**Acceptance and complications of oral contraceptive pills in Nasiriya city in 2019**

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"كن عالما ... فان لم تستطع فكن متعلما ... فان لم تستطع فاحب العلماء ... فان لم تستطع فلا تبغضهم "

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**♦ Abstract :**

Millions of women have chosen to use oral contraceptives for various reasons.

However, questions must be raised to increase awareness to the risks and benefits associated with the use of oral contraceptives.

The research will begin by briefly summarizing the menstrual cycle and how the use of oral contraceptives affects menstruation. Following this, a review of the risks and benefits will be presented.

**♦ INTRODUCTION:**

**Reproductive System**The female reproductive system is composed of two individual components the ovarian cycle and the menstrual cycle.

The endocrine system produces hormones that control these cycles, causing the cycle to last for twenty-eight days. Oral contraceptives alter these cycles, suppressing ovulation and reducing the likelihood of conception.  
**Overview of Conception**  
**Ovarian cycle:**

The ovarian cycle consists of the follicular phase and the luteal phase.

The follicular phase lasts from day one until day fourteen in a twenty-eight day cycle. Under the influence of FSH (follicle stimulating hormone), a follicle that contains the egg begins to mature. When the follicle is mature, the egg (ovum) is released from the ovary into the fallopian tube. The release of the ovum indicates the beginning of the luteal phase. During this phase, LH (luteinizing hormone) increases, allowing the corpus luteum to develop from the follicle, which is needed in pregnancy to provide progesterone until the fourth month. The ovum itself does not reach the uterus until approximately 72 to 96 hours after it is released.

**Menstrual cycle:**

Menstruation typically occurs approximately fourteen days after ovulation in females who are not pregnant. The menstrual cycle has four phases: the menstrual phase, proliferative phase, secretory phase, and ischemic phase. The menstrual phase occurs during days one to six of a twenty-eight day cycle. During this phase, estrogen levels are low and the endometrium (inner layer of the uterus) is shed . The proliferative phase begins on day seven and lasts until day fourteen. Throughout this phase, the endometrial glands in the uterus enlarge due to an increase in estrogen levels. The blood supply to the endometrium is increased and the thickness of the endometrial layer increases by six to eight times. The cervical mucus begins to thin to allow sperm easier passage. After ovulation occurs, the secretory phase begins. Preparation for a fertilized ovum commences as vascularization is greatly increased, glycogen stores for nourishment are increased, and the endometrium continues to thicken. The ischemic phase only occurs if fertilization does not occur. Estrogen and progesterone levels fall, small blood vessels rupture, and the overall blood flow to the endometrium decreases.  
Fertilization: The egg is only fertile for 12 to 24 hours after ovulation and the sperm is fertile for only 48 to 72 hours after it enters the female reproductive tract. In one ejaculation, approximately 200 million to 500 million sperm are introduced into the female. It usually takes between five and seven hours for the sperm to reach the ovum, with only hundreds of the sperm making it the entire way to the fallopian tube. Fertilization occurs when the nuclei of the egg and sperm are united together to form a zygote .  
Implantation. Implantation in the uterus occurs seven to ten days after fertilization. The zygote has now gone through rapid cellular divisions to form a morula, which consists of twelve to sixteen cells. The outer layer of the morula is known as the trophoblast, and the inner part of the morula is known as the blastocyst (which will continue to develop as the embryo). The glycogen that is increased in the uterine glands during the secretory phase of the menstrual cycle nourishes the blastocyst and the trophoblast attaches to the endometrium for nourishment. The blastocyst itself eventually moves into the endometrial lining and the lining of the uterus continues to thicken under the influence of progesterone.

**How the Pill Affects Conception**Oral contraceptive pills are synthetic steroidal pills that are made in different formulations, including monophasic, biphasic, tri-phasic, and progesterone only pills. Contraceptive pills are created to work in three different ways: the first job of oral contraceptives is to prevent ovulation. Follicle Stimulating Hormone (FSH) and Luteinizing Hormone (LH) are the hormones released by the pituitary gland each month to signal the ovaries to produce an egg. Oral contraceptives are composed of synthetic estrogen and progestin, the two hormones produced by the ovaries. Contraceptives make the body think that there is already enough of those hormones, causing the pituitary to secrete less FSH and LH. It is important to note that this does not completely eliminate ovulation but only suppresses it, posing potential ethical considerations that will be discussed in another section of this thesis.  
The pill also has two distinct effects on the uterus and cervix. In the uterus, oral contraceptives act to thin out the inner lining called the endometrium. The woman’s body was created to be prepared for implantation of a zygote around the time of ovulation each month by increasing nutritional stores and blood supply to the uterus. Thinning out the endometrium will cause a decrease in both the glycogen stores and blood circulation, making the uterus less able to support and nourish a zygote should conception occur. There is also some evidence that shows thickening of cervical mucus with the use of oral contraceptives, making it more difficult for sperm to make it through the cervix into the fallopian tubes for conception.

