



## AN EPIDEMIOLOGICAL STUDY ON ILL HEALTH IN NON-PREGNANT WOMEN

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### ABSTRACT

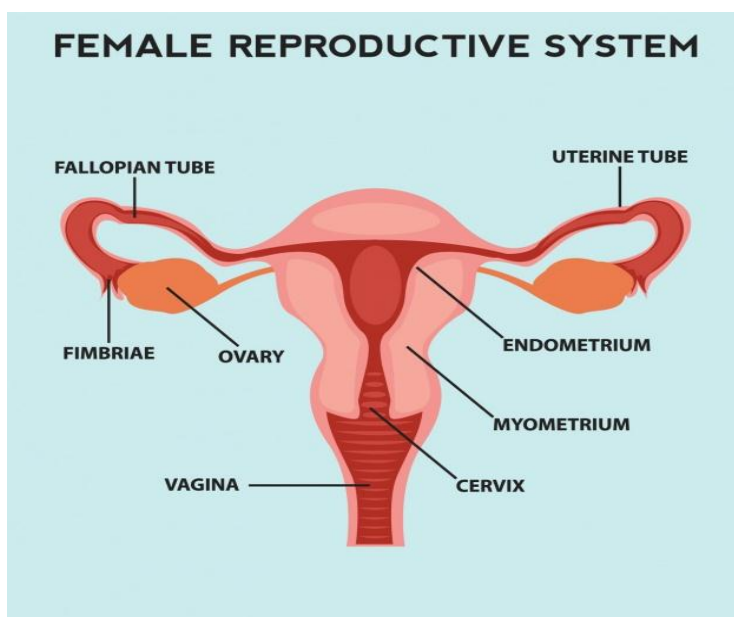
**Introduction:** Now a day there is a huge development in the society, in-terms of technology, and science. But, if it's in relation to health it is deteriorating day by day. This is due to altered habits of individuals like unhealthy food habits, sedentary life style. When it is concerned to adolescence women it's a major concern now a day, many of them suffering with hormonal imbalances which are the impact of habits. So in our study we would like to know the epidemiology, in relation to social habits. **Objective:** To assess the incidence of disorders/disease in non-pregnant women. **Materials and Methods:** This was

prospective and observational study, conducted in a tertiary care hospital. Total number of enrollment in this study is 150 OP, among them 27 patients were drop out, and remaining 123 patients were included in this study. **Results and discussion:** Out of the 123 non-pregnant individuals the prevalence of the gynecological disorders are PCOD 63(51.2%), infertility 24(19.5%), thyroid 6 (4.87%) fibroid uterus, abdominal pain are 5 (4.06%) ovarian cyst 4(3.25%) hemorrhoids 3 (2.43%) abortion, fever, breast pain are 2(1.62%) menorrhagia, gastritis, oligomenorrhea, anemia, leukorrhea, allergy, motions are 1 (0.81%). The prevalence of PCOD stands high and when compared with BMI, 25 individuals are found to be obese with high BMI and 43 individuals has undergone surgery for PCOD and are with hormone replacement therapy. However, about 90% were not physically active in the population. **Conclusion:** In non-pregnant individuals PCOD is the predominant condition among the study population. It is mostly being secondary to preexisting diseases conditions and lack of physical exercises in their day to day life.

**KEYWORDS:** Gynecology, Prevalence, Non pregnant women, BMI, PCOD.

## INTRODUCTION

Female organisms are the one who experiences various phases from the time of birth to the death. Menstruation is one of the important aspects of life. Menstruation usually starts at puberty and ceases at the menopause. These two stages in a woman's life are determined by the levels of female sex hormones in the body. The menstrual cycle itself is also governed by a combination of hormones, all of which are produced at varying levels throughout the cycle.<sup>[1,2,3,4,15]</sup>



**Figure 1.1: Female reproductive system.**

### Amenorrhoea

The absence of menstruation for at least 3 months in women who would otherwise be having periods

- Occurs between puberty and the menopause
- In some cases, due to a chromosomal abnormality
- Stress, excessive exercise, and being underweight are all risk factors

**Primary amenorrhea:** If a girl has not started to menstruate by the age of 16, she is said to have primary amenorrhea. **Secondary amenorrhea:** Once menstruation has become established during puberty, If menstruation stops at any other time for at least 3 months, the condition is known as secondary amenorrhea.

