolescence period. The result Concluded comprehensive school education program on menarche and menstrual problems may help girls to cope better and seek proper medical assistance. Adolescence, females, menstruation.

**SECTION B: LITERATURE RELATED LIFE STYLE PRACTICES AND INTERVENTION ON
MENSTRUAL ABNORMALITIES DYSMENORRHEA, AMENORRHEA,
OLIGOMENORRHEA, HEAVY BLEEDING, PAIN IN PREMENSTRUAL SYNDROME.**

Jaseela Majeed, prerna sharma, Koustov Dalal (2022) Menstrual hygiene practices and associated factors among Indian adolescent girls. Results revealed a statistically significant increase in sanitary pad usage “(SMD = 48.83, 95% CI = 41.38–57.62, p < 0.00001)” and increased perineum practices during menstruation “(SMD = 55.77, 95% CI = 44.27–70.26, p < 0.00001)”. Results also reported that most prevalent disorders are dysmenorrhea “(SMD = 60.24, 95% CI = 50.41–70.06, p < 0.0001)”, Pre-menstrual symptoms “(SMD = 62.67, 95% CI = 46.83–78.50, p < 0.00001)”, Oligomenorrhea “(SMD = 23.57, CI = 18.05–29.10, p < 0.00001), Menorrhagia “(SMD = 25.67, CI = 3.86–47.47, p < 0.00001)”, PCOS “(SMD = 5.50, CI = 0.60–10.40, p < 0.00001)”, and Polymenorrhea “(SMD = 4.90, CI = 1.87–12.81, p < 0.0001)”. A statistically significant improvement in knowledge “(SMD = 2.06, 95% CI = 0.75–3.36, p < 0.00001)” and practice “(SMD = 1.26, 95% CI = 0.13–2.65, p < 0.00001)” on menstruation was observed. Infections of the reproductive system and their repercussions can be avoided with better awareness and safe menstruation practices. It concluded that Learning about menstrual hygiene and health is essential for adolescent girls' health education to continue working and maintaining hygienic habits.

Garima Namdev, sabiha Nav (2021) cross-sectional observational study was done among sixty undergraduate female medical students with the help of pretested and predesigned questionnaire consisting of menstrual pattern, premenstrual syndrome (PMS), and dysmenorrhea along with details about lifestyle factors. Anthropometric measurements such as weight, height, and BMI were also taken. Out of total, 60% of students had regular cycle, 63% had dysmenorrhea, and 75% possess PMS. Majority of obese (65.2%) students had irregular cycle and 52.1% suffered from dysmenorrhea. Maximum 91% and 77.4% of students had regular cycle practicing yoga and physical exercise, respectively, whereas 86.2% of students suffered from PMS among those not exercising regularly. All of these findings were found statistically significant. The study concluded, More than half of students possess regular cycle. Overweight and obesity were found to be associated with irregular menstrual cycle and dysmenorrhea.

Lifestyle factors such as yoga practicing, frequent consumption of fast foods, and regular physical exercise affect menstrual pattern in the present study.

Sharmaa, Coffee y, (2021) examined factors contributing to menstrual health and hygiene were identified. women Caste/ethnicity was a significant predictor of menstrual knowledge and practices. The result shows that the caste/ethnic groups Tarai/ Madhesi /Other, Newar, Janajati, and Muslim all had statistically significant fewer odds of positive menstrual practices compared to Brahman/Chhetri (high caste groups), with Janajati (indigenous ethnic groups) having the poorest outcomes. 679 women

Caste/ethnicity was a significant predictor of menstrual knowledge and practices. The caste/ethnic groups Tarai/Madhesi/Other, Newar, Janajati, and Muslim all had statistically significant fewer odds of positive menstrual practices compared to Brahman/Chhetri (high caste groups), with Janajati (indigenous ethnic groups) having the poorest outcomes.

Pavani Vaddi, Tanuja Paipuru Humera Fatima (2021) conducted cross-sectional to identify the extent of menstrual disorders and relation to various aspects of life in 100 women of age group 12-25 years. The result is 40% have no idea of menstruation prior to menarche, 28% of all were scared at menarche. 15% of menstrual education is contributed by schools. 60% had HMB, 83% had PMS. 91% had menstrual disorders and 37% had severe dysmenorrhea on day 1. Irregular cycles has significant association with BMI and medical history. PMS has significant association with food habits and alcohol intake. 64% with menstrual disorders did not seek medical help. It concludes that the Adolescent period in women can be quite difficult especially in view of menarche; understanding of menstruation and facing menstrual disorders.it needs preparation which is lacking in India.

Muhamme T (2021) A study to assess the association of lifestyle factors with menstrual problems and its treatment-seeking behavior among adolescent girls Secondary data analysis was performed on cross-sectional survey data obtained from the Understanding the Lives of Adolescents and Young Adults The sample size was 12,707 adolescents girls aged 10–19 years. There are two outcome variables, i.e., menstrual problem and its treatment-seeking behaviour. About 11% of adolescent girls suffered from menstrual problems, and among them, nearly one-third of adolescent girls sought treatment. The study noticed that menstrual problems were higher among adolescents who had severe depressive symptoms [β:

0.53; CI: 0.36, 0.70], were using substance [β : 0.03; CI: -0.24, 0.29], and were not involved in physical activity [β : 0.06; CI: -0.03, 0.15]. Adolescent girls from the richest wealth quintile were less likely to report menstrual problems [β : -0.15; CI: -0.32,-0.04], however, were 0.45 times significantly more likely to seek treatment for menstrual problems [β : 0.45; CI: 0.12, 0.78] than poorest adolescent girls. There is a need to focus on improving health education on puberty and menstruation that may further improve the treatment-seeking for menstrual problems among adolescent girls, specifically in rural areas.

Dilgoa, S. Silva (2020). Conducted a study to determine menstrual hygiene practice and sociodemographic as well as socioeconomic factors associated with good menstrual hygiene practice amongst adolescent school girls in Dang district, among 406 adolescent girls studying in grades 8, 9, and 10 between ages of 10 and 19 years A further 406 students were then selected randomly from the 10 selected schools. The result shows that the mean age and family size were 15.13 ± 1.19 and 5.58 ± 1.81 , respectively. A total of 272 (67.0%) adolescents have good menstrual hygiene practice. Mothers and fathers with literature educational background (adjusted odds ratio = 0.52, confidence interval: 0.30–0.89 and AOR = 2.55, CI: 1.26–5.15, respectively), family size greater than or equal to 5 (AOR = 0.61, CI: 0.37–0.98), and living with relatives (AOR = 0.45, CI: 0.24–0.85) were significantly associated with good menstrual hygiene practice. It concludes that educational status of mother and father, family size, and living status were found to be independent associated factors of menstrual hygiene practice.

Yiminzhu, Shuyu Wang (2020) investigate the prevalence and the related characteristics of oligomenorrhea among women within childbearing age in China among 12,964 women aged 18–49 years from 9 provinces/municipalities. Outcome measures include clinical history, ultrasonographic exam, and hormonal and metabolic parameters. prevalence of oligomenorrhea was 12.2% (1,579/12,964). Both sociodemographic factors and medical history were significantly associated with oligomenorrhea ($P < 0.05$). In such women, the prevalence of obesity, acne, seborrhea, acanthosis, larger ovarian size, and polycystic ovarian morphology was higher when compared with normal women; the prevalence of anti-Mullerian hormone, total testosterone, and androstenedione ($P < 0.05$) was higher as well. In the oligomenorrhea group, 57.4% (156/272) of the women underwent treatments for infertility, which was

higher than the non-oligomenorrhea group 36.1% (370/1,024)Obesity, acne, seborrhea, acanthosis, larger ovarian size, and polycystic ovarian morphology were significantly associated with oligomenorrhea.

Sudhadevi.M, Dr Navaneetha.M (2019) Menstrual Hygiene is one of the important aspects of adolescent health which is often ignored particularly in developing countries such as India. In this regard onset of menstruation is often a period when adolescent girls don't have any knowledge about the healthy practices during menstruation. Many studies have reported that adolescent girls particularly from developing world have inadequate knowledge of maintenance of hygiene during menstruation.