**Benefits** Associated with the Use of Oral Contraceptives Continuous use of oral contraceptives appears to have multiple benefits. Oral  
contraceptives can help manage menstruation, endometriosis, polycystic ovary syndrome, premenstrual syndrome, menstrual migraines, and seizures that occur at the time of menses.  
Oral contraceptives (OCs) can be used to eliminate menstrual cycles for those who suffer from dysmenorrhea. Suppressing the menstrual cycle has the ability to reduce cycle disorders like menorrhagia, dysmenorrhea, and iron deficiency anemia. The use of OCs has the ability to decrease the number of bleeding days, which is beneficial for those who suffer from various types of bleeding disorders.

**Decreased Bleeding**  
Recent surveys show that excessive menstrual bleeding is one of the most common gynecological problems seen during primary care visits .Originally, surgical procedures such as hysterectomy or endometrial ablation in the uterus were performed for women with excessive bleeding. OCs can now be used as a way to reduce menstrual bleeding while preserving the possibility of fertility and reducing risks associated with surgery. Oral progestins found in OCs have been seen to reduce blood loss in women who have excessive bleeding during each menstrual cycle. According to recent data, combination OCs are effective in reducing blood loss by up to 40-50% in women suffering from heavy menstrual bleeding These combination agents with oral progestins have also been seen to be effective against bleeding disturbances not related to the menstrual cycle

**Effect on Endometriosis:**

Endometriosis is caused when the endometrium, the inner layer of the uterus, enters the peritoneal cavity during menstruation. Endometriosis causes pelvic pain, dysmenorrhea, and infertility. According to Fertility Weekly, the use of oral contraceptives alters the endometrium, making it less likely to develop into endometriosis. In one study, endometrial biopsies were taken, and those biopsies treated with oral contraceptives had 43% less endometriosis-like lesions. In women experiencing chronic pelvic pain due to endometriosis, those who took OCs for two years had significantly reduced pain scores. Another study found that when OCs were used, the risk of developing endometriosis was lower, and patients with endometriosis had a decrease in pain when placed on continuous OC therapy   
**Effect on Polycystic Ovarian Syndrome**Polycystic ovarian syndrome (PCOS) has become the most common cause of anovulation in women. The common characteristics include hyperandrogenism, oligomenorrhea or amenorrhea, a heterogeneous phenotype, chronic anovulation, and polycystic ovaries. Recent studies suggest that genetic factors with an autosomal dominant pattern are related to this disorder. OCs have been used to treat the menstrual irregularities, weight gain, insulin resistance, and the hyperandrogenism caused by PCOS.

**Decreased Cancer Risk**  
In 1968, a study began in the United Kingdom that included 23,000 women who were taking OCs and 23,000 who had never taken OCs (“Do women who have ever used OCs have an increased risk of cancer”, 2008). This 36 year study by 1,400 practitioners at the Royal College of General Practitioners produced data indicating that those who continuously used oral contraceptives had a 12% reduction in developing any type of cancer. Even further, it included a 29% reduction in the risk of developing cancers such as cervical, uterine, and ovarian (“Pill Use is Associated with Reductions”, 2008). In this study including 23,000 women during this 36-year time frame, the “ever-users” of OCs were found to have significantly reduced risks of cancer of the bowel, uterus, and ovaries. The ever-users were 42% less likely to develop uterine body cancer and 46% less likely to develop ovarian cancers (“Do women who have ever used OCs have an increased risk of cancer”, 2008). The risk for ovarian cancer seemed to be reduced for almost fifteen years after the last pill dose, and uterine cancer risk was reduced for five years after the last dose. However, the researchers in this study did state that the “findings may not reflect current pill users’ experiences, given changes in preparation and protocols” and that “the likely balance of cancer risks and benefits may vary in different parts of the world” (“Pill Use is Associated with Reduction”, 2008).  
A similar study including 122,000 women was performed in the United States beginning in 1976. After twenty-eight years, the results seemed parallel the previous study in Britain. This American study revealed that risks for these certain types of cancers decreased with increasing years of pill use. Women who had taken OCs for more than 10 years had a decreased risk of developing cancer (“Pill Use is Associated with Reduction”, 2008).  
A study published in 2006 reported a significantly reduced risk of gynecological cancers among ever-users of oral contraceptives compared with never-users (“Use of the Pill can offer cancer protection”, 2007). Even with the high dosage of pills that were used, the findings in this study indicated that women had a 3% reduced risk of developing any type of cancer if they had taken oral contraceptives at some point in their life. A decrease in large bowel and rectal cancer, uterine cancer, and ovarian cancer were also indicated by the collected results. This research also confirmed that the odds of getting ovarian cancer for those using oral contraceptives were much lower, even up to fifteen years after the last dose (“Use of the Pill can offer cancer protection”, 2007). Deborah McBride, RN (2008), stated that another new study indicates that the use of oral contraceptives has prevented over 100,000 deaths from ovarian cancer worldwide (2008). This study, done on women both with and without ovarian cancer, showed that 12 in 1,000 women not taking OCs are expected to get ovarian cancer, whereas only 8 in 1,000 of those using OCs are at risk (Beral et al., 2008). This study went on to show that risk of ovarian cancer decreased the longer women used OCs, and that the risk remained lower for former OC users even up to thirty years after the last dose (McBride, 2008). For this reason, women with a family history of ovarian cancer are encouraged to take OCs to decrease their risk of ovarian cancer (Use of Oral Contraceptives Reduces Risk of Ovarian Cancer, 2002).

