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Secondary Effects Due To The Use Of The Birth Control Pill  
And Level of Medical Education Received By Patients Prior  
To Its Use

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## Birth Control Pill

### Dedication

To my parents, Julio and Sonia, because they have given me the best of themselves, and have taught me to be a fighter and not surrender against any obstacle and above all to be honest and respectful.

To my sister, Michelle, who has always been there for me with her unconditional support.

To my daughter Giaeliz, who is the motor of my life and represents all the reason a person needs to continue fighting.

And last but not least to you Lord who has allowed me to be today where I am.

"That the Lord reward you with all the good due to all the good you have done for me today" Samuel 24:19

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## Birth Control Pill

### ABSTRACT

This is a descriptive study intended to determine the possible side effects associated with the use of birth control pills and to identify the level of medical education provided to women by their physician prior to receiving a prescription for birth control pills. The study was conducted in prenatal clinics located at two medical offices in the metropolitan San Juan area in Puerto Rico. The variable(s) were measured using a questionnaire developed by the researcher. The sample consisted of 16 women who had previously used birth control pills. The average age of study participants was 31 years. Sixty two percent of the women had a post-secondary degree, or had taken technical-level college courses. The majority of participants do not want to get pregnant. The participants preferred three pills birth control with are: Ortho Tricyclen (25%), Lo Loestrin Fe (19%), and Yas Yazmia (19%). Data indicates that 50% of the participants had a complete physical examination completed by a physician prior to receiving their prescription for a contraceptive oral medication.

## Birth Control Pill

Further data reveals that 81% of the participants suffered some secondary effects from the contraceptive oral medication; the most common side effect was headache (44%). The less common reported secondary effect is cervical cancer (6%). The study also reveals that only 62% of women who take birth control pills reported being oriented about potential side effects by their physician. An analysis of data reviewed indicates that only 44% of women who use birth control pills have a functional knowledge of their function and potential side effects. This is considered a knowledge deficit.

Table of Contents

Cover Page.....1

Approbatory Page.....i

Dedication.....ii

Acknowledgements.....iii

Abstract.....iv

Table of content.....vi

List of Tables.....ix

Index of Graphics.....x

CHAPTER I - Introduction.....2

    Background of the Problem.....2

    Problem Statement.....5

    Purpose of Study.....6

    Justification.....7

    Conceptual Model.....9

    Research Questions.....10

    Study Objectives.....10

    Variables.....10

    Operational Definitions.....11

    Summary.....12

CHAPTER II - Literature Review.....14

    Introduction.....14

Investigations Related to the variable.....15

# Birth Control Pill

Summary.....	27
CHAPTER III - Method.....	29
Introduction.....	29
Design.....	30
Population.....	31
Inclusion criteria.....	32
Exclusion criteria.....	32
Instrument.....	32
Procedures.....	34
Human Rights Protections.....	34
Statistical Analysis.....	36
Summary.....	36
CHAPTER IV - Findings.....	38
Introduction.....	38
Presentation of socio-demographic data.....	38
Presentation of data on the use and reliability of birth control pills.....	40
Presentation of data according to the questions and study objectives.....	40
Summary.....	64
CHAPTER V - Analysis and Discussion of Results.....	67
Introduction.....	67

Birth Control Pill

Analysis of Findings.....67

    Analysis based on Nursing Model.....73

    Conclusions.....75

    Implications for nursing.....76

    Limitations of the Study.....77

    Recommendations.....78

References.....82

Appendix A Perception of Mentoring & Questionnaire.....87

Appendix B NIH Certification.....88

Appendix C HIPPA Certification.....89



Birth Control Pill

LIST OF TABLES

Table 1. Medical history of the participants.....	40
Table 2. Brand contraceptive pills used by participants.....	48
Table 3. Distribution of participants who have had side effects after using birth control pills.....	60
Table 4. Distribution of participant which are less common side effects of birth control pills.....	61
Table 5. Knowledge of participants about the pill and its effects.....	63

INDEX OF GRAPHICS

Graph 1: Distribution of participants by age.....39

Graph 2: Distribution of participants by education level...41

Graph 3: Distribution of smokers participating.....42

Graph 4: Distribution of participants who have ever been  
pregnant.....42

Graph 5: Distribution of participants who are planning to  
become pregnant in the next 12 months.....43

Graph 6: Distribution of participants who are planning to  
become pregnant in the next 5 years.....44

Graph 7: Distribution of participants by number of live  
births.....45

Graph 8: Distribution of participants by how long did you  
try to conceive.....46

Graph 9: Distribution of participants by many abortions  
or miscarriages has.....47

Graph 10: Distribution of participants has a problem a  
birth control method.....49

Graph 11: Distribution of participants how many times  
stopped using oral contraceptive.....50

Birth Control Pill

Graph 12: Distribution of participants how many different  
have contraceptive have tried.....51

Graph 13: Distribution of participants to which the doctor  
performed a complete physical examination before  
prescribing birth control pills.....52

Graph 14: Distribution of participants to which the doctor  
will ask about your family medical history before  
prescribing a contraceptive pill.....53

Graph 15: Distribution of participants to which the doctor  
possible warned about any side effect that could produce  
the pill before prescribing them.....54

Graph 16: Distribution of the participants on how long I  
stop using birth control pills did.....55

Graph 17: Distribution of participants on their knowledge  
about birth control pills.....56

Graph 18: Distribution of participants who have had some  
effect after using birth control pills.....57

Graph 19: Distribution of participants in relation to  
before starting birth control pills know any side effects  
of there.....58

Graph 20: Distribution of participants as they heard of  
any side effects of birth control pills.....62

## Chapter I

### Background of the Problem

The Planned Parenthood Federation of America commissioned Dr. Gregory Pincus and Dr. John Rock to develop a simple and reliable form of contraception in 1950. According to the Department of Gynecology and Obstetrics, Emory University School of Medicine, Atlanta, Georgia, USA, the doctors worked on formulating a birth control pill at the Worcester Foundation for Experimental Biology in Massachusetts. The birth control pill was introduced to the public in the early 1960s.

According to Mayo Foundation for Medical Education and Research the definition of Birth control pills are synthetic hormones that mimic the way real estrogen and progesterin works in a women's body. The pill prevents ovulation - a woman on the pill releases no new eggs since her body is tricked into believing she is already pregnant. According to Public Broadcasting Service American Experience 1999-2002, they tested their invention on 6,000 women in Puerto Rico. There were no anti-birth control laws on the book, and Pincus was impressed with the extensive network of birth control clinics already in place on the island.

There were 67 clinics dispensing existing methods of birth control and a large group of women used their services. Pincus knew that if he could demonstrate that the poor, undereducated, women of Puerto Rico could follow the Pill regimen, then women anywhere in the world could too.

Based on The Public Broadcasting Service American Experience 1999-2002, The Rio Piedras trials quickly got off the ground in April 1956. In no time, the trial was filled to capacity, and they expanded the trials to additional locations on the island. The pharmaceutical company G.D. Searle provided the pills for the trials. Rock selected a high dose of Enovid, the company's brand name for their synthetic oral progesterone, to ensure that no pregnancies would occur while test subjects were on the drug. Later, after discovering Enovid (birth control pill) worked better with small amounts of synthetic estrogen, that active ingredient was added to the Pill as well. Dr. Edris Rice-Wray, a faculty member of the Puerto Rico Medical School and medical director of the Puerto Rico Family Planning Association, was in charge of the trials. After a year of tests, Dr. Rice-Wray reported good news to Pincus. The Pill was 100% effective when taken properly.

## Birth Control Pill

4

She also informed him that 17% of the women in the study complained of nausea, dizziness, headaches, stomach pain and vomiting. So serious and sustained were the reactions that Rice-Wray told Pincus that a 10-milligram dose of Enovid caused too many side reactions to be generally acceptable. Rock and Pincus quickly dismissed Rice-Wray's conclusions. Their patients in Boston had experienced far fewer negative reactions, and they believed many of the complaints were psychosomatic.

Although three women died while participating in the trials, no investigation was conducted to see if the Pill had caused the young women's deaths. Confident in the safety of the Pill, Pincus and Rock took no action to assess the root cause of the side effects. In later years, Pincus's team would be accused of deceit, colonialism and the exploitation of poor women of color in Puerto Rico. The women had only been told that they were taking a drug that prevented pregnancy, not that this was a clinical trial, that the Pill was prevented was experimental or that there was a chance of potentially dangerous side effects.

According to Public Broadcasting Service America (PBS) the invention was then marketed in the United States in 1960 as Enovid-10.

In 1965, the Federal Food and Drug Administration (FDA) provided a scientist at Johns Hopkins School of Hygiene and Public Health to study the side effects of the birth control pill. The agency also established an Advisory Committee on Obstetrics and Gynecology to study the relationship between oral contraceptives and blood clotting, as well as whether the birth control pill increased risk of breast, cervical, or endometrial cancer. By 1968, another study was conducted by the Federal and Drug Administration (FDA) in which British studies revealed an increase in blood clots among women taking oral contraceptives. With this information known, the FDA required that packages of birth control pills contain warning labels. In 1969, the FDA concluded that the amount of estrogen affected the level of blood clotting and that birth control pills containing lower dosages of estrogen were as effective as their high-estrogen counterparts.

#### Problem Statement

Oral contraceptives have been the preferred method of birth control because of their ease of use and high rate of effectiveness. However, in some women oral contraceptives have been associated with risk problems.

Now there are data that oral contraceptive pills may have lasting adverse effects. Although there are many benefits to using the pill, there are also side effects and serious conditions that can occur with its use. Some of these factors that should be taken in consideration are: History of blood clots, heart attacks, or cancer. Most of the women taking oral contraceptives aren't receiving information about the possibilities of long-term side effects to their reproductive system. (Health professionals aren't educating these side effects and if the pill is appropriate for each individual).

#### Purpose of this study

The purpose of this study is to describe the possible side effects associated with the use of birth control pills and to identify the level of medical education that is being provided to women by their gynecologist prior to being prescribed the birth control pill. This investigation focused on three primary objectives:

1. To describe the possible side effects related to the use of the birth control pill.



2. To determine the level of medical education that women received from their gynecologists about the side effects of the birth control pill.
3. To identify women's level of knowledge of the birth control pill's side effects.

The side effects and complications those are associated with hormonal birth control methods range from mild to severe. While many will assert that the use of hormonal birth control is safe, it is important to understand what the risks and side effects of these methods are, as each birth control technique and birth control product carries its own risk factors. In addition, the individuals who may be at greater risk of experiencing complications vary depending on their medical history as well as the product being used.