M.Sivakasi, Kayal F Laserson, Ashley Bauman_(2016) conducted a study to assess the status of menstrual hygiene management among adolescent girls in India to determine unmet needs. Result shows that Commercial pad use was more common among urban (PP 67%, 57% to 76%, I2 99.3%, n=38) than rural girls (PP 32%, 25% to 38%, I2 98.6%, n=56, p<0.0001), with use increasing over time (p<0.0001). Inappropriate disposal was common (PP 23%, 16% to 31%, I2 99.0%, n=34). Menstruating girls experienced many restrictions, especially for religious activities (PP 0.77, 0.71 to 0.83, I2 99.1%, n=67). A quarter (PP 24%, 19% to 30%, I2 98.5%, n=64) reported missing school during periods. A lower prevalence of absenteeism was associated with higher commercial pad use in univariate (p=0.023) but not in multivariate analysis when adjusted for region (p=0.232, n=53). Approximately a third of girls changed their absorbents in school facilities (PP 37%, 29% to 46%, I2 97.8%, n=17). Half of the girls' homes had a toilet (PP 51%, 36% to 67%, I2 99.4%, n=21). The quality of studies imposed limitations on analyses and the interpretation of results (mean score 3 on a scale of 0–7).

Anna Maria van Eijk, M Sivakami, Ashley Bauman, Kayla F Penelope A Phillips-Howa (2015) conducted a study to assess the status of menstrual hygiene management (MHM) among adolescent girls in India to determine unmet needs. Outcome measures Information on menarche awareness, type of absorbent used, disposal, hygiene, restrictions and school absenteeism was extracted from eligible materials. Results shows that half of the girls reported being informed prior to menarche (PP 48%, 95% CI 43% to 53%, I2 98.6%). Commercial pad use was more common among urban (PP 67%, 57% to 76%, I2 99.3%, n=38) than rural girls (PP 32%, 25% to 38%, I2 98.6%, n=56, p<0.0001), with use increasing over time (p<0.0001). Inappropriate disposal was common (PP 23%, 16% to 31%, I2 99.0%, n=34).

Menstruating girls experienced many restrictions, especially for religious activities (PP 0.77, 0.71 to 0.83, I2 99.1%, n=67). A quarter (PP 24%, 19% to 30%, I2 98.5%, n=64) reported missing school during periods.

Gyanendra kumar Gupta, Gagan Devi (2014) In today's fast and competitive world, many gynecological cases are rapidly increasing because of sedentary life style, faulty food habits etc. Changes in physical and mental well being profoundly affect menstrual cycle. Statistics says that out of 80% women suffering from irregular menstrual cycle, 19.3% are suffering from Oligomenorrhea. Gynecological, Menstrual cycle, Oligomenorrhea, Sedentary life style and Statistics.

CHAPTER - 3

RESEARCH METHODOLOGY

The methodology is the systematic, theoretical analysis of the procedure applied to a field of study (Kothari, 2001)

The chapter deals with the research methodology selected by A study to assess the menstrual abnormalities with life style practices among women in reproductive age group in selected rural area Puducherry.

RESEARCH APPROCH:

The quantitative research approach was adopted for this study, with the aim of produce up-to-date information on menstrual abnormalities and improve lifestyle practice toward menstrual abnormalities among female in reproductive age group.

RESEARCH DESIGN:

Non- Probability Descriptive Design was adopted.

SETTING OF THE STUDY:

The study was conducted in AVMC&H adopted rural areas-Nalavadu and Narambai in Puducherry.

POPULATION:

In this study, the population included all women in reproductive age group who attained menarche at selected area.

SAMPLING TECHNIQUE:

Convenience sampling techniques was used for sample selection.

SAMPLES:

The sample included in this study was all women in reproductive age group who attained menarche at selected area

SAMPLE SIZE:

Total Two hundred ten women in reproductive age group were selected. Adolescent girls were 105 and adult women were 105.

The sample size was calculated to be 210 using Open Epi Version 3.01 ($n=[DEFF^* Np (1-p)] / [(d2/Z21-\alpha/2^*(N-1)+p*(1-p)]$) where “p” was considered maximum of 9.5%, absolute precision of 5%, 95% confidence interval and alpha error of 5%).

CRITERIA FOR SELECTING SAMPLE:

INCLUSION CRITERIA:

- Women who attained menarche
- Women who did not attained menopause
- Who were willing to participate in the study
- Women who were able read and write Tamil
- Women who were reported a menstrual pain

EXCLUSION CRITERIA: Women who were in:

- Diagnosed with any gynocological disease
- Suffering from any chronic diseases like thyroid, Polycystic ovarian Disease.
- History of abdominal pelvic surgery.
- Who had been using any medicines for long duration. (more than one month)

- Pregnant and lactating mothers.

DESCRIPTION OF TOOL:

Description of the tool:

The tool was developed based on the review of literature and opinion from experts five parts,

PART 1: It consists eight items of demographic Variables such as age, education, religion, income, occupation, dietary pattern, type of family, Body mass index, marital status.

PART-2: It consists of ten items of menstrual variables like age at menarche, Family history of menstrual related problems, Menstrual cycle regularity, Amount of menstrual bleeding, Dysmenorrhea, Presence of premenstrual syndrome. The treatment taken to menstrual abnormalities, duration of menstruation, frequency of menstruation.

PART 3: Assessment of menstrual abnormalities such as premenstrual syndrome it includes the physical and psychological symptoms.

PART 4: Assessment of pain severity of dysmenorrhea using numerical rating scale. The Description of score is 0: None, 1-3, Mild pain, 4-7, Moderate pain, > 7, Severe pain.

PART 5: It is assessment of life style practices on menstrual abnormalities. There were 9 items it consists of physical exercise, regular walking, adequate rest and sleep, tolerance to do heavy work, follow balanced diet, regular dietary habit and eating junk food.

VALIDITY OF TOOL:

The tool was validated for data collection and given by seven experts in four from the field of Obstetrics and Gynaecological Nursing, two from the field of Obstetrician and one from Statistician. The suggestion was given by the experts were incorporated. The tool was modified and finalized.

DATA COLLECTION PROCEDURE:

The data was collected from selected rural area at Puducherry. The written informed consent was taken from each subject after thoroughly explaining about menstrual abnormalities with life style practices. The structured interview was conducted by the investigator to collect demographic and health

profile data followed by menstrual abnormalities and life style practices. The time duration was allotted for 30 minutes. The completed sheets was collected and then data was complied for data analysis.