**Acne**  
Acne is prevalent in 61% of girls at the age of twelve and increases to 83% at the age of sixteen (van Vloten, 2004). Acne can have a huge impact throughout the life of an individual. It has been shown that androgens play a large role in the development of acne. To help treat excess androgenic hormones, the use of low-dose oral contraceptives can be prescribed. Studies have found that oral contraceptives containing progestins improve acne through ethinulestradiol, which works to suppress androgen production and block androgen receptors

**Convenience**Some women simply do not wish to deal with the inconvenience of the monthly cycle. Many see their period as an inconvenience and a nuisance. Many feel that it can affect their way of living. The women stated that OCs enabled them to perform at their highest capacity without having to deal with the bothersome effects of menstruation. Female athletes may also find benefits with taking OCs. While the number one use of OCs is to prevent conception, OCs also allow women to manipulate their period. Newer OCs even offer the option of less menstrual cycles per year. OCs help enhance performance in the female athlete by maintaining blood iron levels through a decrease in blood loss. Some studies also show that the estrogen in OCs may protect skeletal muscle from exercise-induced damage .

**Risks Associated with the Use of Oral Contraceptives;**

**Side Effects**

These adverse effects include bloating, fluid retention, breast tenderness, nausea, headache, skin reaction, break-through bleeding, alopecia, and hirsutism . Mood change is one of the top reasons for discontinuation of oral contraceptives.

**Increased Blood Clotting**

Research studies causing great concern include those that have indicated an increased incidence of venous thrombosis due to increased blood clotting related to the use of OCs. Both high and low doses of OCs have been linked with a risk of thromboembolic disease. Hormonal treatments, such as oral contraceptives have been linked to an increased risk of atrial complications as well . This increase in blood clotting is said to cause other problems, including myocardial infarction, stroke, and hypertension. The increased risk of these events seems to be caused by an increase in the procoagulant factors needed for blood clotting, including fibrinogen and factors VII, IX, X, and XII.

According to Kluft, the use of OCs has caused an increased occurrence of venous thromboembolism during the first years of use, specifically targeting susceptible groups (2007). Kluft goes on to say that an increase in the dosage of oral estrogens clearly

affects hemostasis and causes a significant increase in the risk of venous thromboembolism. The dose of estrogen in oral contraceptives is much higher than in hormonal treatment for menopausal women, thus increasing the clot risk for women on OCs (Kluft, 2007). Even at low dosages, these oral estrogens found in many OCs reduce blood levels of coagulation inhibitors, increasing the rate and speed of coagulation, thus causing an increased risk of venous thromboembolism. This unfortunately shows that even decreasing the amount of estrogen in OCs will not have much effect on improving the risk ratio (Kluft, 2007).

While combining progestins with estrogen can counteract some of the effects of estrogen only use, the risks for venous thromboembolism still remain.

Regardless of the type or combination of prescribed OC, users have a three-fold higher risk of developing blood clots than non-users (Fraser et al, 2008). The new third generation oral contraceptives even have a 1.5-2.7 time further increase in risk of venous thromboembolism, creating a 4.8-9.4 time total increase (LeBlanc, l999). This increased risk of blood clotting is seen primarily in the first year of use and the risk is related to the dosage of hormones used in the pill. Fortunately, these blood-clotting effects can be reversed within three months after cessation of the pill .