### ***Menorrhagia***

Menstrual bleeding that is heavier than normal

- More common over the age of 40
- Being overweight is a risk factor
- Genetics is not a significant factor.

Menorrhagia may be associated with a dragging pain in the lower abdomen.. Severe menstrual bleeding may lead to iron-deficiency anemia. About 1 in 20 women has menorrhagia regularly. It is more common in women approaching the menopause.

### ***Dysmenorrhoea***

Lower abdominal pain and discomfort experienced just before or during menstruation .Age, genetics, and lifestyle as risk factors depend on the type Up to three-quarters of women have period pain, also known as dysmenorrhea, at some time. In about a fifth of these women, the pain is severe and can seriously disrupt normal activities. Pain is usually experienced in the 24 hours before menstruation or over the first 1 or 2 days of the period. There are two types of dysmenorrhea: primary, which has no obvious cause; and secondary, which is the result of a disorder of the reproductive organs.

### ***Premenstrual Syndrome***

Varying symptoms that may affect women in the days leading up to menstruation

- Usually develops in late adolescence; may occur in all menstruating females
- Stress and certain foods may aggravate symptoms
- Genetics is not a significant factor.

### ***Abnormal Vaginal Bleeding***

Vaginal bleeding that is not related to menstruation

- Age and lifestyle as risk factors depend on the cause
- Genetics is not a significant factor.

Normally, vaginal bleeding occurs only during a period. Bleeding that occurs outside menstruation is abnormal. In women under the age of 35, abnormal vaginal bleeding is often the result of starting oral contraceptives or of using an intrauterine contraceptive device (IUD). Abnormal bleeding caused by a disorder of the reproductive organs is more common in women over this age.

### **Menopausal Problems**

Symptoms associated with the normal changes that take place in a woman's body as her period of fertility ends

- Most common between the ages of 45 and 55
- Sometimes runs in families
- Smoking may lower the age at which the menopause occurs.

The menopause, the time at which a woman stops menstruating, is a normal consequence of the aging process. Around the menopause, about three-quarters of women experience symptoms, which tend to last for about 2 years. In the other quarter of women, symptoms persist for longer.<sup>[11,12]</sup>

### ***PCOD (polycystic ovarian disease)***

Patients suffering from polycystic ovarian disease (PCOD) have multiple small cysts in their ovaries (the word poly means many). These cysts occur when the regular changes of a normal menstrual cycle are disrupted. The ovary is enlarged; and produces excessive amounts of androgen and estrogenic hormones. This excess, along with the absence of ovulation, may cause infertility. Other names for PCOD are Polycystic Ovarian Syndrome (PCOS) or the Stein-Leventhal syndrome.<sup>[14]</sup>

### ***Infertility***

Infertility is the failure of a couple to conceive a pregnancy after trying to do so for at least one full year. In primary infertility, pregnancy has never occurred. In secondary infertility, one or both members of the couple have previously conceived, but are unable to conceive again after a full year of trying.<sup>[13,15]</sup>

### ***Ovarian Cysts***

Fluid-filled swellings that grow on or in one or both ovaries

- Most common between the ages of 30 and 45
- Genetics and lifestyle are not significant factors.

Ovarian cysts are fluid-filled sacs that grow on or in the ovaries. Most ovarian cysts are noncancerous and not harmful, but a cyst may sometimes become cancerous. Cancerous cysts are more likely to develop in women over the age of 40.

### **Fibroids**

Fibroids are abnormal growths that develop in or on a woman's uterus. Sometimes these tumors become quite large and cause severe abdominal pain and heavy periods. In other cases, they cause no signs or symptoms at all. The growths are typically benign, or noncancerous. The cause of fibroids is unknown.