PLAN FOR DATA ANALYSIS

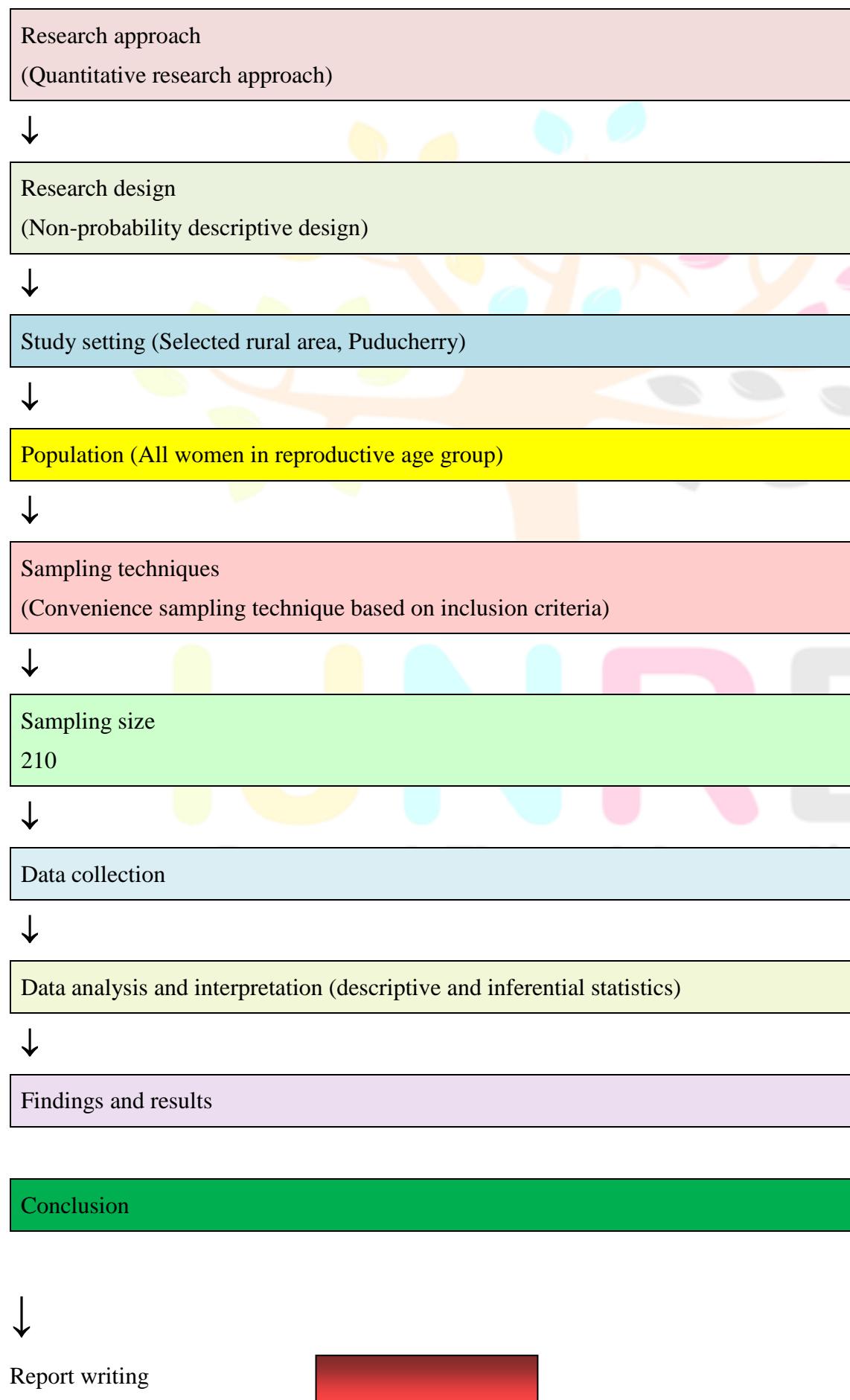
Data analysis was carried out based on the objectives of the study using descriptive and inferential statistics.

- Frequency and percentage distribution was used to assess the sample characteristics.
- Correlation coefficient test was used to correlate menstrual abnormalities with life style practice among the women in reproductive age group at selected rural area.
- Chi square test was used to find out association of pre intervention level of life style practices with demographic variables on women in reproductive age group at selected rural area.

SUMMARY:

This chapter dealt with research approach, design, settings, sample, sampling technique, development and description of tool, method of data collection and statistical analysis in relation to the objectives stated.

Fig: I FLOW CHART: SCHEMATIC REPRESENTATION OF RESEARCH METHODOLOGY



CHAPTER – IV

DATA ANALYSIS AND INTERPRETATION

This chapter deals with analysis and interpretation of the data collected from 210 women in reproductive age group. The data was organized, tabulated and analyzed according to the objectives. The findings are presented under the following sections.

ORGANIZATION OF THE DATA

- SECTION A:** Description of the demographic variables of women in reproductive age group.
- SECTION B:** Assessment of level of menstrual abnormalities and lifestyle practice among women in reproductive age group.
- SECTION C:** Relationship between menstrual abnormalities and lifestyle practice among women in reproductive age group.
- SECTION D:** Association of level of menstrual abnormalities and lifestyle practice with selected demographic variables.

SECTION A: DESCRIPTION OF THE DEMOGRAPHIC VARIABLES OF WOMEN IN REPRODUCTIVE AGE GROUP.

Table 1: Frequency and percentage distribution of demographic variables of women in reproductive age group.

N = 210

Demographic Variables	Frequency (F)	Percentage (%)
Age in yrs		
12 – 16	26	12.4
17 – 21	63	30.0
22 – 26	16	7.6
27 – 31	39	18.6
Above 31	66	31.4
Religion		
Hindu	185	88.1
Christian	22	10.5
Muslim	3	1.4
Others	-	-
Educational status		
No formal education	8	3.8
Primary school education	58	27.6
High school education	81	38.6
Higher secondary education	43	20.5
Degree	20	9.5
Occupation		
Homemaker	42	20.0
Daily wages	82	39.0
Private employee	73	34.8
Government employee	13	6.2
Type of family		
Nuclear family	112	53.3
Joint family	76	36.2
Extended family	22	10.5
Dietary habits		
Vegetarian	28	13.3
Non-vegetarian	182	86.7
Marital status		
Married	123	58.6
Unmarried	87	41.4

Demographic Variables	Frequency (F)	Percentage (%)
Body Mass Index		
Underweight	123	58.6
Normal	87	41.4
Overweight	-	-
Obese	-	-

The table 1 shows that, most of the women of reproductive age group, the majority 66 (31.4%) of them were above 31 years, 63(30%) were 17-21 years, 39(18.6%,) of them were, 27-31 years, 26 (12.4%) were the age group of 12-16 years and 16 (7.6%) of the were the age group of 22-26 years. Regarding religion, 185(88.1%) were Hindus, 122(10.5%) were Christian, 3(1.4%) were Muslim and none of them were in others, that majority 81(38.6 %) of them studied high school education, 58(27.6%) were completed their primary school education, 43 (20.5%) of them were studied up to higher secondary, 20 (9.5%) of women completed their degree and 8 (3.8%) of them were no formal education. 81(38.6%) had high school education, 82(39%) Majority of women 82(39%) were in daily wages, 73(34.8%) were in private employee 13(6.2%) were in government employee. women 76(36.2%) belonged to joint family, 112(53.3%) belonged to nuclear family, 22(10.5%) belonged to nuclear family. Regarding dietary pattern 182(86.7%) were non-vegetarian, and 28(13.3%) were vegetarian. 123(58.6%) were married and 87(41.4 %) were married. 87(41.4 %) were underweight and 123 7(58.6%) were underweight respectively.

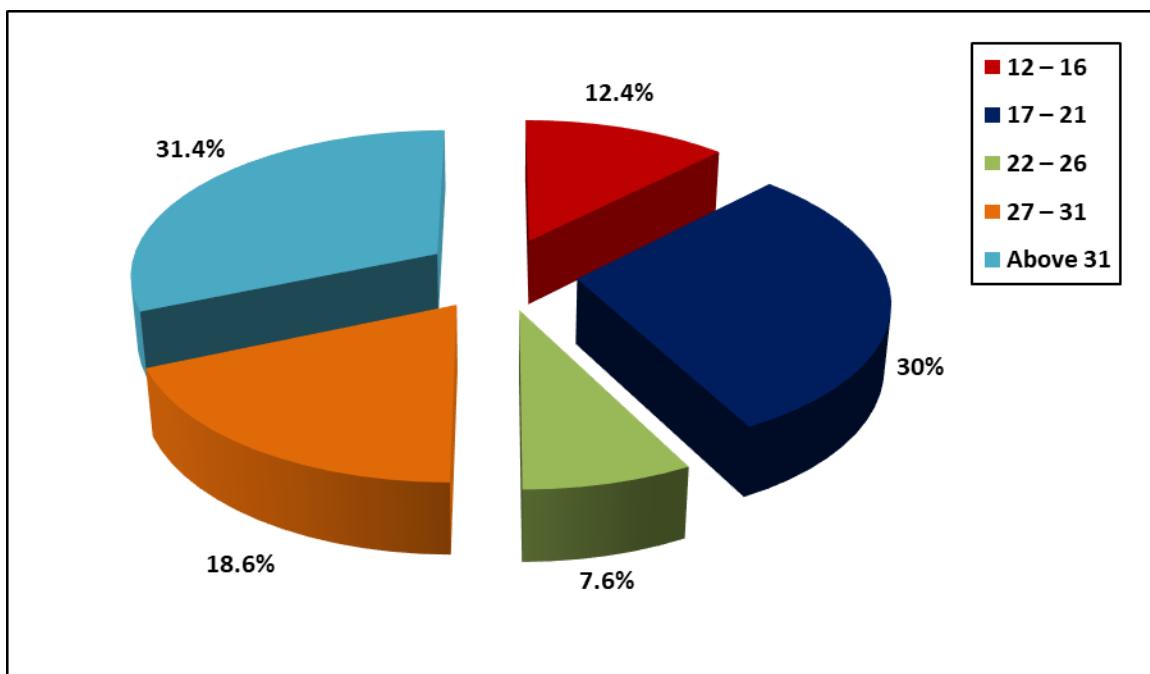


Fig 4.1 Percentage distribution of age of the women in reproductive age group

Fig 4.1 shows the percentage distribution of age of the women in reproductive age group should that the majority 66 (31.4%) of them were above 31 years, 63(30%) were 17-21 years, 39(18.6%,) of them were, 27-31 years, 26 (12.4%) were the age group of 12-16 years and 16 (7.6%) of the were the age group of 22-26 years.