**Increased Cancer Risk**

While many studies have published the benefits that the use of oral contraceptives can have on decreasing the risk of many types of cancers, research has shown that the use of the pill can also *increase* the risks of developing certain other types of cancer. The same study started in 1968 that was previously used to portray benefits of taking OCs simultaneously found long term risks with taking OCs, including increased risks for cancer. This study found that women who used oral contraceptives for more than eight years had an increased risk of being diagnosed with cancer, specifically cervical cancer A study by the Oxford Family Planning Association correspondingly discovered an increase in mortality rates among women using oral contraceptives for greater than eight years compared to those who were considered to be never-users (Vessey et al., 2003). There has also been a correlation between the use of oral contraceptives and an increase in thyroid cancer risk (“Correlation with Cancer Risk”, 2008). This study on women with thyroid cancer showed that risk for thyroid cancer greatly increased with the use of progesterone

OCs increase the risk of breast cancer in premenopausal women. The study found a relationship between an elevated risk of breast cancer and women between the ages of 25-34 who had used OCs for one year or longer (Rosenberg, 1996). Women in this age group were 1.7 times as likely to be diagnosed with breast cancer. A significantly greater risk was associated with women in this age group who had used OCs for over 10 years (Rosenberg, 1996).

**Increase in Blood Lipids and Glucose Levels**

A consequence of most hormone replacement therapies is an increase in plasma triglycerides and other lipid levels. This has been shown to be associated with elevation of plasma viscosity, which could cause many other health problems . After 18 months on oral contraceptives, studies showed an increase in triacycleycerol and glucose levels, increased body weight, increased VLDL-cholesterol and LDL- cholesterol, and a decrease in HDL- cholesterol levels (I’Onyesom, 2008).

The increase in glucose and lipid levels has been linked to insulin resistance, thromboembolism, coronary heart disease, and stroke The use of OCs apparently causes interference with the metabolism of lipids, increasing the risk for cardiovascular diseases including myocardial infarction and other vascular disorders. The data in this study showed that LDL-cholesterol, or the “bad” cholesterol, increased by 5.6-13.7% after one year of use. On the other hand, HDL-cholesterol, the “good” cholesterol, was reduced by 4.1-5.0% by the end of the first year of use (I’Onyesom, 2008). Glucose levels and body weight had also increased in those who had been taking OCs for over a year, causing a reduction of insulin sensitivity and an increase in glucose intolerance.

**Cardiovascular Problems**

The risk of thromboemboli caused by the use of OCs causes an increase in other cardiovascular events such as strokes and myocardial infarctions. For this reason, women at risk or with a history of coronary artery disease, hypertension, and current smokers should not take oral contraceptives. It is the increased androgen activity that has been associated with increased hypertension, diabetes, and cardiovascular mortality . Women with a history of migraines have an increased risk of ischemic stroke. numerous clinical reports suggest that using oral contraceptives may result in neurologic complications- including those of the retinal arteries, vascular headaches, and other cerebrovascular disorders. However, all studies, regardless of the generation of oral contraceptive used, have concluded that women who smoke and use oral contraceptives have a greater risk of developing cardiovascular problems.

**Bone Density**

Decreased bone mineral density early in life can be a contributing factor for osteoporosis. Young women who start using progesterone-based oral contraceptives have a significant decrease in bone quality. These experiments show that adolescents and young women who use a low dose OCs right after puberty did not gain as much bone mineral density as those who did not use oral contraceptives.

**Low-Birth Weight**

Many studies have been conducted on the effects of periconceptional exposure (4 weeks prior to and 4 weeks after conception) to OCs has on newborns. A study conducted from March 2001 to June 2006 compared an exposed group of 136 pregnant women to another group of women who had been exposed to other non-teratogenic drugs during the periconceptional period (Ahn et al., 2008). While this study did not show an increase in birth defects, it did show an increase in babies born with low birth weights. In this study, 7.1% of the babies exposed to OCs during the periconceptional period had low birth weights, compared to the 2.6% that were born with low birth weights in the non-exposed group. Since the women were relatively comparable in other respects, it seems likely that the OCs were the sole reason for the difference in birth weight. Another study by Dr. Ahn had similar results, in which high-dose exposure of hormones in-utero had a direct influence on fetal growth .