#### Justification

Even though the birth control pill is one of the most widely used medications in the United States and throughout the world, many women know very little about the possible side effects associated with its use. Given these circumstances, the propose of the study is to describe the possible side effects associated with the use of birth

control pills and to identify the level of medical education that is being provided to women by their gynecologist prior to being prescribed the birth control pill. For example, many women who currently use or plan on using birth control pills may not be fully aware that a possible side effect is encountering problems conceiving a child after discontinuing use of the pill. Other common side effects may include: nausea, vomiting, blood clots and uncontrollable changes in mood. The side effects experienced by oral contraceptive users have often been reported to be among the main reasons for intermittent use of the pill and/or discontinuation all together, which can often result in unplanned pregnancies. However, through research and development in previous years, the amount of hormones contained in pills have steadily decreased, which has also decreased the risk of side effects in women.

The importance lies in the doctor properly educating their patients in order for the patient to make an informed decision about something that can have a significant impact on their lives. That way, if a woman does not wish to take the risks involved with birth control pill use, she may choose to use an alternate method of contraception.

However, after proper education, some women may still feel that the benefits outweigh the risks and may decide that the birth control pill is well worth the possible side effects. Therefore, offering women education and proper alternatives for birth control may not only improve patient satisfaction but also prevent many unplanned pregnancies.

#### Conceptual Model

According to Nola Pender (2010) Health Promotion was designed to be a "complementary counterpart to models of health protection." It defines health as a positive dynamic state not merely the absence of disease. Health promotion is directed at increasing a client's level of wellbeing. The health promotion model describes the multi dimensional nature of individuals as they interact within their environment to pursue health. The nursing process provides a scientific and systematic framework to define health promotion (Health promotion has evolved from a disease orientation to a wellness orientation). It is important to address the factors influencing these inequalities in health. Each factor can be modified through nursing interventions.

Health promoting behavior is the desired behavioral outcome.

#### Research Question

What are the Secondary Effects Due To The Use Of The Birth Control Pill?

What is the Level of Medical Education Received by Patients Prior to Its Use?

#### Study Objectives

1. Determine which are the most common side effects of long term use of birth control pills.
2. Identify less common side effects of birth control pills.
3. Determine the Level of Medical Education Received By Patients Prior To Its Use?
4. Identify women's level of knowledge of the birth control pill's side effects.

#### Variables

Definition the variable in the title is the secondary effect, pill, long term us. In the independent it would be

pill, and the dependent would be secondary effects, long term us.

For the purpose of this investigation, side effects are defined as the complaint issues of the patient to be uneducated on the adverse reactions of the birth control pills.

#### Operational Definitions

According to Holmes, Hosins and Gross (1981) side effects of birth control pills is defined as the use of any practices, methods, or devices to prevent pregnancy from occurring in a sexually active woman. Also referred to as family planning, pregnancy prevention, fertility control, or contraception; birth control methods are designed either to prevent fertilization of an egg or implantation of a fertilized egg in the uterus. According to Webster (2007) defines contraceptives as the control of the number of children born to a woman especially by preventing or lessening the frequency of conception.

Summary

According to Kathryn, K., Forrest, J. & Susan, H. in the article Family Planning Perspectives Birth control pill was an extremely important invention and was just one of the many advances in technologies for women that was made in the 20<sup>th</sup> century.

Birth control pills works by increasing the hormones in the body and the body chemistry is changed. As women pass through different stages of their reproductive life, each contraceptive method offers a somewhat different combination of risk, not only to their well-being but also to their chances of being able to bear children and remain in good health in the future. Oral contraceptives have ironically been associated with risk problems. Although there are many benefits to using the pill, there are also side effects and serious conditions that can occur. As a woman needs, options and preferences change over time, woman must reevaluate their choice of contraceptive. Women need to consider a variety of factors when choosing a method: child bearing, their sexual behavior, their individual and family health history and their health habits. Most of the women taking oral contraceptive aren't receiving information about the possibilities of long-term

side effects to their reproductive system. Ultimately, the greatest benefit that could result from the finding of this investigation is being aware of medical options and alternatives can only benefit health in the long term.

In addition it can be assumed that the findings of this investigation can positively impact the women who consume oral contraceptive in a negative way.

## Chapter II

### Literature Review

#### Introduction

This chapter presents a review of literature related to the long term effects of contraceptive use. For the development of this chapter, I used the recommendation of Polit and Hunger (2008). The literature review is defined as the factor allowing the researcher to know the depth of the research topic. One of the most researched drugs is the birth control pill. A great deal of information has arisen to improve the drug. The secondary effects of contraceptives are strongly associated with lack of family planning practice and other socio-economic and demographic background characteristics of women. Every method has its own advantages and disadvantages. Over ten million women in the United States use the birth control pill and about four million of those are under the age of 25. The Pill consists of a combination of two types of artificial hormones called estrogens and progesterone. It works by inhibiting ovulation and sperm transport and by changing the lining of the inside of a woman's uterus so that if the woman does conceive she may have an early abortion.



It is estimated that a sexually active woman will experience at least one very early abortion as well as medical side effects from the use of oral contraception. Women's decisions about use, non-use or discontinuation can be affected by their perceptions of contraceptive risks and benefits, concerns about how side effects may influence their daily lives, and assessments of how particular methods may affect relationships with partners or other family members.

#### Investigations related to the study variable

An investigation was held by Ford Helen, J. and Maccormac, L. (1995) they studied Pregnancy and lifestyle: Maternal ageing is a very important factor in aneuploidy which is an abnormal number of chromosomes, and is a type of chromosome abnormality. An extra or missing chromosome is a common cause of genetic disorders (birth defects). It is associated with an increased risk of a live born trisomy, especially Down's syndrome, and with a dramatic increase in trisomic -Most people have 46 chromosomes, in 23 pairs, but some have an extra copy of one chromosome. Having an extra chromosome can lead to a variety of abnormalities that can be quite severe, conceptions, the

majority of which miscarry. A total of 585 volunteer couples that were planning pregnancies participated in a prospective study of reproduction. The couples answered extensive questionnaires and early pregnancy tests (day 28) were conducted each month. The number of years of contraceptive pill use was correlated with pregnancy outcome.

Lowered rates of miscarriage were found with increased years of pill use. The cut-off point for this positive effect appeared to be nine years. Use of oral contraceptives for  $>$  or  $=$  nine years was associated with a spontaneous abortion rate of 11.3%, which is about half the rate (23%) which was found in couples who had not used the pill. However, the effect of pill taking was correlated with female age, and when age was examined as an independent factor, the reduction in miscarriage was only statistically significant in women  $>$  30 years old, where the rate of abortion reduced from 28 to 7%.

Because age-related aneuploidy in humans probably occurs as a direct or an indirect result of follicle depletion, it is proposed that the long-term use of the oral contraceptive pill protects against abortion due to aneuploidy by preserving the number of follicles.

Urine samples were collected on the last day of each menstrual cycle in which conception was attempted; outcomes were classified as live birth of a normal infant, spontaneous abortion, or persisting infertility. Only 39 women had never used oral contraceptives (OCs); the majority had used the pill for at least six months. The age-related miscarriage rate was 13.4% in women aged 25-29 years, 17.3% in those aged 30-34 years, and 28.3% in those aged 35-39 years. The frequency of miscarriage showed a pattern of decline with increasing years of OC use: 0-2, 22.2%; 3-4, 17.3%; 5-6, 19.6%; 7-8, 16.7%; and 9 or more, 11.4%. However, the addition of maternal age to the logistic regression model revealed that the association between OC use duration and miscarriage was significant ( $p < 0.001$ ) only for women 30 years of age and over.

Rasch, V. (2002) investigated contraceptive failure-results among women with accepted and unaccepted pregnancies in Denmark. Most studies focusing on contraceptive failure in relation to pregnancy have focused on contraceptive failure among women having induced abortions, there by neglecting those women who, despite contraceptive failure, accept the pregnancy and intend to carry the fetus to term.

To get a more complete picture of the problem of contraceptive failure, this study focuses on contraceptive failure among women with diverse pregnancy outcomes. In all, 3520 pregnant women attending Odense University Hospital were included: 373 had induced abortions, 435 had spontaneous abortions, 97 had ectopic pregnancies, and 2614 received antenatal care. Contraceptive failure, defined as contraceptive use (condom, diaphragm, IUD, oral contraception, or another modern method) at the intercourse where conception most likely occurred, were reported by 315 women, 52% of these women had induced abortions, 10% had spontaneous abortions, 3% had ectopic pregnancies, and 36% received antenatal care.

An investigation was held by Dye M, H., Stanford B, J., Alder C, S., Han S, K. and Murphy A, P. (2005) assessing the consistency of responses among women regarding their beliefs about the mechanisms of actions of birth control methods, beliefs about when human life begins, the intention to use or not use birth control methods that they believe may act after fertilization or implantation, and their reported use of specific methods. A questionnaire was administered in family practice and obstetrics and gynecology clinics in Salt Lake City, Utah,

and Tulsa, Oklahoma. Participants included women ages 18-50 presenting for any reason and women under age 18 presenting for family planning or pregnancy care. Analyses were based on key questions addressing beliefs about whether specific birth control methods may act after fertilization, beliefs about when human life begins, intention to use a method that may act after fertilization, and reported use of specific methods.

Responses were considered inconsistent if actual use contradicted intentions, if one intention contradicted another, or if intentions contradicted beliefs. Women who believe that life begins at fertilization may not intend to use a birth control method that could have post-fertilization effects. However, many women were uncertain about the mechanisms of action of specific methods. To respect the principles of informed consent, some women may need more education about what is known and not known about the mechanisms of action of birth control.

For its part Barden O Fallon, J., Speizer, I., Rodriguez, F. and Calix, J. (2008) investigated the experience with Side Effects Among Users of Injectables, the IUD (intrauterine device) and Oral Contraceptive Pills in Four Urban Areas of Honduras.

Contraceptive side effects are often the most commonly reported reason for method discontinuation, particularly of modern methods. This study used data from eight focus groups and 800 exit interviews to examine women's experiences with contraceptive side effects in four urban areas of Honduras. Ease of treatment and differences in motivation to avoid pregnancy are suggested explanations for why side effects cause some women to continue and others to discontinue. Although side effects are a common reason for discontinuation in this population, a health worker informed less than half of the surveyed women about potential side effects on the day of the interview.

In a study done by Chen, X., Wen, S., Sun, L., Yang, Q., Walker, M. and Krewski, D. (2008) they conducted a population based cohort study of pregnant women who used oral contraceptives within three months before their last menstrual periods. Subjects were divided into three groups, according to the interval (0-30, 31-60, and 61-90 days, 0 between the dispensing date and their last menstrual periods. For each exposed subject, four subjects without exposure to oral contraceptives were

individually matched by infants year of birth and plurality and by mothers age and parity.

Oral contraceptive use within 30 days prior to the last menstrual periods was associated with increased risk of very low birth weight (OR: 3.24, 95% CI: 1.01, 2.55); however, oral contraceptive use 31-90 days prior to the last menstrual periods did not increase the risk of low birth weight or preterm birth. In conclusion the author said, our results indicate the use of oral contraceptives near the time of conception may be associated with an increased risk of low birth weight and preterm birth.