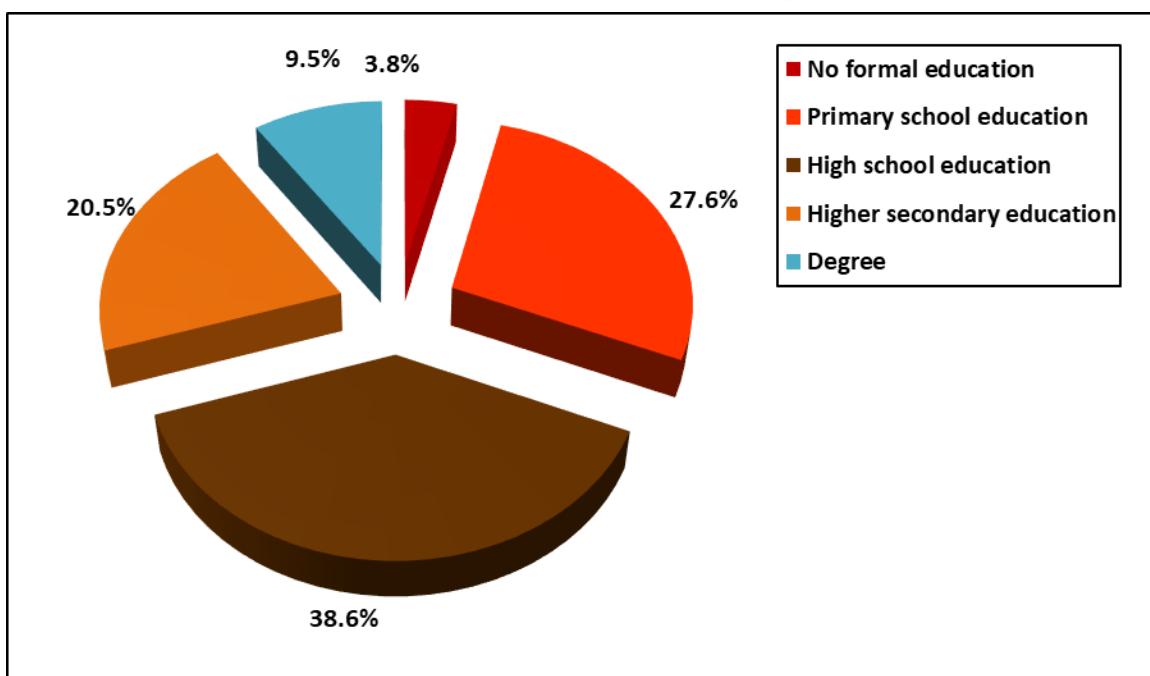


Fig 4.2 Percentage distribution of educational status of the women in reproductive age group

Fig 4.2 shows the percentage distribution of educational status of the women in reproductive age showed that majority 81(38.6 %) of them studied high school education, 58(27.6%) were completed their primary school education, 43 (20.5%) of them were studied up to higher secondary, 20 (9.5%) of women completed their degree and 8 (3.8%) of them were no formal education.

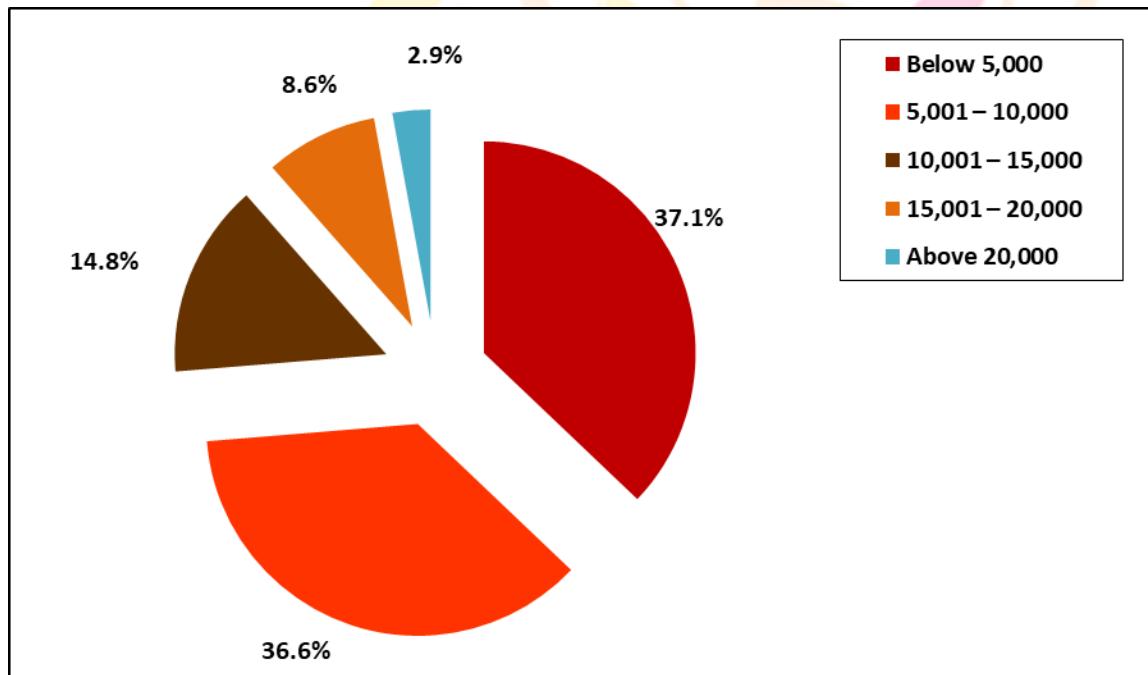


Fig 4.3 Percentage distribution of income of the women in reproductive age group

Fig. 4.3 shows that percentage distribution of income of the women in reproductive age group showed that 78 (37.1%) of them were earn below 5000rupees, 77(36.6%) of them were Rs. 5001-10,000, 31 (14.8%) of women were earn Rs 10.001-15,000, 18 (8.6%) of them earn Rs 15,001-20,000 and 6(2.9%) of them earn above Rs. 20,000.

Table 2: Frequency and percentage distribution of menstrual variables of women in reproductive age group.**N = 210**

S.No	Menstrual Variables	Frequency (F)	Percentage (%)
1	Duration of menstruation		
	2 – 3 days	74	35.3
	4 – 5 days	96	45.7
	More than 5 days	40	19.0
2	Frequency of menstruation		
	Once in 28 days	92	43.8
	Once in 29 – 30 days	81	38.6
	Once in 31 – 35 days	37	17.6
3	Family history of menstrual related problems		
	Yes	37	17.6
	No	173	82.4
4	Menstrual cycle regularity		
	Regular	129	61.4
	Irregular	81	38.6
5	Amount of menstrual bleeding		
	Heavy	35	16.6
	Moderate	123	58.6
	Scanty	52	24.8
6	Dysmenorrhea		
	Yes	59	28.1
	No	151	71.9
7	The treatment taken to menstrual abnormalities		
	Yes	37	17.6
	No	173	82.4

The table 2 shows that, most of the women of reproductive age group, 116(55.2%) were aged 14 – 16 years at the age of menarche, 96(45.7%) had menstruation for 4 – 5 days, 92(43.8%) had menstruation once in 28 days, 95(45.2%) had experience menstrual pain for 13 – 24 hours, 173(82.4%) had no family history of menstrual related problems, 129(61.4%) had regular menstrual cycle, 123(58.6%) had moderate amount of menstrual bleeding, 151(71.9%) had no dysmenorrhoea, 157(74.8%) had no presence of premenstrual syndrome and 173(82.4%) had not taken any treatment for menstrual abnormalities.