### ***Endometriosis***

Endometriosis (en-doe-me-tree-O-sis) is an often painful disorder in which tissue that normally lines the inside of your uterus — the endometrium — grows outside your uterus. Endometriosis most commonly involves your ovaries, fallopian tubes and the tissue lining your pelvis. Rarely, endometrial tissue may spread beyond pelvic organs. With endometriosis, displaced endometrial tissue continues to act as it normally would — it thickens, breaks down and bleeds with each menstrual cycle. Because this displaced tissue has no way to exit your body, it becomes trapped. When endometriosis involves the ovaries, cysts called endometriomas may form. Surrounding tissue can become irritated, eventually developing scar tissue and adhesions — abnormal bands of fibrous tissue that can cause pelvic tissues and organs to stick to each other. Endometriosis can cause pain — sometimes severe — especially during your period. Fertility problems also may develop. Fortunately, effective treatments are available.

### ***pelvic Inflammatory Disease (PID)***

Pelvic inflammatory disease (PID) is an infection of the female reproductive organs. It usually occurs when sexually transmitted bacteria spread from your vagina to your uterus, fallopian tubes or ovaries. Pelvic inflammatory disease often causes no signs or symptoms. As a result, you might not realize you have the condition and get needed treatment. The condition might be detected later if you have trouble getting pregnant or if you develop chronic pelvic pain.

**AIMS AND OBJECTIVES:** To assess the incidence of disorders/disease in non-pregnant women.

- ▶ Relativity of patient social habits to the health effects.
- ▶ To analyze the prescription pattern of out patients.
- ▶ To analyze the drug interactions.
- ▶ To assess the prevalence and incidence of women disorders/disease.

## MATERIALS AND METHODS

**Study Design:** This study was prospective and observational study.

**Study Duration:** This study was carried out for 6 months.

**Study Population:** Out-patients attending gynecology department of the hospital.

**Sample Size:** Total number of enrollment in this study are 150 OP. Among them 27 patients were drop out, and remaining 123 patients were included in this study.

### Study Criteria

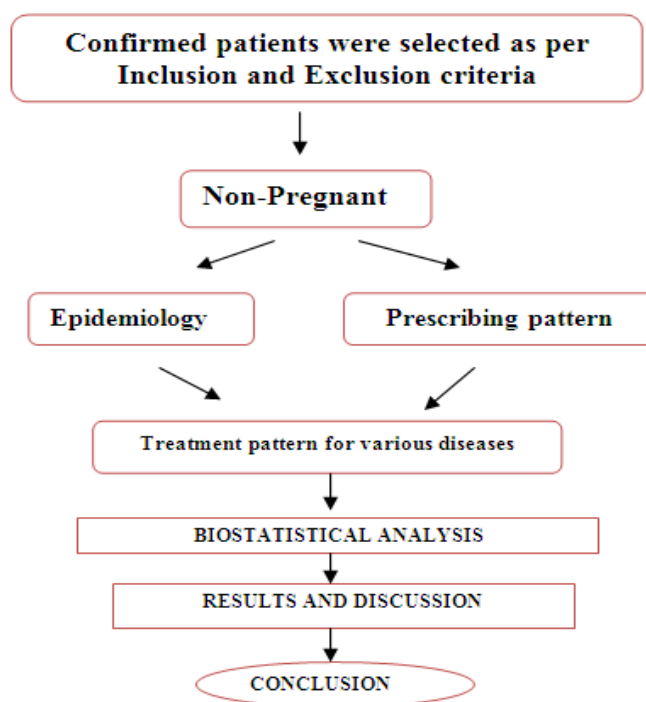
#### Inclusion Criteria

- ❖ All the non-pregnant women attending OPD above 18-45 years are included.
- ❖ Patients prescribed with at least one medication are included.
- ❖ Patient with co-morbidities and non-hospitalized are included.
- ❖ Pregnant women who were willing to participate in the study.