**Smoking While Using Oral Contraceptives**

Cigarette smoking alone is a huge risk factor for hypertension, atherosclerosis, and developing coronary heart disease. Combining the use of oral contraceptives with a smoking habit has been seen to compound the risk factors. It appears that estrogen-containing oral contraceptives dramatically increase the risk of myocardial infarction and subarachnoid hemorrhage in women who also smoke. An exacerbated reduction in HDL cholesterol is seen as well . the oral contraceptives added to an increase in total cholesterol and triglycerides compared to those who were not using oral contraceptives (Weber et al, 1982).

**Contraceptive Pills as Abortifacients**

Perhaps the biggest controversy in regards to oral contraceptives is the question of whether or not the use of OCs can cause spontaneous abortions to occur. This would not create a dilemma, should one suppose that life does not begin at conception. On the other hand, if one believes life *does* begins at conception, anything that has the potential to cause an abortion should be avoided.

As discussed at the outset, oral contraceptives act to suppress ovulation, thin the endometrium of the uterus, and thicken cervical mucus. Each of these is an attempt at preventing conception from occurring. Ovulation suppression and cervical mucus thickening occur before conception takes place, thus preventing pregnancy from occurring. However, the thinning of the endometrial lining that has the potential to inhibit an unborn fetus from implanting after conception has already occurred (Kahlenborn, 2000).

**Ovulation suppression***.*

As Kahlenborn notes, suppressing ovulation is not synonymous with eliminating it. Since there is sufficient evidence of women conceiving while on birth control- as seen with full-term pregnancies, miscarriages, and ectopic pregnancies- to state that oral contraceptives *usually* suppress ovulation. The couples who used oral contraceptives consistently and correctly for an entire year would still have a pregnancy rate of 3% (Kahlenborn, 2000)

**Effects on the endometrium**

The effect that oral contraceptives have on the inner lining of the uterus raises debates even among pro-life physicians. argues that were a woman to ovulate while taking OC, the fertilized egg would still initiate enough hormone response to prepare the uterus before the zygote traveled the seven days through the fallopian tubes to the uterus. On the other hand, Randy Alcorn (2008) repudiates this, claiming that there is not enough time for the uterus to properly prepare itself should conception take place . Oral contraceptives are comprised of synthetic estrogen and progesterone that signal the body to decrease its own production of these hormones. Evidence of the thinning effect that oral contraceptives have on the uterine lining can be seen in the substantial decrease in the volume of menstrual contents that a woman on birth control has during a monthly cycle .This indicates that the endometrium has indeed become thinner due to the use of the OCs. When the endometrium thins, blood supply and nutrient supply to the uterus is also decreased. Kalenborn (2000) presents research that shows a decrease in the size of the blood vessels and a decrease in the rate of cell division at the microscopic level.

**♦ Aim of Study:**

This research was performed to assess how well women are accepting the use of oral contraceptives pills, if there is any complication when they use it and if they know about this complications that could influence their life before beginning to use oral contraceptive pills.

* **Why we need to study this issue:**

Now Contraceptive pills are widely used for various reasons. As seen above, oral contraceptives can have both positive and negative effects. OCs have positive effects by decreasing risks for certain types of cancer, reducing the pain and symptoms associated with menstrual cycles, and by treating health problems such as polycystic ovarian syndrome and endometriosis. On the other hand, oral contraceptives can also increase the risk for certain cancers, cause an elevation in blood clotting, and increase cardiovascular problems. In an effort to see how well informed oral contraceptive users are of these risk and benefits, if they accepted it or not and if there is any complications.

**♦ Methods:**

This descriptive survey includes 100 women between ages 18-47 who have previously used or are currently using oral contraceptives in Nasiriya city, randomly selected.

**The survey questions that was distributed is provided below:**

Questionnaire number

**A. SOCIODEMOGRAPHIC CHARACTERISTICS**

1. Age

□ 18-27 □ 28-37 □ 38-47 □ 48-57

2.Marital status

□Never married □Currently married □Formerly married

3.Highest Education level

□ None □ Primary □ Secondary □ Tertiary

4.Employment status

□ Unemployed □ Informal employment □ Formal employment □ Self-employed

7. Number of children

□ 0 □1-2 □ 3-4 □ 5-6 □ >6

8.Breastfeeding

□ Yes □ No

9. Smokes

□ Yes □ No

10. Weight

11. Comorbidities □ Yes □ No

Which one(s)?