An investigation done by Lindh, I., Blohm, F., Andersson-Ellström, A and Milsom, I. (2009) studied contraceptive use and pregnancy outcome in three generations of Swedish female teenagers from the same urban population. Contraceptive use, pregnancy outcome, smoking and weight/height were assessed by a postal questionnaire. Current contraceptive use was unchanged between the 62 (60%) and 72 cohorts (62%) but had increased (pb.01) in the 82 cohort (78%); there was no difference in contraceptive use between SES groups at any time. Condom use alone increased over time (pb.01), and the use of oral contraception and a condom together had

increased in the 72 and 82 cohorts compared to the 62 cohort (pb.01).

Reasons given for using and discontinuing oral contraceptives in three generations of teenagers were studied over 20 years. In addition to contraception, oral contraception was used to reduce dysmenorrhea and heavy bleeding. Discontinuation due to bleeding disturbances decreased over time, whereas discontinuation due to mental side effects increased. The percentage of women who had been pregnant at  $\leq 19$  years of age, (7%) was lower than in the 1962 (11%) and 1972 (13%) cohorts. However, there was a successive increase in the percentage of women who had been pregnant more than once at  $\leq 19$  years of age (1962/1972/1982: pregnant more than once, 8%/21%/31%). Smoking decreased over time and was no longer related to SES in the 82 cohort. Body Mass Index (BMI) increased over time. There was no difference in BMI between SES groups in the 62 and 72 cohorts but was higher in the low-SES group in the 82 cohort compared to the middle and high SES groups. Contraceptive use was higher in the 82 cohort where there was a corresponding reduction in the percentage of women who had been pregnant at  $\leq 19$  years of age compared with the 62 and 72 cohorts.



Discontinuation of oral contraception due to mental side effects increased over time. The prevalence of smoking decreased and BMI increased, and there were changes in smoking prevalence.

In a study done by Dehlendorf, C., Ruskin, R., Darney, P., Vittinghoff, E., Grumbach, K., and Steinaur, J. (2010) they examined the effects of patients gynecologic history on clinician contraceptive counseling. Contraceptive providers have an important influence on women's selection of contraception. Previous studies suggest that clinicians inappropriately limit use of intrauterine contraception. This study investigated the influence of patients' gynecologic histories on recommendations for intrauterine contraception and other methods of contraception. In the study design videos of standardized patients varying by history of pelvic inflammatory disease (PID) and parity were shown to clinicians at meetings of national medical societies. Participants indicated their contraceptive recommendations for the patient and whether they would have concerns were the patient to use IUC. Five hundred twenty-four providers viewed one video of a standardized patient and completed the survey.

Gynecologic history was significantly associated with recommendations for the contraceptive ring, contraceptive patch, and copper IUC. Many clinicians indicated that they had concerns about the use of IUC with respect to risks such as PID, infertility and ectopic pregnancy. Concerns about infertility and pain with use of IUC were related to gynecologic history. Patient gynecologic characteristics affect recommendations for some reversible contraceptive methods. Clinicians continue to have concerns about IUC use despite evidence supporting its safety.

Burgo del Lopez, C., Lopez de Fez, C., Osorio, A., Guzman, J., Irala, J. (2010) studied spanish women's attitude towards Post-fertilization effects of birth control methods. Some methods of family planning, such as oral contraceptives, emergency pill or intrauterine device, may occasionally work after fertilization. The study explored Spanish women's attitudes towards contraceptive choices that may have occasional post-fertilization mechanisms of action. A Cross-sectional study in a Spanish representative sample of 848 potentially fertile women aged 18-49.

Data were collected using a 30-item questionnaire about family planning. The majority of women were married, had completed high school and had at least one child. Forty-five percent of women would not consider using a method that may work after fertilization and 57% would not consider using one that may work after implantation. Forty-eight percent of the sample would stop using a method if they learned that it sometimes works after fertilization, increasing to 63% when referring to a method that sometimes works after implantation.

Women who believe that human life begins at fertilization, those who believe it is important to distinguish between spontaneous and induced embryo losses, and women who report having a religion were less likely to consider the use of a method with some post-fertilization effects. The possibility of post-fertilization effects may influence Spanish women's choice of a family planning method. Information about mechanisms of action of birth control methods should be disclosed to women so that they can make informed choices.

In another investigation done by Raine T.R., Foster-Rosales, A., Upadhyay, U.D., Boyer, C.B, Brown, B.A., Sokoloff, A., & Harper, C.C. (2011) they studied how one

Year Contraceptive Continuation and Pregnancy in Adolescent Girls and Women Initiating Hormonal Contraceptives. This was a 12-month longitudinal cohort study of adolescent girls and women aged 15 to 24 years attending public family planning clinics that did not desire pregnancy for at least 1 year and selected to initiate the patch, ring, depot medroxyprogesterone acetate, or pills. Participants completed follow-up assessments at three, six, and 12 months after baseline. Life table analysis was used to estimate survival rates for contraceptive continuation. Cox proportional hazards models were used to estimate factors associated with method discontinuation.

The continuation rate (per 100 person-years) at 12 months was low for all methods; however, it was lowest for patch and depot medroxyprogesterone acetate initiators, 10.9 and 12.1 per 100 person years, respectively ( $P \leq .003$ ); continuation among ring initiators was comparable to pill initiators, 29.4 and 32.7 per 100 person-years, respectively ( $P = .06$ ). Discontinuation was independently associated with method initiated and younger age. The only factors associated with lower risk of discontinuation were greater intent to use the method and being in school

or working. The pregnancy rate (per 100 person-years) was highest for patch and ring initiators (30.1 and 30.5) and comparable for pill and depot medroxyprogesterone acetate initiators (16.5 and 16.1;  $P < .001$ ). The patch and the ring may not be better options than the pill or depot medroxyprogesterone acetate for women at high risk for unintended pregnancy. This study highlights the need for counseling interventions to improve contraceptive continuation, education about longer-acting methods, and developing new contraceptives that women may be more likely to continue.

#### Summary

Lack of knowledge and education regarding proper use of oral contraceptives can not only decrease its effectiveness but can also lead to an unplanned pregnancy. Inadequate knowledge about method use and side effects leads to contraceptive failure due to user error. Non-contraceptive health benefits are highlighted. More than 50% of all contraceptive pill users perceive that there are substantial serious health risks to the pill. We can conclude that women aren't being properly educated about the secondary effects of hormonal contraceptives.

In general terms, oral contraceptives meet the purpose for which they were made, and the majority of women feel satisfied with the pill while they are using it. Yet once they stop using it because they want to become pregnant, many of them face the challenge of achieving to become pregnant and as a result they feel frustration and discontent with the side effects.

### Chapter III

#### Method

##### Introduction

The following is a methodology that will be used for this study. The title of the study is secondary effects due to long-term use of birth control pill and Level of Medical Education Received By Patients Prior To Its Use. The study is descriptive and follows the recommendations established by Polit and Hungler (2008) for this type of research. This methodology describes the design, population, instrument, procedure and the protection of human rights of participants.

The purpose of this research is to know and understand, what are the secondary effects due to long term use of birth control pill, determine which are the most common side effects, identify less common side effects and determine the level of medical education received by patients. While many will assert that the use of hormonal birth control pills is safe, it is important to understand what the risks and side effects of these methods are, as each birth control pills and birth control product carries

its own risk factors. In addition, the individuals who may be at greater risk of experiencing complications vary depending on their medical history as well as the product being used. The side effects and complications that is associated with hormonal birth control methods range from mild to severe. While many will assert that the use of hormonal birth control is safe, it is important to understand what the risks and side effects of these methods are, as each birth control product carries its own risk factors. In addition, the individuals who may be at greater risk of experiencing complications vary depending on their medical history as well as the product being used.

#### Design

The design of this study would be both descriptive and exploratory research methods in the conduct of the study. According to Polit and Hungler (2008) Descriptive research is a method used to obtain information relating to the current status of an issue or phenomenon to describe "what exists" within the variables or conditions of the situation. The most common type of descriptive research tools is surveys. With the exploratory method of personal experience of the use of birth control pill will help come



up with description of the research problem. Exploratory research, on the other hand, is often utilized in order to yield information to explain problem, which are not yet clearly defined, or the real scope is still unclear according to Polit and Hungler (2008). The present study is an exploratory attempt since it will try to gather information regarding the miss information in side effects in birth control pills. The informative waiver and questionnaire will be completed in Spanish and English so there shouldn't be any type of confusion in understanding or filling out the questionnaire.

#### Population

The population is composed of women consuming oral contraceptives and that has presented any type of side effects because of oral contraceptives. According to the Food and Drug Administration (FDA) there are risks, because of the use of oral contraceptives. The population for this study was held with 16 women who are in oral contraceptives or have used oral contraceptives, two doctor's offices who recommend oral contraceptives. The investigator asked each who have or are in birth control pills. Once the Doctors have referred the candidates, the investigator approached

each candidate. The investigator will explain the importance in the participation of the investigation. The questionnaire was completed in a private room in which the participant could have the privacy and confidentiality. The sample (16 questionnaires) will be taken by availability of subjects. According to Polit and Hungler (2008) with regard to the research itself, the main problem is that some for some practice areas, availability of high quality research evidence are limited.

#### Criteria for sample selection

1. From ages 21-45 Females
2. Consumed oral contraceptives
3. 1 or more years of oral consumptions

#### Exclusion criteria

1. Usage of other methods of contraceptives
2. 46 years and older

#### Instrument

A questionnaire was developed by the researchers, titled side effects in oral contraceptive used by women of ages 21-45. It was developed based on review of literature related to the topic. It is composed of three parts: the

first related to any type of side effects, the second education on behalf of the oral contraceptives third demographic data. This instrument is the most appropriate because; according to Polit and Hungler (2008) a questionnaire facilitates the collection of data and is an inexpensive way to gather data from a potentially large number of respondents. Often they are the only feasible way to reach a number of reviewers large enough to allow statistically analysis of the results.

In addition, the instrument for this type of variable and population was applied in other investigations such as the effect of patient gynecologic history on clinician contraceptive counseling by Dehlendorf (2010), proving to be an effective method. Two professionals validated the questionnaire; Jonathan Perez Registered Nurse Bachelor Science in Nursing (BSN), Master Science in Nursing (MSN) and Dr. Mayra Figueroa Associate Dean of UMET in Health Science. The questionnaire was revised by these professionals. They recommended if the questions were acceptable, eliminated or modified. The questionnaires were semi-structured; all participants were provided a written

informed consent and should comply with study procedure.

#### Procedures

The procedure follows by the recommendations made by Polit and Hungler (2008). For this survey, a questionnaire was sent to offices of gynecologist for completion. This was presented with the purpose of the study and the need of it as part of an academic project. Those who were in agreement to voluntarily participate were given the questionnaire developed by the researcher. The questionnaire was held in a private room which the doctor provided. This process was done in a strict confidentiality, privacy and respecting the decision of the subject to participate or not to participate in the study. The investigator was available to clarify questions of the participants. The completed questionnaires by participants were given to the researcher for tabulation.