#### Exclusion Criteria

- ❖ Patients with incomplete information.
- ❖ Out patients <18 and >45 are excluded from the study.
- ❖ Neonates, infants and lactating women are excluded.
- ❖ Patients with liver and kidney disorders are excluded.

### Study Design



### Statistical Analysis

Statistical Analysis was performed by using MS Excel, and the results were statistically analyzed.

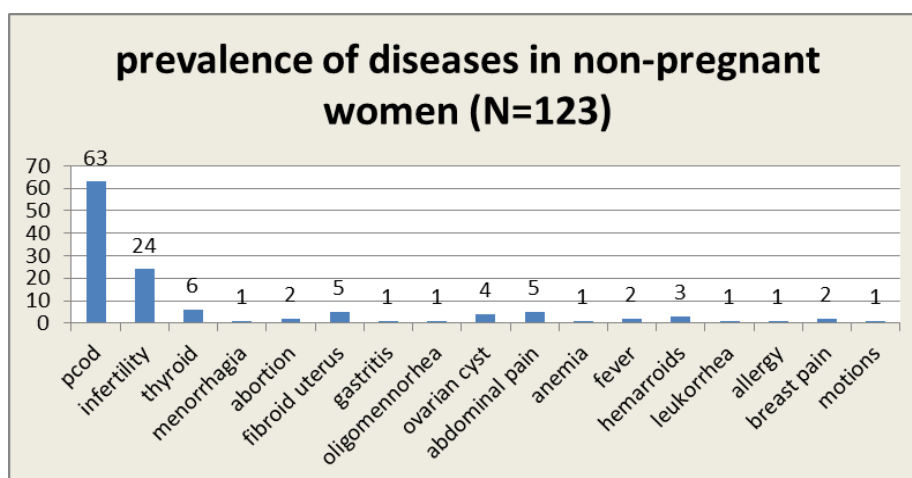
## RESULTS AND DISCUSSION

### Epidemiology and prescribing patterns in non pregnant women (N=123)

**Prevalence of diseases in non-pregnant women:** It mostly defines the measurement of all individuals affected by the disease at a particular time. In this study the no of patients(non pregnant) affected with the diseases were noted.

**Table 1: Prevalence of diseases in Non-pregnant women.**

Disease	No of non pregnant women	Percentage (%)
Pcod	63	51.2
Infertility	24	19.5
Thyroid	6	4.87
Menorrhagia	1	0.81
Abortion	2	1.62
Fibroid Uterus	5	4.06
Gastritis	1	0.81
Oligomenorrhea	1	0.81
Ovarian Cyst	4	3.25
Abdominal Pain	5	4.06
Anemia	1	0.81
Fever	2	1.62
Hemorrhoids	3	2.43
Leukorrhea	1	0.81
Allergy	1	0.81
Breast Pain	2	1.62
Motions	1	0.81



**Chart 1: Prevalence of diseases in Non-pregnant women.**

Point Prevalence:  $\frac{\text{No of Cases}}{\text{Total no of Population}}$

**Table 2: Point Prevalence of diseases in Non-pregnant women.**

Disease	Point prevalence
Pcod	0.512
Infertility	0.195
Thyroid	0.048
Menorrhagia	0.008
Abortion	0.016
Fibroid Uterus	0.040
Gastritis	0.008
Oligomenorrhea	0.008
Ovarian Cyst	0.032
Abdominal Pain	0.040
Anemia	0.008
Fever	0.016
Hemorrhoids	0.024
Leukorrhea	0.008
Allergy	0.008
Breast Pain	0.016
Motions	0.008

**Table 3: Age wise disease distribution in Non-pregnant women.**

AGE	No of Women
18	6
19	13
20	10
21	12
22	23
23	9
24	6
25	4
26	6
27	9
28	6
29	1
30	1
31	4
32	5
33	3
35	3
38	1
42	1