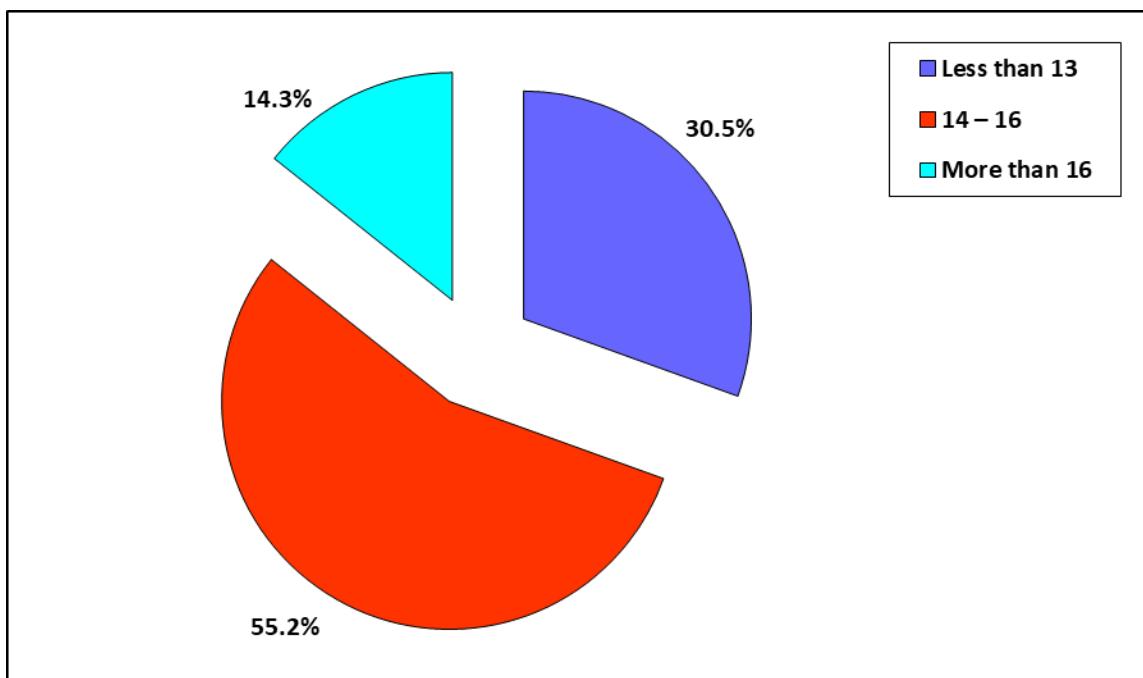


Fig 4.4 Percentage distribution of age at menarche among women in reproductive age group

Fig 4.4 shows the percentage distribution of age at menarche among women in reproductive age group should that majority 55.2% of women of then age at menarche in year of 14-16,30.5% of women of them were age at menarche in year of less than 13,14.3%of women of then were age at menarche in year of more than 16.

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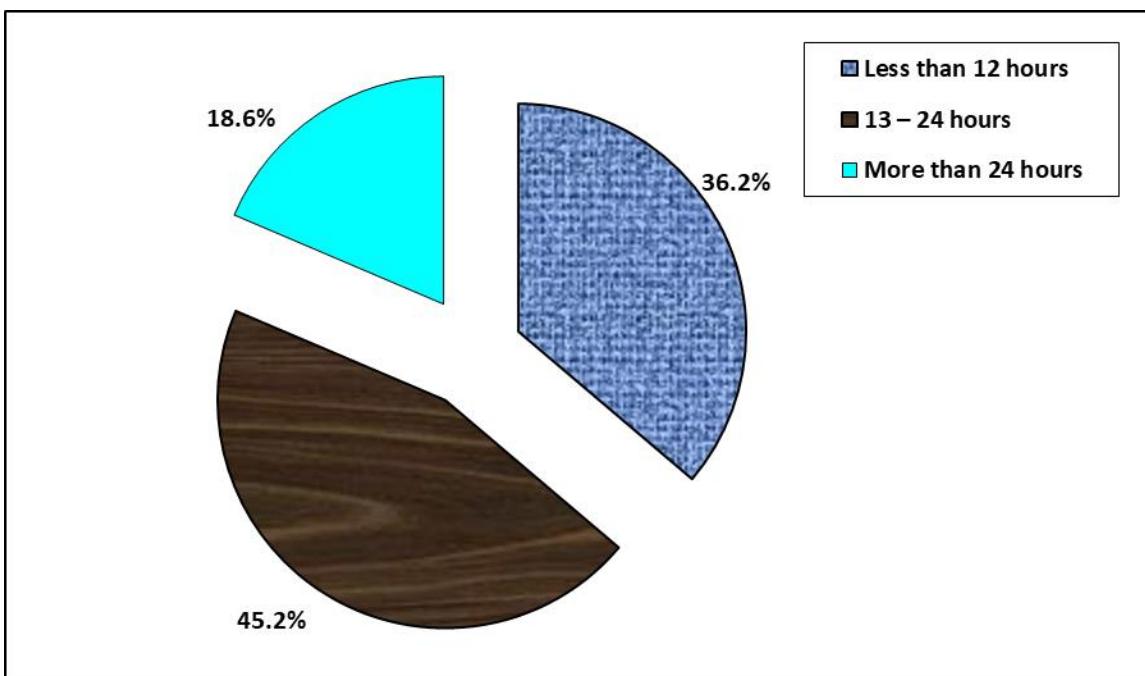


Fig 4.5 Percentage distribution of duration of menstrual pain among women in reproductive age group

Fig 4.5 shows the percentage of duration of menstrual pain among women in reproductive age group showed that majority 45.2% of women of them were duration of menstrual pain 13-24 hours, 36.2% of women of them were less than 12 hours, 18.6% women of them were more than 24 hours

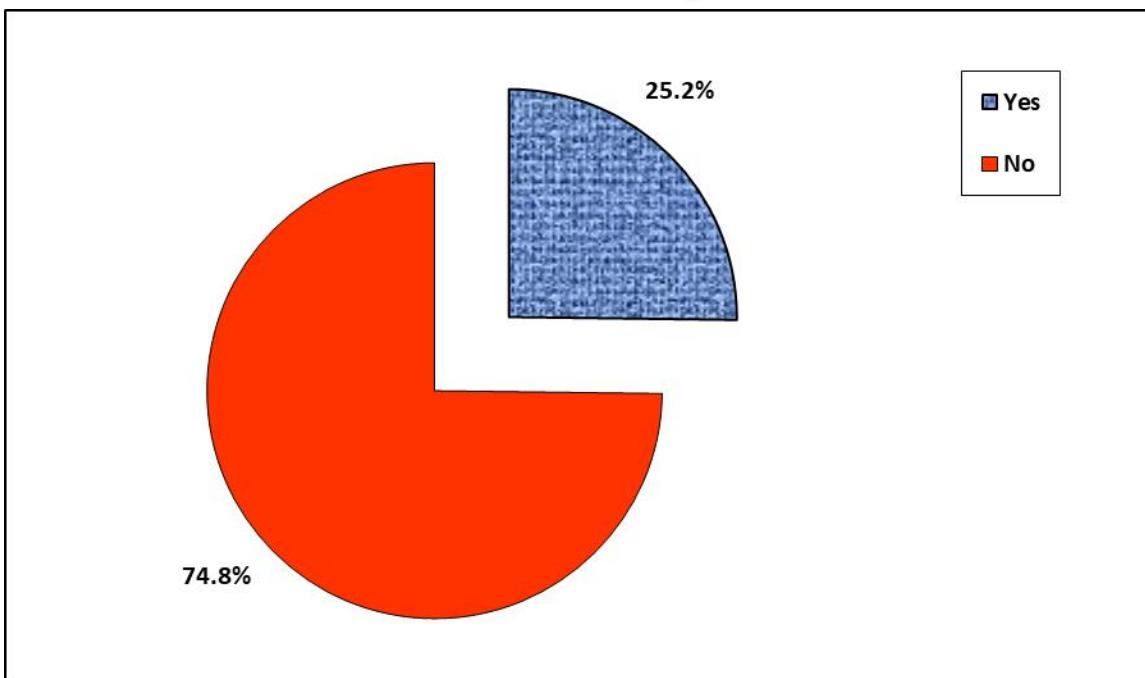


Fig 4.6 Percentage distribution of presence of premenstrual syndrome among women in reproductive age group

Fig 4.6 shows the percentage distribution of presence of premenstrual syndrome among women in reproductive age group showed that majority 74.8% of them were presence of premenstrual syndrome is no, 25.2% women of them were yes having.