12.Medication history

**CONTRACEPTIVE USE**

1. Do you use any form of contraception?

□ Yes □ No

2. If yes, which one?

□Pills □Injectables □Implant □ IUD □Patch □Vaginal ring □ Barrier methods □ Sterilization

□ Lactational amenorrhoea method □ Coitus interruptus □Fertility awareness method

3. If on pills, what is the trade name?

4. Where do you obtain you hormonal contraception?

□Government health facility □Private health facility □Community pharmacy

□Others, Specify

5. For how long have you used that method of hormonal contraception?

□< 1 year □1-2 years □3-4 years □>4 years

6. Why did you settle on that method of hormonal contraception?

□Most effective method □Most available method □Least side effects □Least cost

□Others, Specify

7. Where did you get information on the hormonal contraception? □Media and advertisement □Family and friends □Health practitioner

□Others, Specify

8. Were you counselled on how to use the hormonal contraception?

□Yes □No

9. If yes, by whom?

□Medicine practitioner □Pharmacy practitioner □Nursing practitioner

□Others, Specify

10. If not on any contraceptive method, have you ever used any contraceptives? □Yes □No

11. Why did you stop using the methods?

□Side effects □Wanted more children □Unavailability □High costs

□Others, specify

**C. LEVEL OF KNOWLEDGE ON THE CORRECT USE OF HORMONAL CONTRACEPTIVES**

1.Combined oral contraceptives (COCs)

a)On initiation, when did you start taking your pills?

□Same day you were dispensed with the pills □On a Sunday

□Within 5 days of commencing the next menstruation □Any day

b)What time do you take your pills?

□Any time I remember □Same time everyday

□Morning only □Evening only

c)What warning signs are you meant to look out for when taking COCs?

□Abdominal Pain □Chest pain □Headache □Eyes problems □Severe leg pain

□Others, specify

d) What should you do if you miss one pill start a new pack one or two days late? □Take a pill as soon as possible □Take two pills as soon as possible

□Use back up contraceptives with emergency contraception □I don’t know

e)What should you do if you miss two pills in the first or second week or started a new pack three or more days late?

□Take a pill as soon as possible  
□Use a backup method for the next seven days

□If there was intercourse without backup method, emergency contraceptives should be used

□ I don’t know

**♦ Results and Discussion:**

This study was based on cross-sectional study given our focus on women only.

A proportional stratified sample was chosen and the questionnaire was randomly distributed to ensure the desired representation of all subgroups in the community.

120 questionnaires were distributed but only 100 of them were convenient and can be used in this study.

The randomly selected sample was used because it’s the best type of samples used in this kind of studies because it's capable of representing the whole community and its results can be generalized as in Table (1)

♦ Table (1): Marital status of the sample.

|  |  |
| --- | --- |
| Subgroups | Their Number |
| Not married | 9 |
| Married now | 79 |
| Formerly married | 12 |

Graph (1): Marital status of the sample.

♦ Table (2): Introductive information on the study sample.

|  |  |  |  |
| --- | --- | --- | --- |
| Variable | Subgroups | Frequency | Percentage |
| Age | 18-27 yrs | 11 | 11% |
| 28-37 yrs | 65 | 65% |
| 38-47 yrs | 24 | 24% |
| Total | 100 | 100% |
| Educational Level | None | 4 | 4% |
| Primary | 8 | 8% |
| Secondary | 24 | 24% |
| Tertiary | 64 | 64% |
| Total | 100 | 100% |

Table (2) shows that the highest percentage of women who participated in this study (65% of them) are of ages between 28-37 years which helps to assess their opinions in the best way. We can notice that 24% of them are aged between 38-47 years while the remaining 11% are aged between 18-27 years.

Also, as related to the educational level, it's considered very acceptable because 64% of the women have a tertiary educational level and it's very helpful to the study and the researchers because these women can understand and give precise information and answers involving our study.

Graph (2): Age groups.

Graph (3): Educational level.

♦ Table (3): Biographic information about the sample.

|  |  |  |  |
| --- | --- | --- | --- |
| Variable | Subgroups | Frequency | Percentage |
| Employment Status | Unemployed | 19 | 19% |
| Informal employment | 5 | 5% |
| Formal employment | 76 | 76% |
| Total | 100 | 100% |
| Number of children | 0 | 10 | 10% |
| 1-2 | 27 | 27% |
| 3-4 | 40 | 40% |
| 5-6 | 19 | 19% |
| >6 | 4 | 4% |
| Total | 100 | 100% |
| Weight | 50-60 kg | 12 | 12% |
| 60-70 kg | 22 | 22% |
| 70-80 kg | 46 | 46% |
| 80-90 kg | 19 | 19% |
| 90-100 kg | 1 | 1% |
| Total | 100 | 100% |

Table (3) shows that the highest percentage of the women (76% of them) are formally employed which make them more committed to worktime which has many effects on the pregnancy and also on their will to be pregnant.