#### Human Rights Protection

This research report followed all ethical, legal and responsible guidelines. The primary investigator has taken the IRB and HIPAA certifications related to the federal

laws of confidentiality and protection of human rights. To ensure the protection of the subjects, there was an informed consent, they have read with the principles of confidentiality and protection of identity. The questionnaire is concealed in a locked place for five years. The informed consent explained that participation in research is voluntary and that the risk of completing the instrument is minimal. Currently, the real risk is potentially physical, psychological, social, legal or other minimal, including for the researcher. The only potential risk to participants is to feel slightly tired while completing the instrument.

The primary investigator, during recruitment provided participants with the information necessary to ensure voluntary participation, for the convenience of the participants. The informed consent describes the purpose of the study, how long the instrument and the type of questions to be performed. The participant may withdraw at any time that they desire, without being bound by the researcher. The primary investigator explained in advanced the potential benefit of being part of the investigation and the importance of it, since participants did not receive compensation.

The researcher was available at all time to answer questions or concerns about the study. In fact, the risk of participating in this research is minimal and commit of filling the questionnaire.

#### Statistical Analysis

The statistical analysis used in this study was descriptive statistics and central tendency as the percent, and average frequency. The socio-demographic data was analyzed by using a descriptive statistics percent, mean, median, mode and standard deviation. This type of analysis is suitable for this type of research and other research related to the topic.

#### Summary

It is important to be able to have all the instruments needed for this study and take into consideration the recommendations given. The primary investigator should have support and be part of an ethical and proper the investigation. It is important to study and understand the regulations of IRB and HIPAA, which is related to the federal laws of confidentiality and protection of human rights.

This investigation is intended to allow the reader to reconstruct, in some ways, the work done, given the opportunity to verify the sources used, for further reading and to extend their knowledge. The value and importance of valid informed consent in any research involving human beings is unquestionable.

## Chapter IV

### Findings

#### Introduction

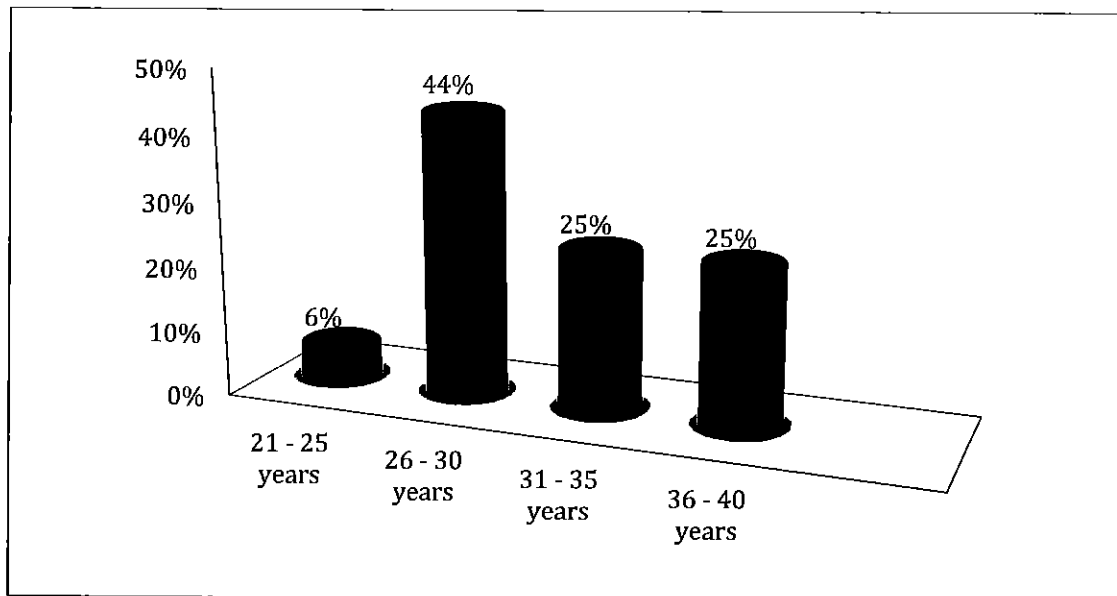
The research findings are the results associated with the previously posed objectives, hypotheses or questions that have an investigator. The new proposals will be reconsidered based on new findings not associated with the expected finding (Polit & Hungler, 2010). The findings presented below. It include the socio-demographics of the sample, there is also a section that focuses on the objectives of this research which are: 1) Determine which the most common side effects of long term use of birth control pills. 2) Identify less common side effects of birth control pills. 3) Determine the Level of Medical Education Received By Patients Prior To Its Use. 4) Identify women's level of knowledge of the birth control pill's side effects.

#### Presentation of socio-demographic data

Participants in this study were 16 women who are in oral contraceptives or have used oral contraceptives, two doctor's offices who recommend oral contraceptives.



The following table presents the data of the sample in relation to gender, age, marital status, area of residence, educational level, etc.



Graph 1: Distribution of participants by age.

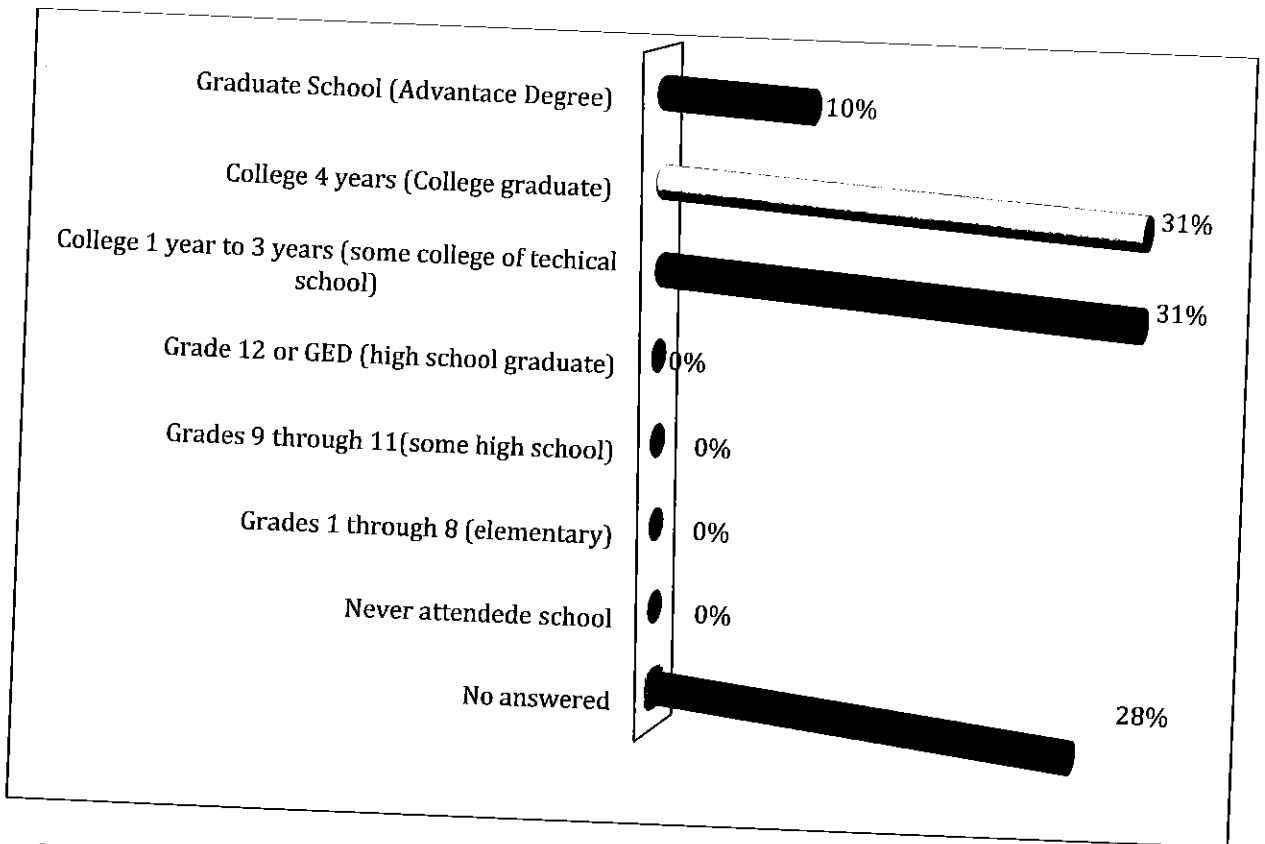
Graph 1 shows the distribution of participants by age. According to the data the majority of participants had 26 to 30 years for 44%, followed by those who reported they had 31 and 30 years and 36 to 40 years to 25%, in each of the above categories. While participants who were 21 to 25 years reached 6%. The average age of study participants was 31 years.

Table 1. Medical history of the participants.

Conditions	f	%
Migraine	7	44
Headaches	8	50
Breast disease/Discharge	1	6
Stroke	0	0
Epilepsy	0	0
Depression	2	12
Thyroid problems	2	12
Liver disease	2	12
Hepatitis	0	0
Heart disease/murmur	0	0
High blood pressure	4	25
Blood clots	1	6
Bleeding disorder	1	6
Cancer	1	6
High cholesterol	2	12
Kidney problems	0	0
Loss of menstruation	7	44
Anxiety	4	25
Other medical history:		
Asthma	1	6
Endometriosis type II	1	6

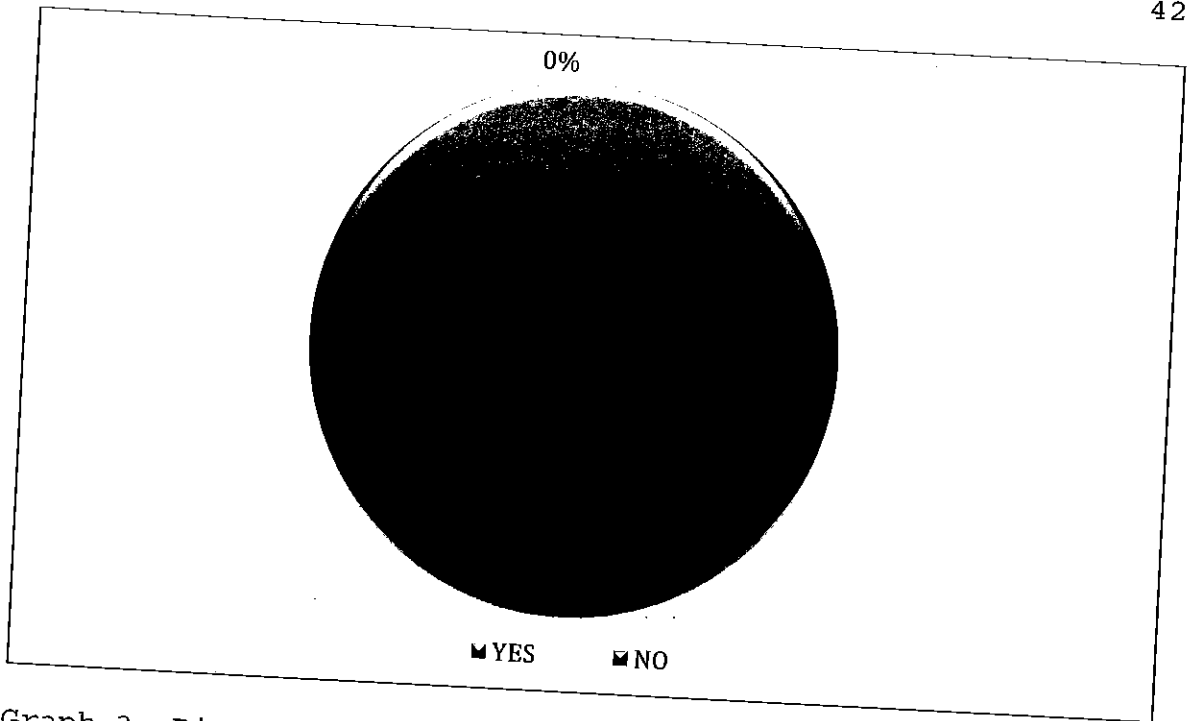
Table 1 shows the medical conditions that have suffered the study participants. According to the data 50% of participants have had any health condition. The most common conditions suffered by the participants are:

headache (50%), migraine (44%), loss of monthly period (44%), high blood pressure (25%) and anxiety (25%).