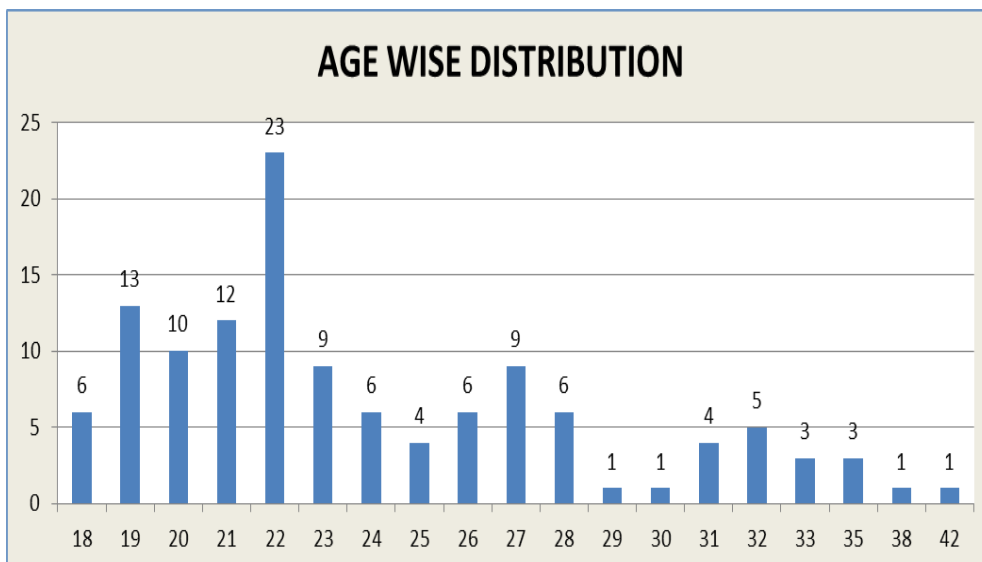


Chart 2: Age wise disease distribution in Non-pregnant women.

**PCOD VS BMI**

In the surveys it states that due to the social habits of the individual is the major problem for many of the diseases. But when our study is on women disorders they are at major risk so the BMI plays a major role here for the occurrence of PCOD.

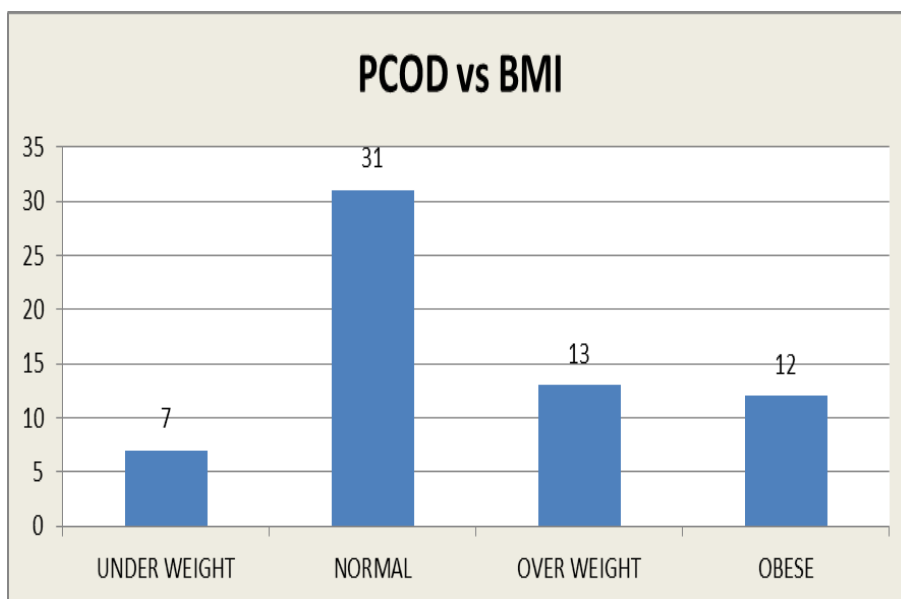
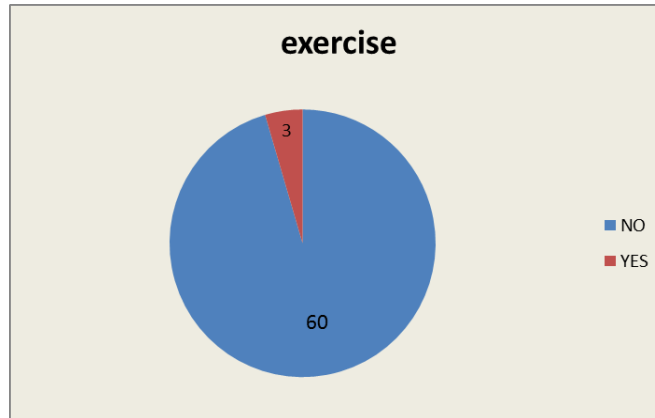