SECTION B: ASSESSMENT OF LEVEL OF MENSTRUAL ABNORMALITIES AND LIFESTYLE PRACTICE AMONG WOMEN IN REPRODUCTIVE AGE GROUP.

Table 3: Frequency and percentage distribution of level of menstrual abnormalities among women in reproductive age group.

N = 210

Level of Menstrual Abnormalities	Frequency (F)	Percentage (%)
Mild (<50)	100	47.62
Moderate (50 – 75)	110	52.38
Severe (>75)	0	0

The above table 3 shows that among women in reproductive age group, 110(52.38%) had moderate menstrual abnormalities and 100(47.62%) had mild level of menstrual abnormalities and none of them had severe level of menstrual abnormalities.

Percentage distribution of level of menstrual abnormalities among women in reproductive age group

Table 4: Frequency and percentage distribution of level of lifestyle practice among women in reproductive age group.

N = 210

Level of Lifestyle Practice	Frequency (F)	Percentage (%)
Low (<50)	18	8.57
Moderate (50 – 75)	137	65.24
Good (>75)	55	26.19

The above table 4 shows that among women in reproductive age group, 137(65.24%) had moderate level of lifestyle practice, 55(26.19%) had good lifestyle practice and 18(8.57%) had low level of lifestyle practice.

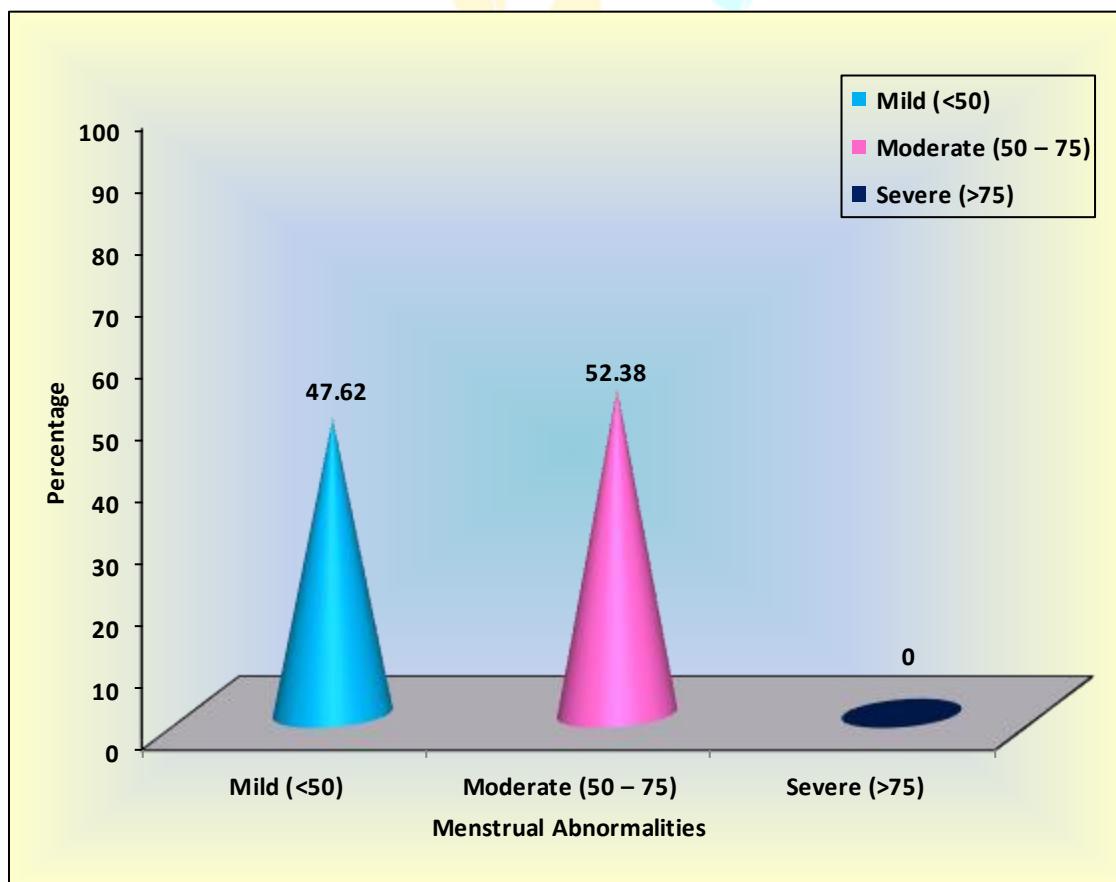


Fig 4.7 Percentage distribution of level of menstrual abnormalities among women in reproductive age group

SECTION C: RELATIONSHIP BETWEEN MENSTRUAL ABNORMALITIES AND LIFESTYLE PRACTICE AMONG WOMEN IN REPRODUCTIVE AGE GROUP.

Table 5: Correlation between menstrual abnormalities and lifestyle practice among women in reproductive age group.

N = 210

Variables	Mean	S.D	Karl Pearson's Correlation 'r' Value
Menstrual Abnormalities	46.80	11.16	r= -0.466
Lifestyle Practice	23.44	5.31	p=0.0001, S***

***p<0.001, S – Significant

The table 5 depicts that the mean score of menstrual abnormalities among women in the reproductive age group was 46.80 ± 11.16 and the mean score of lifestyle practice was 23.44 ± 5.31 . The calculated Karl Pearson's Correlation 'r' value of $r = -0.466$ shows a moderate negative correlation which was found to be statistically significant at $p<0.001$ level which clearly infers that when the lifestyle practice increases found to be good then the menstrual abnormalities decreases.

SECTION D: ASSOCIATION OF LEVEL OF MENSTRUAL ABNORMALITIES AND LIFESTYLE PRACTICE WITH SELECTED DEMOGRAPHIC VARIABLES.

Table 6: Association of level of menstrual abnormalities among women in the reproductive age group with their selected demographic variables.

N = 210

Demographic Variables	Frequency (F)	Menstrual Abnormalities	Lifestyle Practice
		Chi-Square & p-Value	Chi-Square & p-Value
Age in yrs			
12 – 16	26	$\chi^2=3.429$ d.f=4 p = 0.489 N.S	$\chi^2=67.182$ d.f=8 p = 0.0001 S***
17 – 21	63		
22 – 26	16		
27 – 31	39		
Above 31	66		
Religion			
Hindu	185	$\chi^2=3.307$ d.f=2 p = 0.191 N.S	$\chi^2=1.810$ d.f=4 p = 0.771 N.S
Christian	22		
Muslim	3		
Others	-		
Educational status			
No formal education	8	$\chi^2=5.374$ d.f=4 p = 0.251 N.S	$\chi^2=37.849$ d.f=8 p = 0.0001 S***
Primary school education	58		
High school education	81		
Higher secondary education	43		
Degree	20		
Occupation			
Homemaker	42	$\chi^2=4.706$ d.f=3 p = 0.195 N.S	$\chi^2=4.043$ d.f=6 p = 0.671 N.S
Daily wages	82		
Private employee	73		
Government employee	13		
Monthly income in rupees		$\chi^2=12.454$ d.f=4	$\chi^2=7.392$ d.f=8
Below 5,000	78		

Demographic Variables	Frequency (F)	Menstrual Abnormalities	Lifestyle Practice
		Chi-Square & p-Value	Chi-Square & p-Value
5,001 – 10,000	77	$p = 0.014$ S*	p = 0.495 N.S
10,001 – 15,000	31		
15,001 – 20,000	18		
Above 20,000	6		
Type of family		$\chi^2=1.947$ d.f=2 $p = 0.378$ N.S	$\chi^2=12.058$ d.f=4 $p = 0.017$ S*
Nuclear family	112		
Joint family	76		
Extended family	22		
Dietary habits		$\chi^2=1.836$ d.f=1 $p = 0.175$ N.S	$\chi^2=6.064$ d.f=2 $p = 0.048$ S*
Vegetarian	28		
Non-vegetarian	182		
Marital status		$\chi^2=0.925$ d.f=1 $p = 0.336$ N.S	$\chi^2=31.648$ d.f=2 $p = 0.0001$ S***
Married	123		
Unmarried	87		
Body Mass Index		$\chi^2=5.120$ d.f=3 $p = 0.163$ N.S	$\chi^2=9.313$ d.f=6 $p = 0.157$ N.S
Underweight	123		
Normal	87		
Overweight	-		
Obese	-		

*p<0.05, S – Significant, N.S – Not Significant

The table 6 shows that the demographic variable monthly income ($\chi^2=12.454$, $p=0.014$) had shown statistically significant association with level of menstrual abnormalities among women in the reproductive age group at p<0.05 level and the other demographic variables had not shown statistically significant association with level of menstrual abnormalities among women in the reproductive age group.