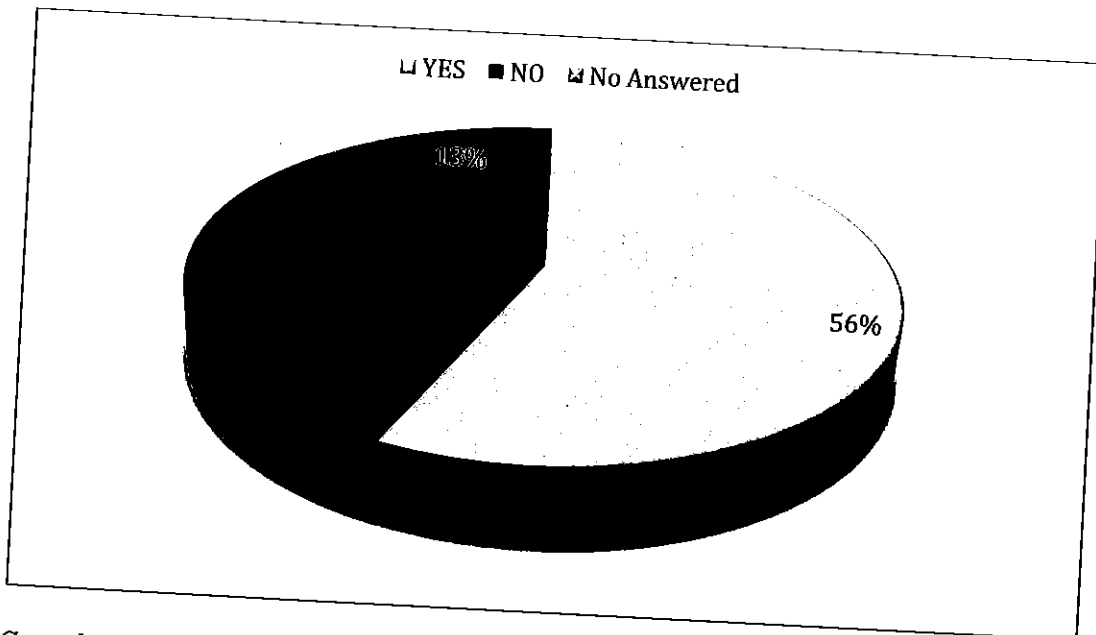
Graph 2: Distribution of participants by education level.

Graph 2 shows the academic preparation of the participants. According to the data presented, the majority of participants have a degree or technical college level courses, or instead a college degree with 31% in both groups. Also, 10% of participants said they have a graduate level course. 28% of participants did not answer this question.



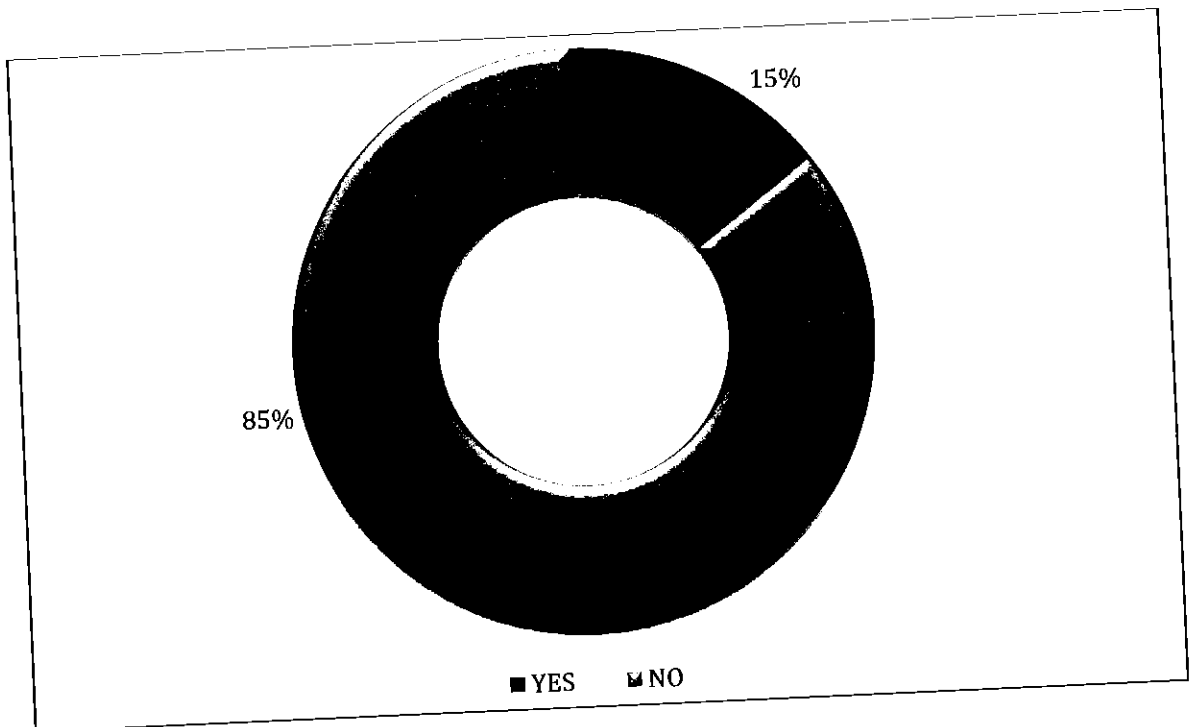
Graph 3: Distribution of smokers participating.

On the graph 3 shows that 100% of study participants did not smoke.



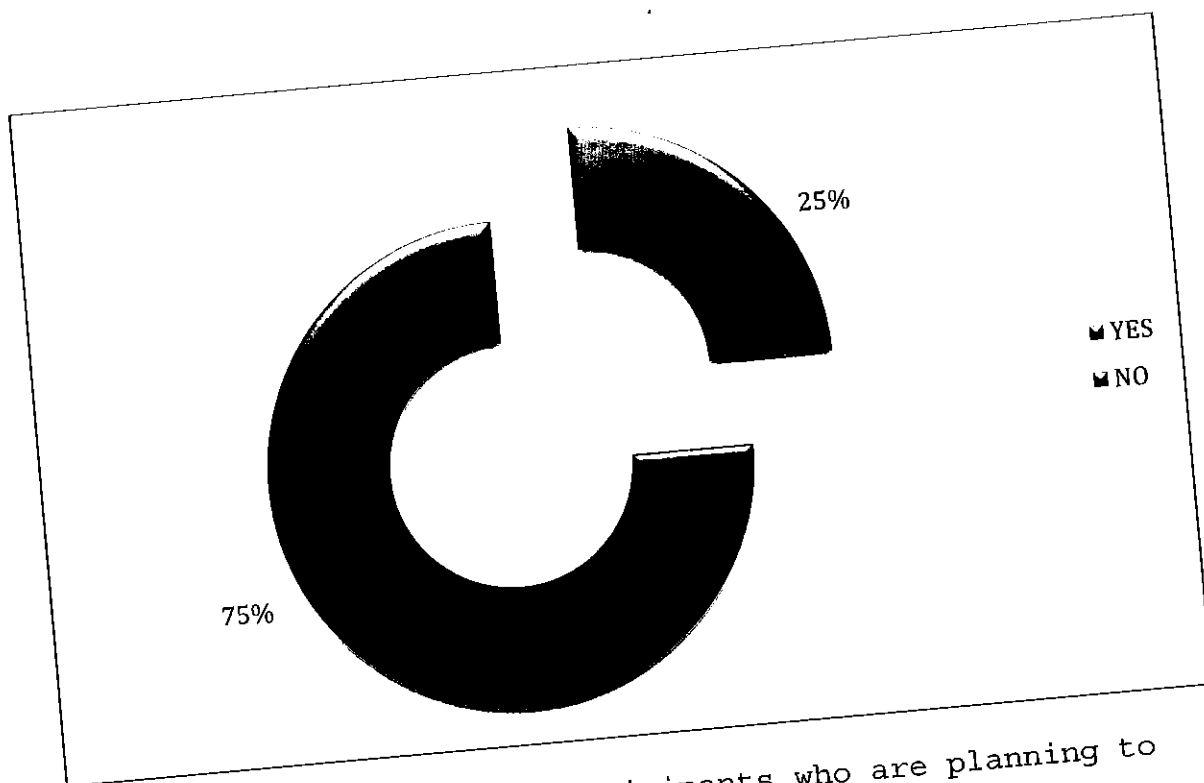
Graph 4: Distribution of participants who have ever been pregnant.

According to the data shown in Graph 4, the majority of participants, 56% indicated they have been pregnant. While 31% indicated that has never been pregnant. 13% did not answer the question.