Chart- 3: PCOD VS BMI

In the same way exercise also plays a major role in maintaining a good health. The first step to treat women disorders is majorly the alteration of habits i.e non pharmacological therapy such as exercise, walking, Reducing stress, yoga etc.

**Table 4: Exercise vs PCOD.**

Exercise	No of women with PCOD(n=63)
No	60
Yes	3



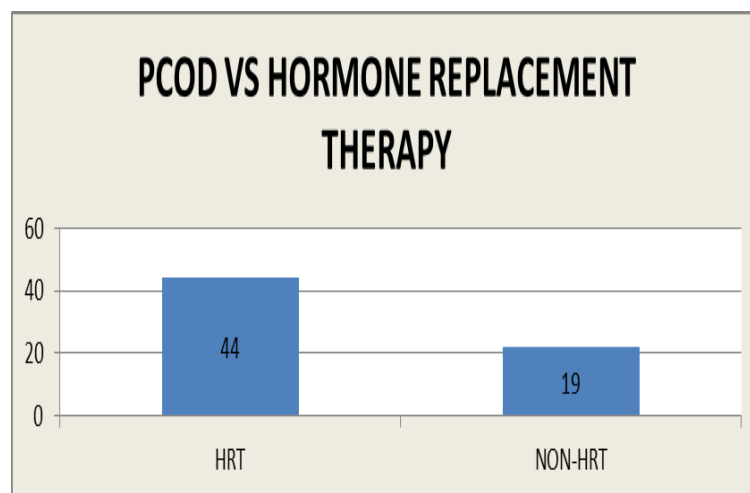
**Chart- 4: Exercise in patients with PCOD**

**Hormone Replacement in Pcod**

HRT is not the first treatment choice for PCOD. Here it is shown the HRT is given to each and every women irrespective of the demographic, social considerations.5,6.

**Table 5: Hormone replacement therapy in PCOD.**

Hormone replacement therapy	No of women with PCOD(n=63)
HRT	44
NON-HRT	22



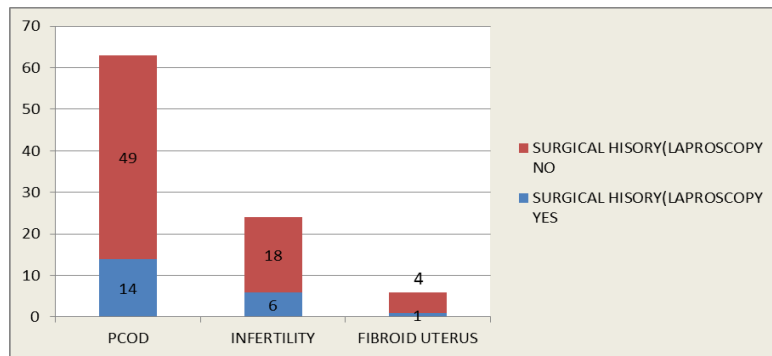
**Chart- 5: Hormone replacement therapy in PCOD.**

**Surgical History in Women With Different Disorders**

In our study there are 21 women opted for surgery for different abnormality.