This table also shows that 40% of the women have 3-4 children which is very helpful to know their opinions and seek good information about their use of contraceptive pills.

At the same time, about 46% of the sample are of normal weight which is nearly half of the total study sample and from this, we can ensure that the results will be more accurate because they have the optimal weight and this is helpful in medical studies and researches.

♦ Table (4): Women complaining from chronic diseases.

|  |  |  |
| --- | --- | --- |
| Does she have a chronic disease or not? | Frequency | Percentage |
| Yes | 26 | 26% |
| No | 74 | 74% |
| Total | 100 | 100% |

As we can see in Table (4), the researchers asked about chronic diseases despite their types and found that the number of women who suffer from chronic diseases is less than the number of normal healthy women in this study by about 3 times which helps in giving accurate results as women with chronic diseases might give false answers due to the effect of their illnesses.

♦ Table (5): Chronic diseases observed.

|  |  |  |
| --- | --- | --- |
| Disease | Frequency | Percentage |
| Asthma | 6 | 6% |
| Diabetes Mellitus | 8 | 8% |
| Hypertension | 11 | 11% |
| Thyroid disorders | 1 | 1% |
| Healthy women | 74 | 74% |
| Total | 100 | 100% |

Table (5) shows the number of women who suffer from chronic diseases, the type of their disease and its percentage to the total women in the sample.

And we were able to conclude that all these women use medical treatment according to their diseases as shown in Table (6).

♦ Table (6): Drugs used by the ill women.

|  |  |
| --- | --- |
| Drugs for the disease | Frequency |
| Asthma | 6 |
| Diabetes Mellitus | 8 |
| Hypertension | 11 |
| Thyroid disorders | 1 |
| Total | 26 |

All these women use oral contraceptive pills in addition to their established medications.

100% of the women in the sample use oral contraceptive pills instead of other methods of contraception and the types of pills they use are shown in Table (7).

♦ Table (7): Types of pills used.

|  |  |  |
| --- | --- | --- |
| Type | Frequency | Percentage |
| Yasmin | 72 | 72% |
| German | 3 | 3% |
| Pakistani | 2 | 2% |
| Turkish | 1 | 1% |
| Microgynon tabs | 22 | 22% |
| Total | 100 | 100% |

As we can see above, 72% of the women use Yasmin as their oral contraceptive pills of choice followed by 22% of women who use Microgynon tabs.

♦ Table (8): Sources of oral contraceptive pills.

|  |  |  |
| --- | --- | --- |
| Source | Frequency | Percentage |
| Government health facility | 15 | 15% |
| Private health facility | 0 | 0% |
| Community pharmacy | 85 | 85% |
| Total | 100 | 100% |

Community pharmacies are the main source from which women obtain their oral contraceptive pills.

♦ Table (9): Duration of their use.

|  |  |  |
| --- | --- | --- |
| Duration | Frequency | Percentage |
| <1 year | 0 | 0% |
| 1-2 years | 36 | 36% |
| 3-4 years | 39 | 39% |
| >4 years | 25 | 25% |
| Total | 100 | 100% |

Most of the women who participated in this study used oral contraceptive pills for 3-4 years and their percentage was 39% of the total number of women followed by 36% of women who used them for 1-2 years and there were no women who used them for less than a year.

And women have settled on using oral contraceptive pills for many reasons that can be mentioned in Table (10).

♦ Table (10): Reasons of using oral contraceptive pills.

|  |  |  |
| --- | --- | --- |
| The reason | Frequency | Percentage |
| Most effective method | 35 | 35% |
| Most available method | 30 | 30% |
| Had the least side effects | 15 | 15% |
| Had the least cost | 20 | 20% |
| Other reasons | 0 | 0% |
| Total | 100 | 100% |

35% of the women used oral contraceptive pills instead of other methods of contraception because they think that it’s the most effective method in preventing pregnancy.

And it's also considered as the most available method according to the opinion of 30% of them.

♦ Table (11): Sources of information about the oral contraceptive pills.

|  |  |  |
| --- | --- | --- |
| Source | Frequency | Percentage |
| Media and advertisement | 0 | 0% |
| Family and friends | 35 | 35% |
| Health practitioner | 65 | 65% |
| Total | 100 | 100% |

This shows that 65% of the women received information about the pills from their health practitioner whereas family and friends provided information to 35% of the women but media and advertisement had no effect on this subject.