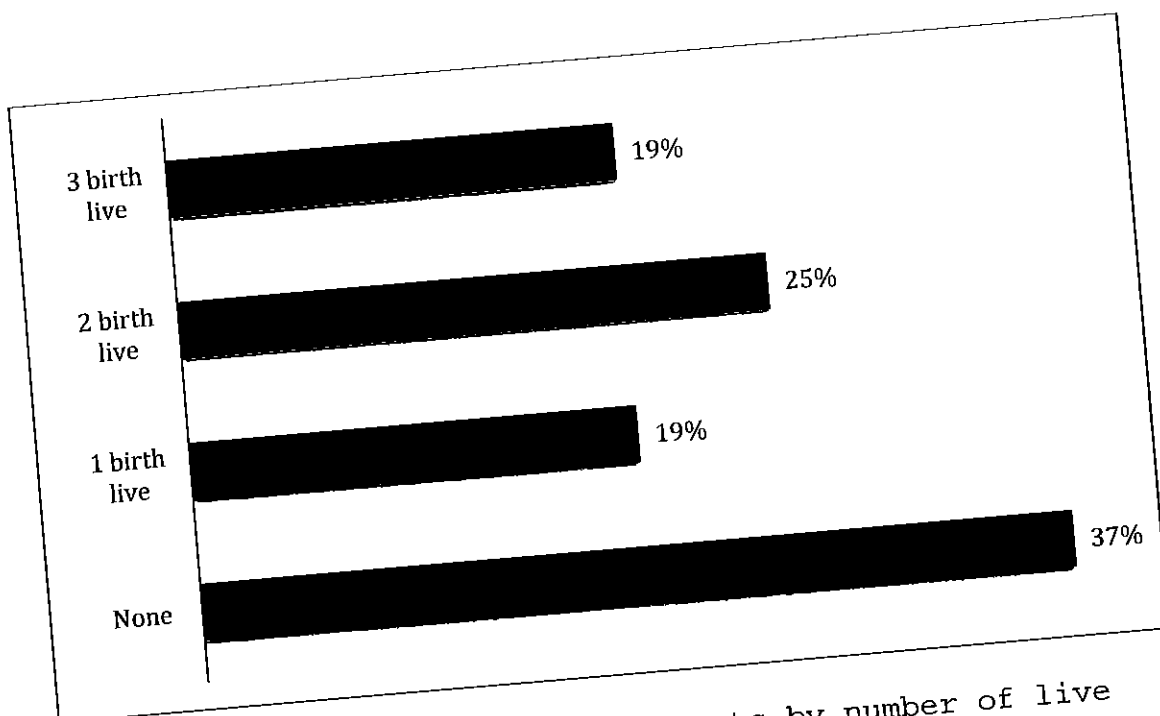
Graph 5: Distribution of participants who are planning to become pregnant in the next 12 months.

The graph 5 shows the distribution of study participants planning to get pregnant. According to the data, 69% of participants did not want to get pregnant in the next 12 months. While 12% of women planning to become pregnant in the next 12 months.



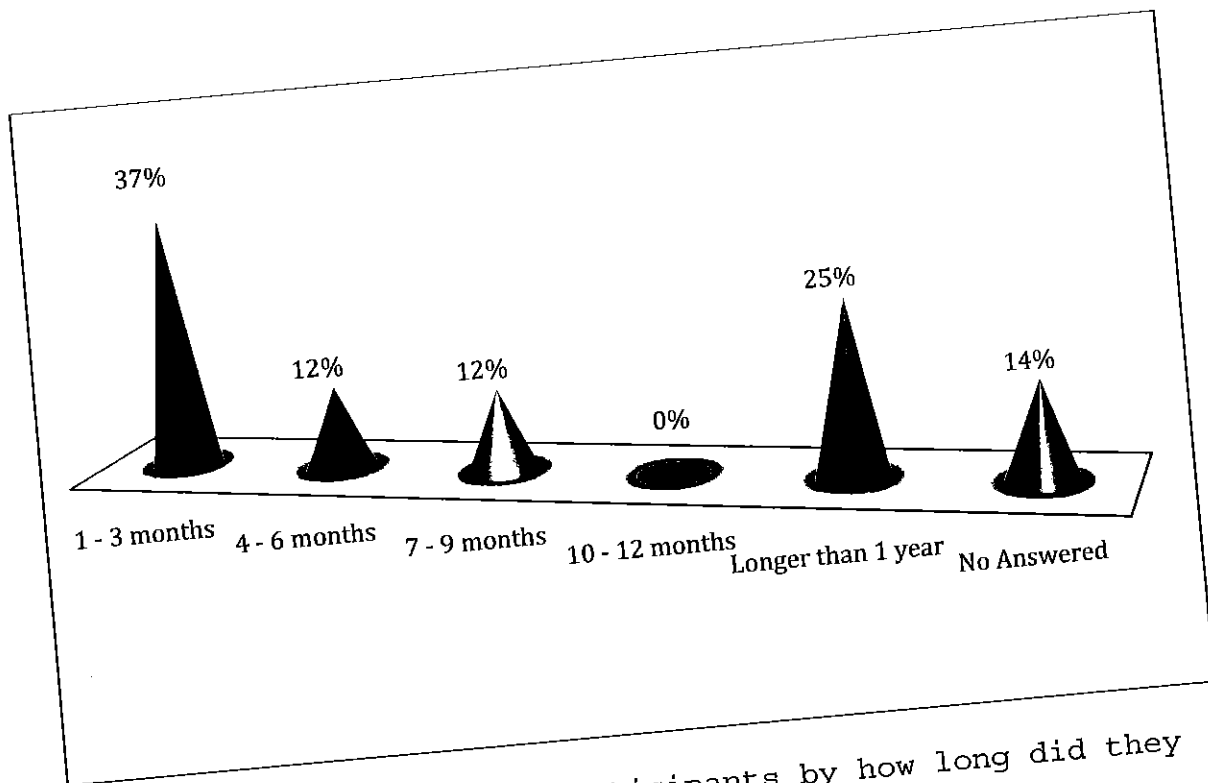
Graph 6: Distribution of participants who are planning to become pregnant in the next 5 years.

The graph 6 shows the distribution of study participants planning to get pregnant in the next 5 years. According to the data, the majority of participants, 75% do not plan to get pregnant in the next 5 years. While 25% of women are planning to become pregnant in the next 5 years.



Graph 7: Distribution of participants by number of live births.

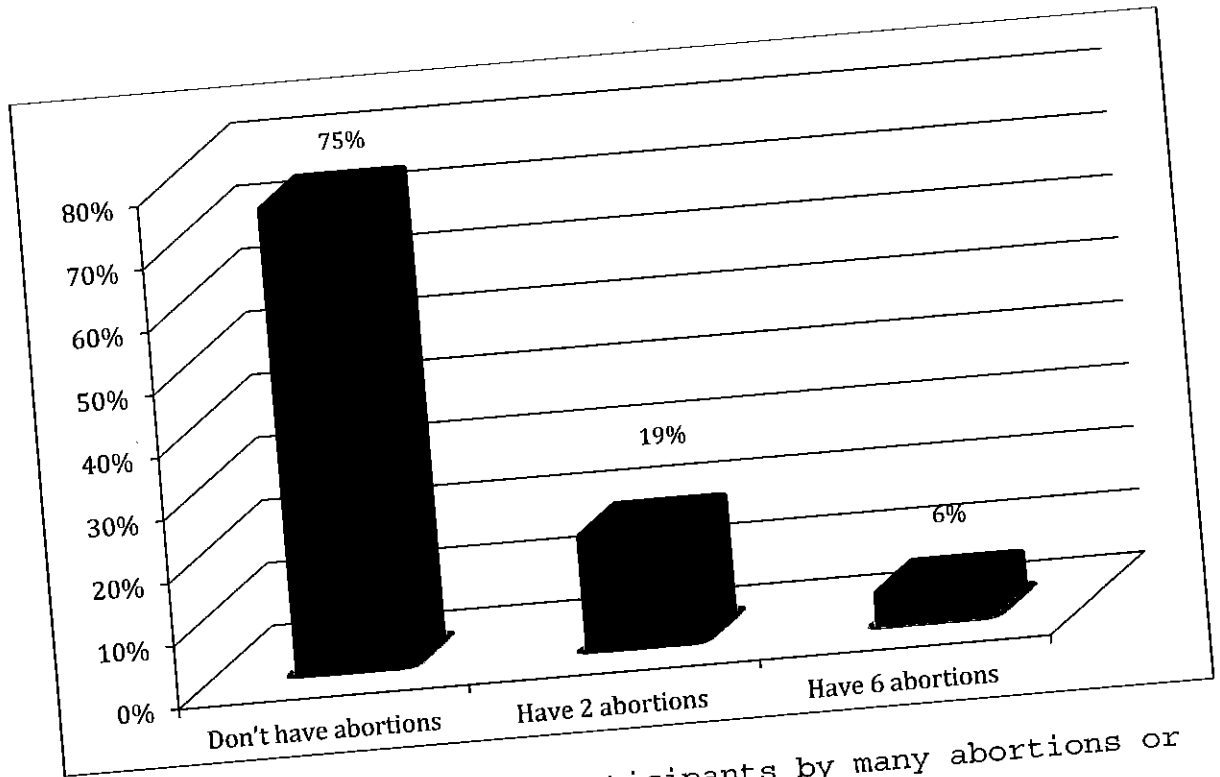
The graph 7 shows the distribution of participants by the number of live births has had. According to data 37% of the participants have not had births. Also, 25% of participants report having 2 live births, followed by those who reported have had one live birth in 19% of cases, just as they had 3 live births for 19% of cases.



Graph 8: Distribution of participants by how long did they try to conceive.

The graph 8 shows the distribution of participants that try to conceive. According to the data most try to conceive between 1-3 months with 37%. While others reported to try to conceive between 4-6 months and others between 7-9 months to 12% in both groups. Also, there was a 25% that try to conceive longer than one year. Finally, two participants indicated that this does not apply because they have never had child for a 12%. 14% of participant did not answer the question.





Graph 9: Distribution of participants by many abortions or miscarriages has.

The graph 9 shows the distribution of participants who suffer spontaneous abortions or abortions. According to the data most of the participants did not have any abortions at 75%. While 19% say they have had two abortions, followed by those who reported they have had 6 abortions to 6%.

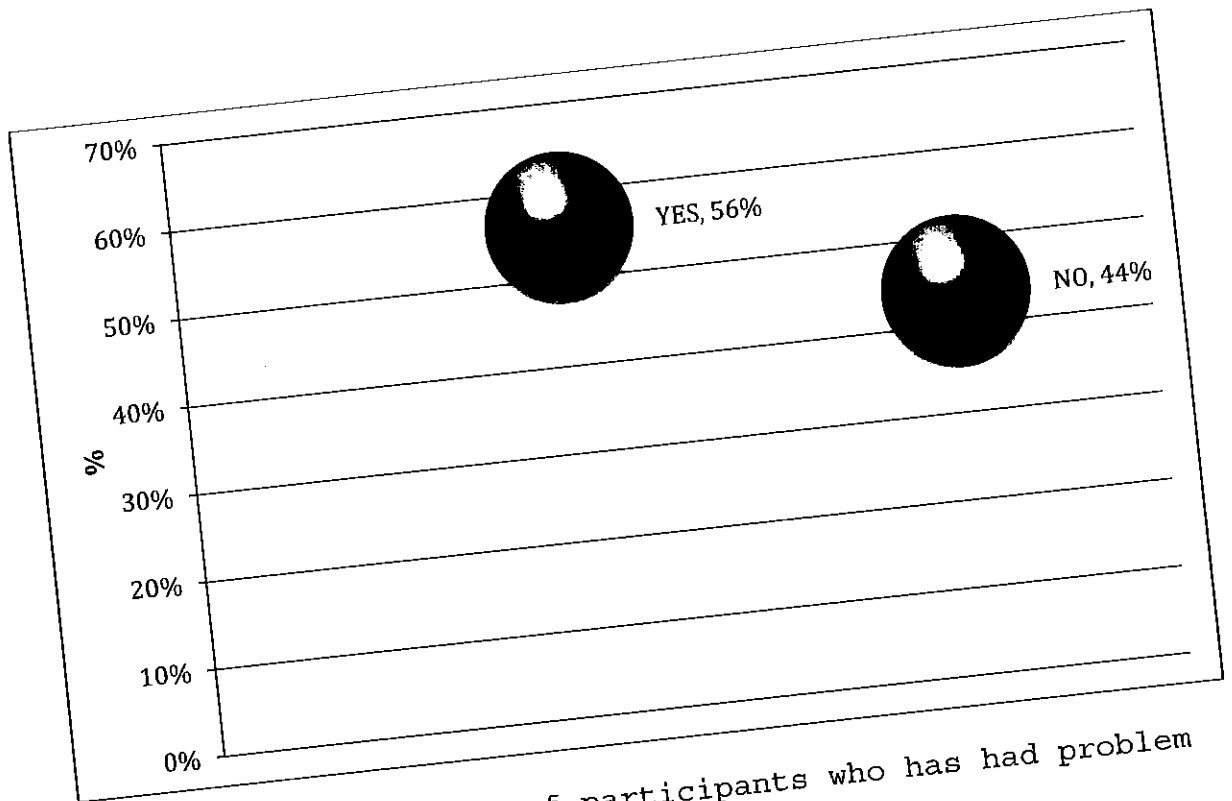
Presentation of data on the use and reliability of birth control pills

The first part present the data about the pills brands name used in birth control.