**Table 6: Surgical history in women.**

Disease	Surgical history	
	Yes	No
<b>Pcod</b>	14	49
<b>Infertility</b>	6	18
<b>Fibroid uterus</b>	1	4

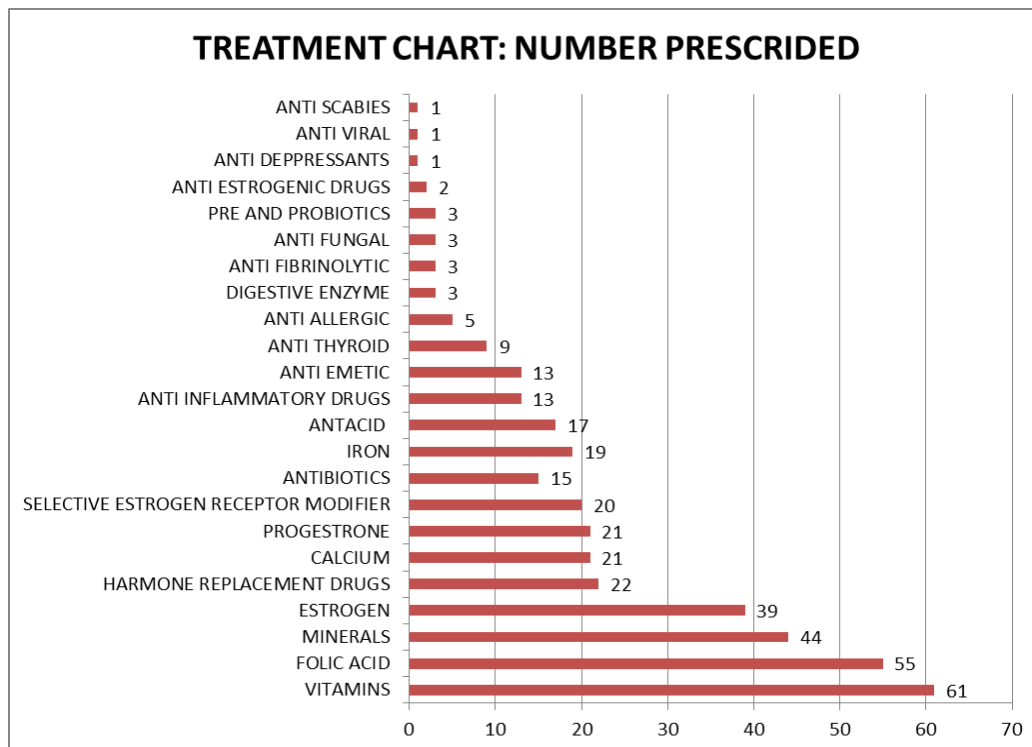


**Chart 6: Surgical history in women.**

**Prescribed Drugs in the Study**

Prescribed drugs in the study were mostly prescribed followed by Vitamins (61), folic acid (55), minerals (44), estrogen (39). Commonly prescribed drugs in the study as shown in the table below.<sup>[7,8,9,10]</sup>