Demographic variables such as age ($\chi^2=67.182$, $p=0.0001$), educational status ($\chi^2=37.849$, $p=0.0001$) and marital status ($\chi^2=31.648$, $p=0.0001$) had shown statistically significant association with level of lifestyle practice among women in the reproductive age group at $p<0.001$ level respectively.

Demographic variables like type of family ($\chi^2=12.058$, $p=0.017$) and dietary habits ($\chi^2=6.064$, $p=0.048$) $p=0.0001$) had shown statistically significant association with level of lifestyle practice among women in the reproductive age group at $p<0.05$ level respectively and the other demographic variables had not shown statistically significant association with level of lifestyle practice among women in the reproductive age group.

Table 7: Association of level of lifestyle practice among women in the reproductive age group with their selected demographic variables.

N = 210

Menstrual Variables	Frequency (F)	Menstrual Abnormalities	Lifestyle Practice
		Chi-Square & p-Value	Chi-Square & p-Value
Age at menarche (in yrs)			
Less than 13	64	$\chi^2=4.471$ d.f=2 $p = 0.107$ N.S	$\chi^2=19.356$ d.f=4 p = 0.001 S***
14 – 16	116		
More than 16	30		
Duration of menstruation			
2 – 3 days	74	$\chi^2=0.641$ d.f=2 $p = 0.726$ N.S	$\chi^2=4.543$ d.f=4 $p = 0.338$ N.S
4 – 5 days	96		
More than 5 days	40		
Frequency of menstruation			
Once in 28 days	92	$\chi^2=0.552$ d.f=2 $p = 0.759$ N.S	$\chi^2=7.159$ d.f=4 $p = 0.128$ N.S
Once in 29 – 30 days	81		
Once in 31 – 35 days	37		
Duration of menstrual pain			
Less than 12 hours	76	$\chi^2=16.115$ d.f=2 p = 0.0001 S***	$\chi^2=12.937$ d.f=4 p = 0.012 S*
13 – 24 hours	95		
More than 24 hours	39		
Family history of menstrual related problems			
Yes	37	$\chi^2=0.746$ d.f=1 $p = 0.388$ N.S	$\chi^2=5.993$ d.f=2 p = 0.050 S*
No	173		
Menstrual cycle regularity			
Regular	129	$\chi^2=0.026$ d.f=1 $p = 0.871$ N.S	$\chi^2=2.906$ d.f=2 $p = 0.234$ N.S
Irregular	81		
Amount of menstrual bleeding			
Heavy	35	$\chi^2=0.715$ d.f=2	$\chi^2=8.470$ d.f=4

Menstrual Variables	Frequency (F)	Menstrual Abnormalities	Lifestyle Practice
		Chi-Square & p-Value	Chi-Square & p-Value
Moderate	123	p = 0.699 N.S	p = 0.076 N.S
Scanty	52		
Dysmenorrhea		$\chi^2=0.077$ d.f=1 p = 0.781 N.S	$\chi^2=7.037$ d.f=2 p = 0.030 S*
Yes	59		
No	151		
Presence of premenstrual syndrome		$\chi^2=0.006$ d.f=1 p = 0.940 N.S	$\chi^2=13.318$ d.f=2 p = 0.001 S***
Yes	53		
No	157		
The treatment taken to menstrual abnormalities		$\chi^2=0.251$ d.f=1 p = 0.616 N.S	$\chi^2=5.508$ d.f=2 p = 0.064 N.S
Yes	37		
No	173		

***p<0.001, *p<0.05, S – Significant, N.S – Not Significant

The table 7 shows that the menstrual variable duration of menstrual pain ($\chi^2=16.115$, **p=0.0001**) had shown statistically significant association with level of menstrual abnormalities among women in the reproductive age group at p<0.001 level and the other menstrual variables had not shown statistically significant association with level of menstrual abnormalities among women in the reproductive age group.

Menstrual variables such as age at menarche ($\chi^2=19.356$, **p=0.0001**) and presence of premenstrual syndrome ($\chi^2=13.318$, **p=0.001**) had shown statistically significant association with level of lifestyle practice among women in the reproductive age group at p≤0.001 level respectively.

Menstrual variables like duration of menstrual pain ($\chi^2=12.937$, **p=0.012**), family history of menstrual related problems ($\chi^2=5.993$, **p=0.050**) and dysmenorrhea ($\chi^2=7.037$, **p=0.030**) had shown statistically significant association with level of lifestyle practice among women in the reproductive age group at p<0.05 level respectively and the other menstrual variables had not shown statistically significant association with level of lifestyle practice among women in the reproductive age group

CHAPTER – V

DISCUSSION, SUMMARY, CONCLUSION, IMPLICATIONS AND RECOMMENDATION

DISCUSSION

This chapter deals with major findings of the study and discusses them in relation to the similar studies conducted by other researchers. Study to assess the menstrual abnormalities with life style practice among the women in reproductive age group Puducherry. The collected data was analysed by using descriptive statistics – frequency and percentage distribution of demographic variables.

Study was discussed based on objectives of the study represented under the following headings.

First objective was description of demographic variables of women in reproductive age group:

The table 1 shows that, most of the women of reproductive age group, 66(31.4%) were aged above 31 years, 185(88.1%) were Hindus, 81(38.6%) had high school education, 82(39%) were daily wages, 78(37.1%) had monthly income of below Rs.5,000, 112(53.3%) belonged to nuclear family, 182(86.7%) were non-vegetarian, 123(58.6%) were married and were underweight respectively.

The prevalence of contraceptive use in married women of reproductive age group (15-45 year) in urban slum area is found to be 41.9%. Spacing methods including the modern methods of contraception are not getting accepted. More efforts should be taken to remove fear and misconceptions about contraceptive use. Shows that the percentage distribution of the women in reproductive age groups showed that majority 31% of them were above 31 years, 30% of the were 17-21 years, 18.6% of the were the age group of 27-31 years, 12.4% were from 12-16 years, and 7.6% of the were 22-26 years. The prevalence of dysmenorrhea was 35% [95% confidence interval (CI): 36.6%–54.4%] and that of menorrhagia was 17% (95% CI: 11.6%–25.3%). QOL in women with dysmenorrhea 22-30 year.

Second objective was assessment of level of menstrual abnormalities and lifestyle practice among the women in reproductive age group:

The above table 2 shows that among women in reproductive age group, 110(52.38%) had moderate menstrual abnormalities and 100(47.62%) had mild level of menstrual abnormalities.

In this study, 140 (39.37%) respondents had good practice of menstrual hygiene. The findings of the study showed a significant positive association between good practices of menstrual hygiene and years of education of the study subject (adjusted odds ratio [AOR] =9.3, 95% confidence interval [CI]: 4.4–19.5), having a higher socioeconomic status (AOR = 9.27, 95% CI: 4.7–18.03).

Results In this study, 120 (48.37%) respondents had good practice of menstrual hygiene. **Kumar, Gunjan1** The findings of the study showed a significant positive association between good practices of menstrual hygiene and years of education of the study subject (adjusted odds ratio [AOR] =9.3, 95% confidence interval [CI]: 4.4–19.5), having a higher socioeconomic status (AOR = 9.27, 95% CI: 4.7–18.03).