Table 2. Brand contraceptive pills used by participants.

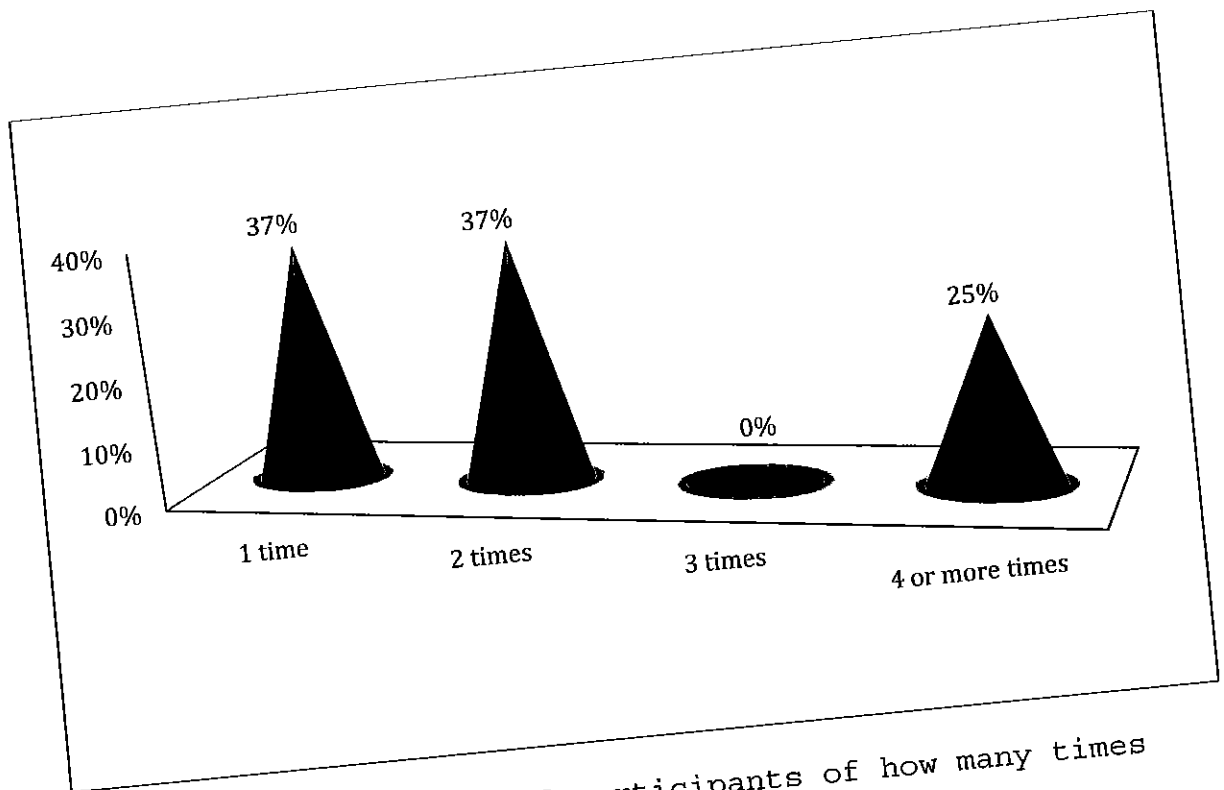
Brand names	f	%
Lo Loestrin Fe	3	19
Ortho Tricyclen	4	25
Yas Yazmia	2	19
Gildessie	1	6
Microgestin	1	6
Ortonovum	1	6
Beyaz	2	12
Monoreza	1	6
Jolessa	1	6

According to the data presented in the Table 2, the participants used different birth control pills. In order of preference or use, the first 4 are: Ortho Tricyclen (25%), Lo Loestrin Fe (19%), Yas Yazmia (19%), and Beyaz (12%).



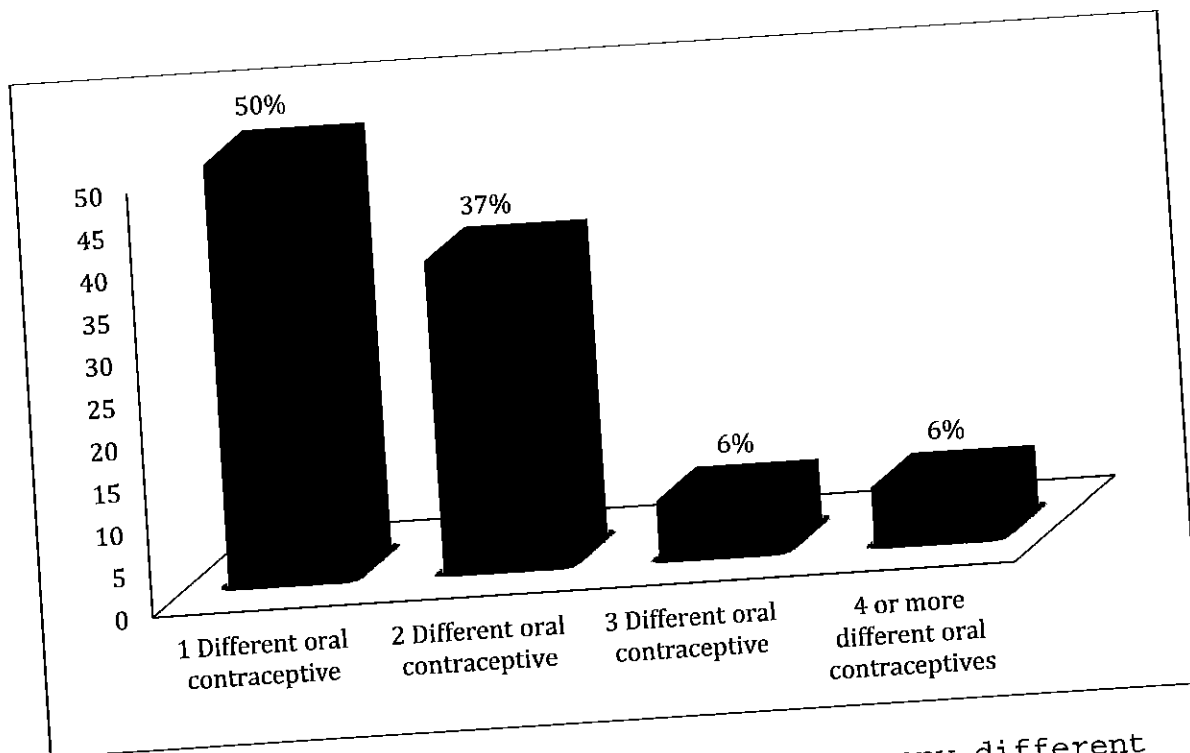
Graph 10: Distribution of participants who has had problem with birth control pills.

The graph 10 show the distribution of participants has a problem with birth control pills. According to the data presented most of the participants had problems with the methods of birth control with 56%. While 44% of respondents report not having suffered this situation.



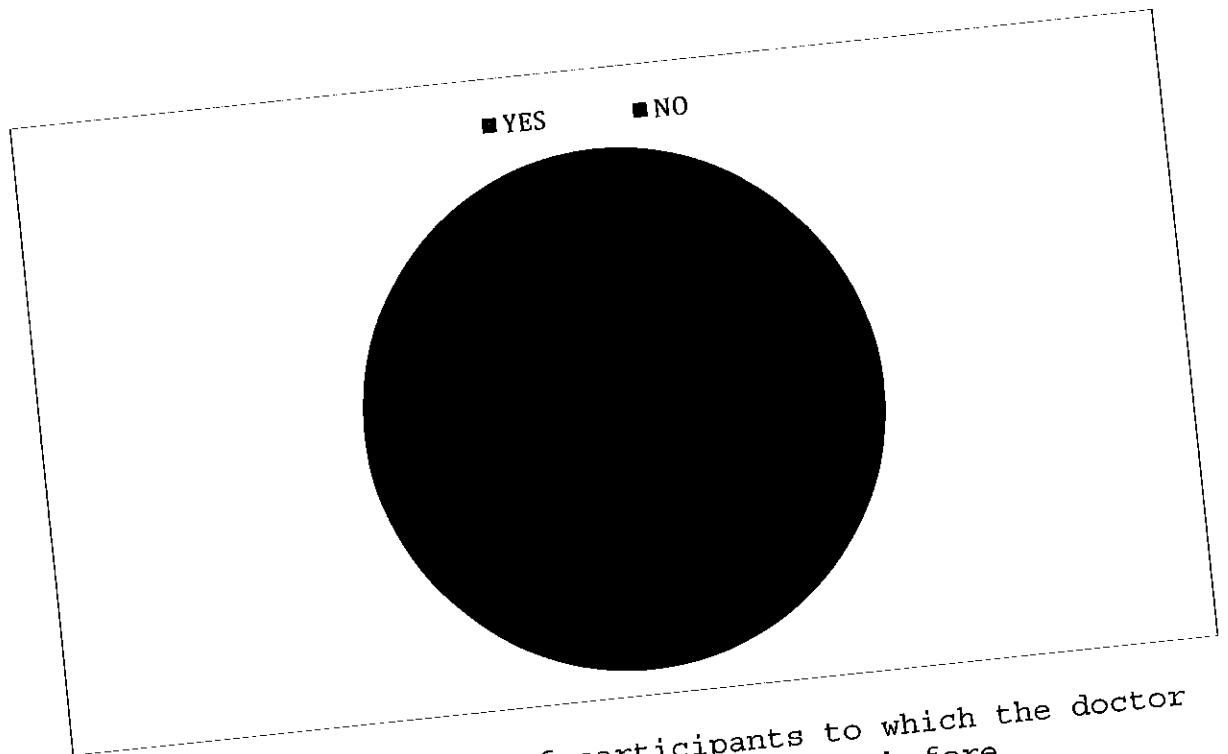
Graph 11: Distribution of participants of how many times they stopped using oral contraceptive.