**Treatment Chart**

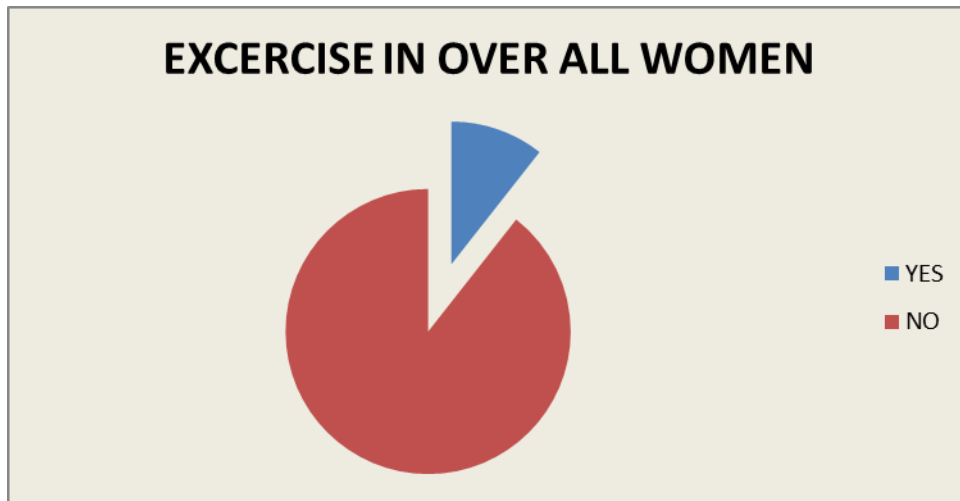


**Chart 7: Treatment chart in non pregnant women.**

**Physical Exercise in All the Non Pregnant Women**

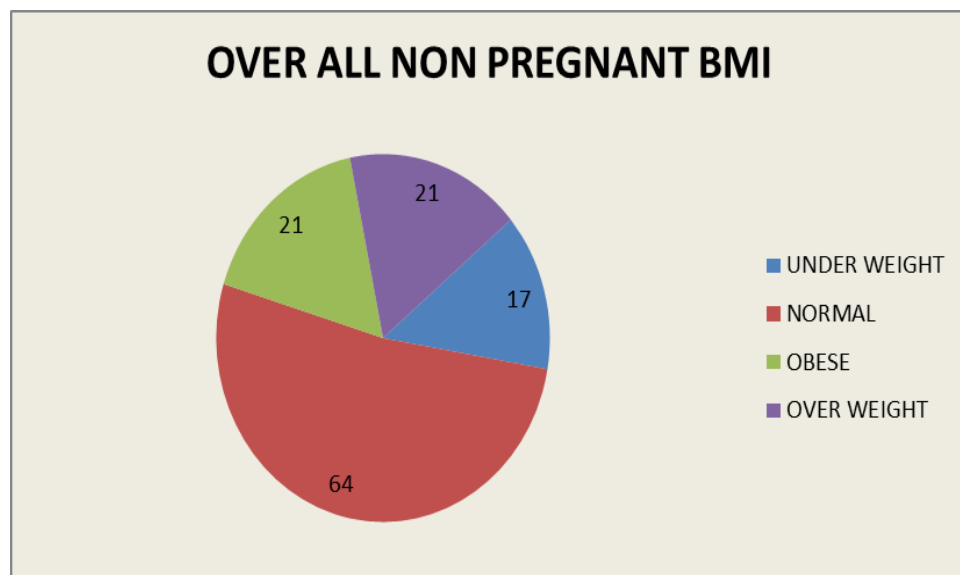
**Table 7: Exercise in overall non pregnant women.**

Exercise	No of non-pregnant women
Yes	14
No	118



**Chart 8: Exercise in overall non pregnant women**

**Bmi In Over All Non-Pregnant Women**



**Chart 9: BMI in overall non pregnant women.**

**CONCLUSION**

Out of 123 non-pregnant individuals monitored, the prevalence of PCOD 63(51.2%) is high, and then followed by infertility 24 (19.5%), thyroid disorders 6(4.87%), fibroid uterus, abdominal pain 5 (4.06%), ovarian cyst 4(3.25%), hemorrhoids 3(2.43%), abortion, breast

pain are 2 (1.62%) menorrhagia, gastritis, oligomenorrhea, anemia, leukorrhea, allergy, motions are 1 (0.81%) among the gynecological disorders. The prevalence of PCOD stands high and when compared with BMI, 25 individuals are found to be obese with high BMI and 43 individuals has undergone surgery for PCOD and are with hormone replacement therapy. However, about 90% were not physically active in the population. Most prescribed drugs for these conditions are vitamins; diet also plays a major role to causes some disease in this population. All the health care practitioners should educate the patient to change the life style modifications rather than the medications and surgical procedures for treating the conditions, in order to provide the better quality of life.

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