And we must mention that the medicine practitioner had the main role in providing information about the contraceptive pills and their use in addition to nursing practitioner as it’s the closest one to the patients and as shown in Table (12).

♦ Table (12): Source of counselling about the pills.

|  |  |  |
| --- | --- | --- |
| Source | Frequency | Percentage |
| Medicine practitioner | 65 | 65% |
| Pharmacist | 4 | 4% |
| Nurse | 25 | 25% |
| Others | 6 | 6% |
| Total | 100 | 100% |

And the researchers sought to find the cause of stopping the intake of oral contraceptive pills and found that 15% of the women stopped because they wanted more children where as 85% stopped because of their side effects and as shown in Table (13).

♦ Table (13): Causes of stopping their intake.

|  |  |  |
| --- | --- | --- |
| Cause | Frequency | Percentage |
| Side effects | 85 | 85% |
| Wanted more children | 15 | 15% |
| Unavailability | 0 | 0% |
| High cost | 0 | 0% |
| Other | 0 | 0% |
| Total | 100 | 100% |

The level of knowledge about the correct use of oral contraceptive pills had its effect which made the researchers investigate about it and started by asking about the initial use of the pills and the time they were taken at as in Table (14).

♦ Table (14): Time of starting the use of the pills.

|  |  |  |
| --- | --- | --- |
| Time of start | Frequency | Percentage |
| Same day of dispensing | 26 | 26% |
| After one day | 11 | 11% |
| Within 5 days of the start of the next menstrual cycle | 63 | 63% |
| Any day | 0 | 0% |
| Total | 100 | 100% |

The highest percentage of the women started the use of contraceptive pills within 5 days of the start of the next menstrual cycle and this is normal as they wanted good contraception effect and no children.

♦ Table (15): Daily time of use.

|  |  |  |
| --- | --- | --- |
| Time of use | Frequency | Percentage |
| Anytime I remember | 8 | 8% |
| Same time everyday | 37 | 37% |
| Morning only | 25 | 25% |
| Evening only | 30 | 30% |
| Total | 100 | 100% |

Most of the study sample used the contraceptive pills as they were ordered by the medicine practitioner where they used it every day the same time.

♦ Table (16): Warning signs of contraceptive pills intake.

|  |  |  |
| --- | --- | --- |
| Warning sign | Frequency | Percentage |
| Abdominal pain | 0 | 0% |
| Chest pain | 0 | 0% |
| headache | 46 | 46% |
| Eye problems | 6 | 6% |
| Severe leg pain | 44 | 44% |
| Others | 4 | 4% |
| Total | 100 | 100% |

Headache and severe leg pain were the most evident warning signs of contraceptive pills use with percentages of 46% and 44% respectively.

♦ Table (17): What to do after forgetting the use of the pills.

|  |  |  |
| --- | --- | --- |
| Methods | Frequency | Percentage |
| Take a pill as soon as possible | 9 | 9% |
| Use backup contraceptive methods | 80 | 80% |
| I don’t know | 11 | 11% |
| Total | 100 | 100% |

80% of the women tend to use backup contraceptive methods with emergency contraception in case if they forgot to use the pills at their time.

♦ **Conclusions:**

1. Women who suffer from chronic diseases are less than the number of the healthy women participating in the study.
2. The drugs used by women with chronic diseases who take oral contraceptive pills were mostly for the control of Hypertension and Type II Diabetes Mellitus.
3. "Yasmin" contraceptive pills were the mostly used pills for contraception between women in the study sample.
4. Community pharmacies are the main source of the contraceptive pills.
5. Most women used contraceptive pills for 3-4 years followed by women who used them for 1-2 years and no women used them for less than a year.
6. Women settled on using contraceptive pills instead of using other methods of contraception because they were the most effective and the most available methods of contraception.
7. Most women received information about the oral contraceptive pills from their health practitioner whereas family and friends were a secondary source of information. Media and advertisement had no role in giving information on this subject.
8. Medicine practitioner was the one who counselled the women about the correct use of oral contraceptive pills.
9. Side effects of the oral contraceptive pills were the main cause of stopping their use.

10. Many women started using the pills within 5 days of the next menstrual cycle as advised by the medicine practitioner.

11. Most women used the pills every day at the same time.

12. Headache and severe leg pain were the main warning signs of using the pills.

13. Most women tend to use backup contraceptive methods in addition to the use of emergency contraception in case that they forgot to use the pill at its time.

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