The findings of the study supported by **Shekhar Chauhan** The results revealed a wide variation in sanitary napkins' use across the socio-economic and demographic factors. The use of sanitary napkins was significantly higher among girls with 8-9 (53.2%) and 10 and more (75.4%) years of schooling compared to those who had no formal education (26.4%).

Third objective was relation relationship between menstrual abnormalities and life style practice among women in reproductive age group:

The findings of the study supported by **Priyanka NegI.** The age of menarche was 13.5 ± 0.64 years. Dysmenorrhea (62.75%), premenstrual syndrome (PMS) (40.42%), and irregular cycle (28.72%) were observed common problems among adolescent girls. Dysmenorrhea was associated with eating junk food (66.10%), and PMS was associated with lacking of physical activities (78.94%).

The findings of the study supported by **Chauahan M** conducted a randomized controlled study on effect of oral hydration therapy in isolated reproductive age 12-16. in B.D. Sharma PGIMS, Rohtak. There was a significant difference was observed between the mean reproductive of the two groups after seven days' Menstrual abnormalities. $p < 0.001$. The study concluded that the oral6 hydration therapy was improved menstrual level.

Fourth objective of association of level Menstrual abnormalities and life style practice with selected demographic variables:

The findings of the study supported by **Abayneh Birlie Zeru**, A total of 620 students participated in the present study with a response rate of 93.9%. Out of the total study participants, 32.6% (95% CI 29–36.5) participants had irregular menstrual cycle. Significant association was found between anemia (AOR = 2.1; 95%CI 1.337–3.441), alcohol intake (AOR = 2.4; 95%CI 1.25–4.666), < 5 sleep hours (AOR = 5.4; 95%CI 2.975–9.888), 6–7 sleep hours (AOR = 1.9; 95%CI 1.291–2.907), Perceived stress (AOR = 3.3; 95%CI 1.8322–5.940), iodine deficiency disorder (IDD) (AOR = 3.9; 95%CI 1.325–11.636) and underweight (AOR = 1.8; 95%CI 1.109–2.847) with menstrual irregularity.

The findings of the study supported by **JE Chavarro, Harvard** shows that the menstrual variable duration of menstrual pain ($\chi^2=16.115$, $p=0.0001$) had shown statistically significant association with level of menstrual abnormalities among women in the reproductive age group at $p<0.001$ level and the other menstrual variables had not shown statistically significant association with level of menstrual abnormalities among women in the reproductive age group.

SUMMARY

The major findings were

Characteristics of Demographic Variables of women in reproductive age group

Most of the women of reproductive age group, 66(31.4%) were aged above 31 years, 185(88.1%) were Hindus, 81(38.6%) had high school education, 82(39%) were daily wages, 78(37.1%) had monthly income of below Rs.5,000, 112(53.3%) belonged to nuclear family, 182(86.7%) were non-vegetarian, 123(58.6%) were married and were underweight respectively.

Menstrual variables of women in reproductive age group

Most of the women of reproductive age group, 116(55.2%) were aged 14 – 16 years at the age of menarche, 96(45.7%) had menstruation for 4 – 5 days, 92(43.8%) had menstruation once in 28 days, 95(45.2%) had experience menstrual pain for 13 – 24 hours, 173(82.4%) had no family history of

menstrual related problems, 129(61.4%) had regular menstrual cycle, 123(58.6%) had moderate amount of menstrual bleeding, 151(71.9%) had no dysmenorrhoea, 157(74.8%) had no presence of premenstrual syndrome and 173(82.4%) had not taken any treatment for menstrual abnormalities.

level of menstrual abnormalities among women in reproductive age group.

women in reproductive age group, 110(52.38%) had moderate menstrual abnormalities and 100(47.62%) had mild level of menstrual abnormalities.

level of lifestyle practice among women in reproductive age group.

women in reproductive age group, 137(65.24%) had moderate level of lifestyle practice, 55(26.19%) had good lifestyle practice and 18(8.57%) had low level of lifestyle practice.

Correlation between menstrual abnormalities and lifestyle practice among women in reproductive age group.

Mean score of menstrual abnormalities among women in the reproductive age group was 46.80 ± 11.16 and the mean score of lifestyle practice was 23.44 ± 5.31 . The calculated Karl Pearson's Correlation 'r' value of $r = -0.466$ shows a moderate negative correlation which was found to be statistically significant at $p < 0.001$ level which clearly infers that there when the lifestyle practice increases found to be good then the menstrual abnormalities decreases.

Association of level of menstrual abnormalities among women in the reproductive age group with their selected demographic variables.

Demographic variable like monthly income ($\chi^2=12.454$, $p=0.014$) had shown statistically significant association with level of menstrual abnormalities among women in the reproductive age group at $p < 0.05$ level and the other demographic variables had not shown statistically significant association with level of menstrual abnormalities among women in the reproductive age group.

Demographic variables such as age ($\chi^2=67.182$, $p=0.0001$), educational status ($\chi^2=37.849$, $p=0.0001$) and marital status ($\chi^2=31.648$, $p=0.0001$) had shown statistically significant association with level of lifestyle practice among women in the reproductive age group at $p<0.001$ level respectively.

Demographic variables such as type of family ($\chi^2=12.058$, $p=0.017$) and dietary habits ($\chi^2=6.064$, $p=0.048$) $p=0.0001$) had shown statistically significant association with level of lifestyle practice among women in the reproductive age group at $p<0.05$ level respectively and the other demographic variables had not shown statistically significant association with level of lifestyle practice among women in the reproductive age group.

Association of level of lifestyle practice among women in the reproductive age group with their selected demographic variables.

Menstrual variable like duration of menstrual pain ($\chi^2=16.115$, $p=0.0001$) had shown statistically significant association with level of menstrual abnormalities among women in the reproductive age group at $p<0.001$ level and the other menstrual variables had not shown statistically significant association with level of menstrual abnormalities among women in the reproductive age group.

Menstrual variables age at menarche ($\chi^2=19.356$, $p=0.0001$) and presence of premenstrual syndrome ($\chi^2=13.318$, $p=0.001$) had shown statistically significant association with level of lifestyle practice among women in the reproductive age group at $p\leq 0.001$ level respectively.

Menstrual variables duration of menstrual pain ($\chi^2=12.937$, $p=0.012$), family history of menstrual related problems ($\chi^2=5.993$, $p=0.050$) and dysmenorrhea ($\chi^2=7.037$, $p=0.030$) had shown statistically significant association with level of lifestyle practice among women in the reproductive age group at $p<0.05$ level respectively and the other menstrual variables had not shown statistically significant association with level of lifestyle practice among women in the reproductive age group.

CONCLUSION

The menstrual irregularities are more prevalent among adolescent females and women. The ideal menstrual health education program on menstrual abnormalities may help girls to consider the importance

between knowledge and life style practice and improved human health. Better need to seeks medical attention and address to improve their quality of life style.

IMPLICATIONS:

The investigator had derived the ensuing indications from the study which are of being concern field of Nursing Practice, Nursing Administration, Nursing Education and Nursing Research.

NURSING PRACTICE:

- The nurse can render service to the Adolescent girls and reproductive age group to provide which improves their performance.
- Training for midwives may be given regarding complementary and non-pharmacological treatment to women with menstrual abnormalities.

NURSING ADMINISTRATION:

- Nursing administration having role to provide conductive environment for education to the Adolescent during menstruation by means to conduct health education programme.

NURSING EDUCATION

- The nurse educator promotes the curriculum for nursing and students to get them in knowledge and skills towards alternative therapies on menstrual irregularities
- Short term courses and in-service education programs should be organized for menstrual irregularities in community setting

NURSING RESEARCH:

- Nurse researchers update their knowledge regarding alternative therapies used for Mensuration.

- Nurse researcher publishes the study findings related to non -pharmacological

therapies used for mental abnormalities through journals, research articles, etc.

which may be useful for the upcoming researchers for referencing.

RECOMMENDATION:

The study recommended the following for further research

- A study can be replicated on large sample thereby findings can be generalized to a large population .
- Quantitative study can be considered to find out the similarities or difference in effectiveness of consider with Dysmenorrhea.
- A descriptive study can be conducted to find out the and practice Regarding to menstrual abnormalities.

LIMITATIONS

- The study setting was limited to rural area, Puducherry.
- The period of data collection was limited to one month
- The sample size was limited to two hundred and ten.

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