The graph 11 shows the distribution of participants of how many times stopped using oral contraceptive. According to the data most of the participants have stopped using birth control pills 4 times or more, followed by those who have left them once or twice with 37% in each of the aforementioned groups.



Graph 12: Distribution of participants how many different have contraceptive have tried.

The graph 12 shows the distribution of the participants that have tried a different contraceptives. The data show that 50% to prove one contraceptive. While 37% had tried two contraceptives. Followed by the group of participants who said they have proven 3, 4 or more contraceptives for 6% respectively.



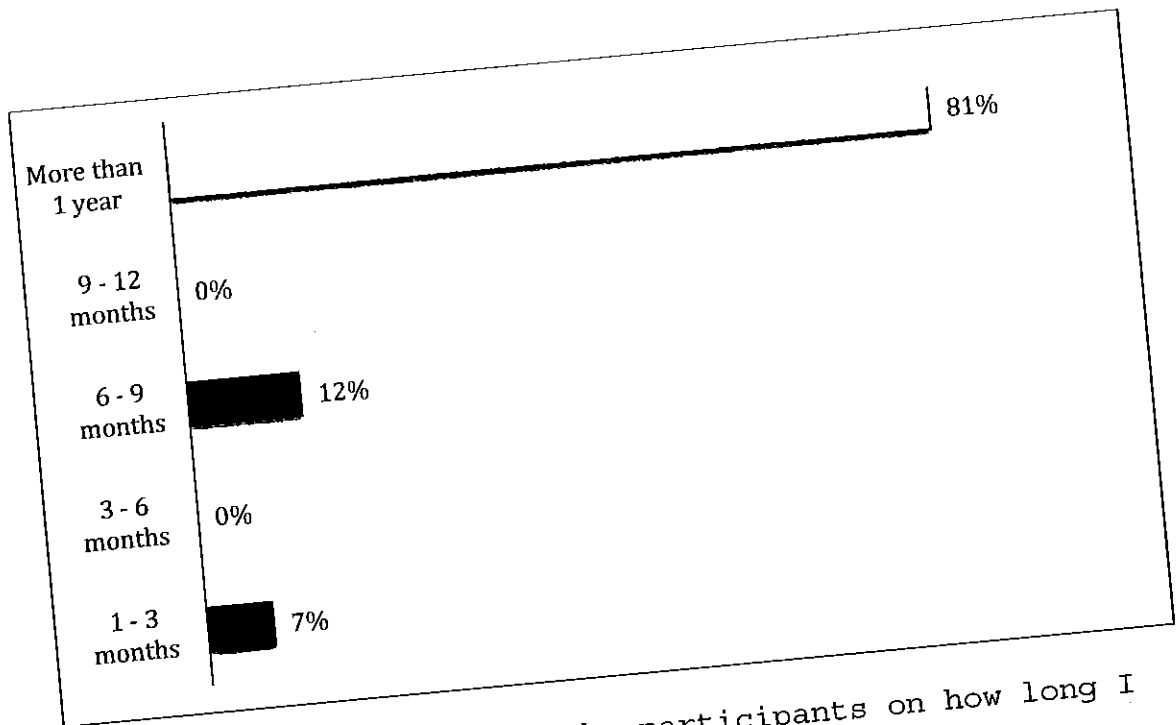
Graph 13: Distribution of participants to which the doctor performed a complete physical examination before prescribing birth control pills.

According to the data shown in graph 13, 50% of participants the doctor who did a complete physical examination before prescribing birth control pills. The same percentage (50%) was those in which the doctor prescribed birth control pills without doing a physical exam.



Graph 14: Distribution of participants to which the doctor will ask about your family medical history before prescribing a contraceptive pill.

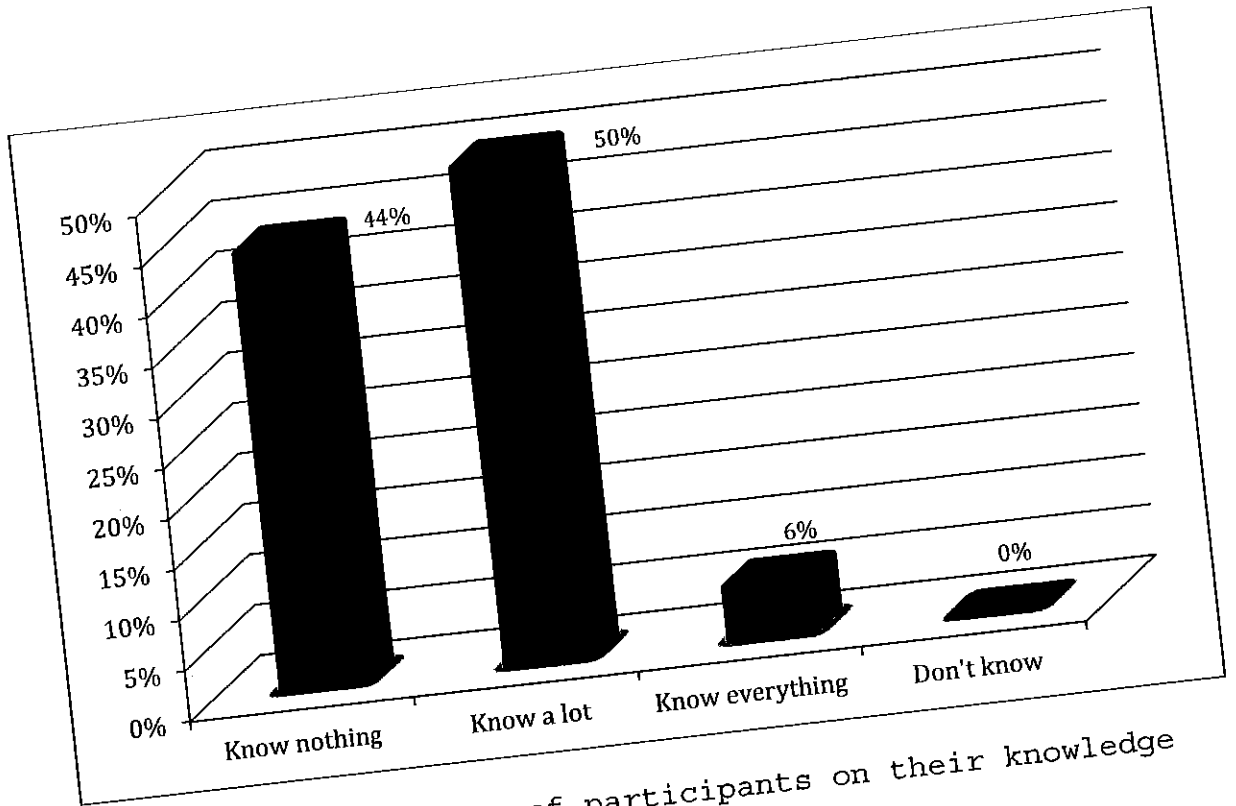
The data reflected in the graph 14 that the majority of the time the physicians ask the participants to family health history before prescribing a birth control (75%) pill. While 25% of physicians do not explore family health history before prescribing contraceptives participant.



Graph 15: Distribution of the participants on how long I stop using birth control pills did.

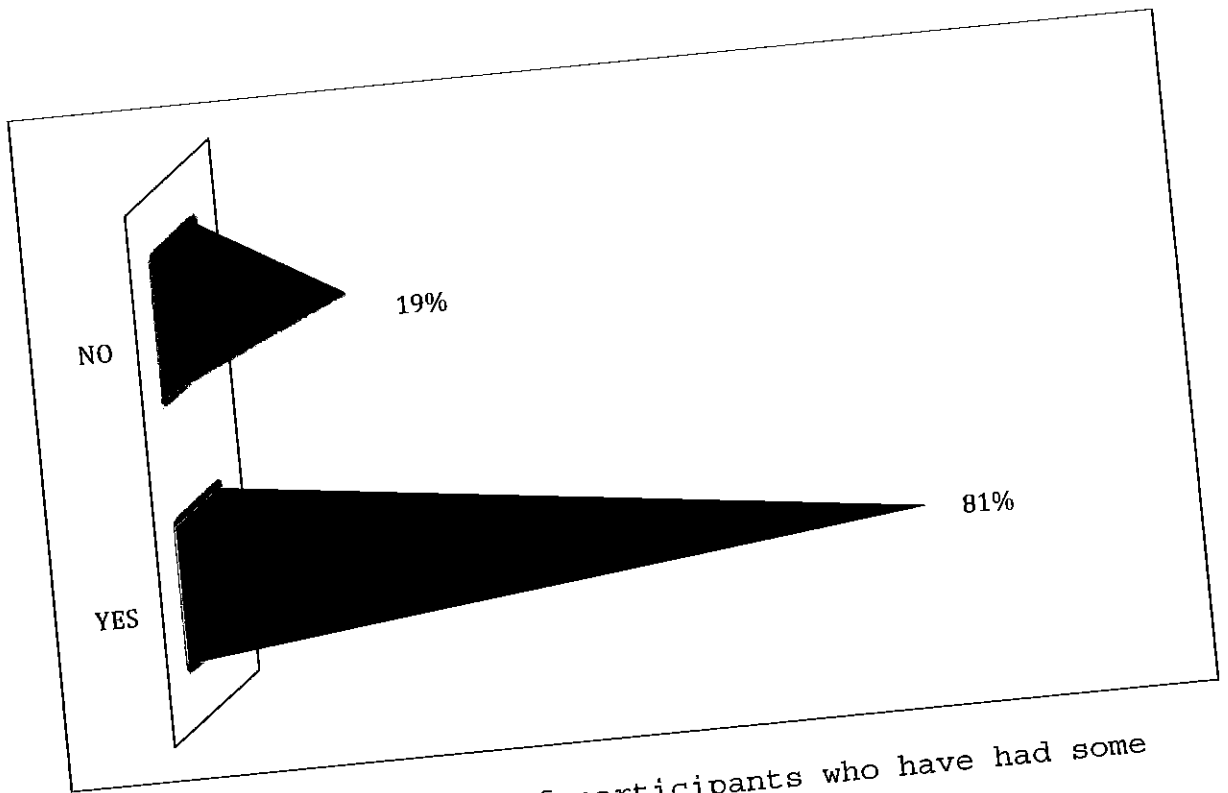
The graph 15 show the distribution of the participants is showing how long they stopped using birth control pills. According to the data offered, 81% said they stopped taking the pills for a year or more, followed by 12% who said they had stopped taking between 6-9 months. Finally, only 7% said they stopped taking birth control pills between 1-3 months.





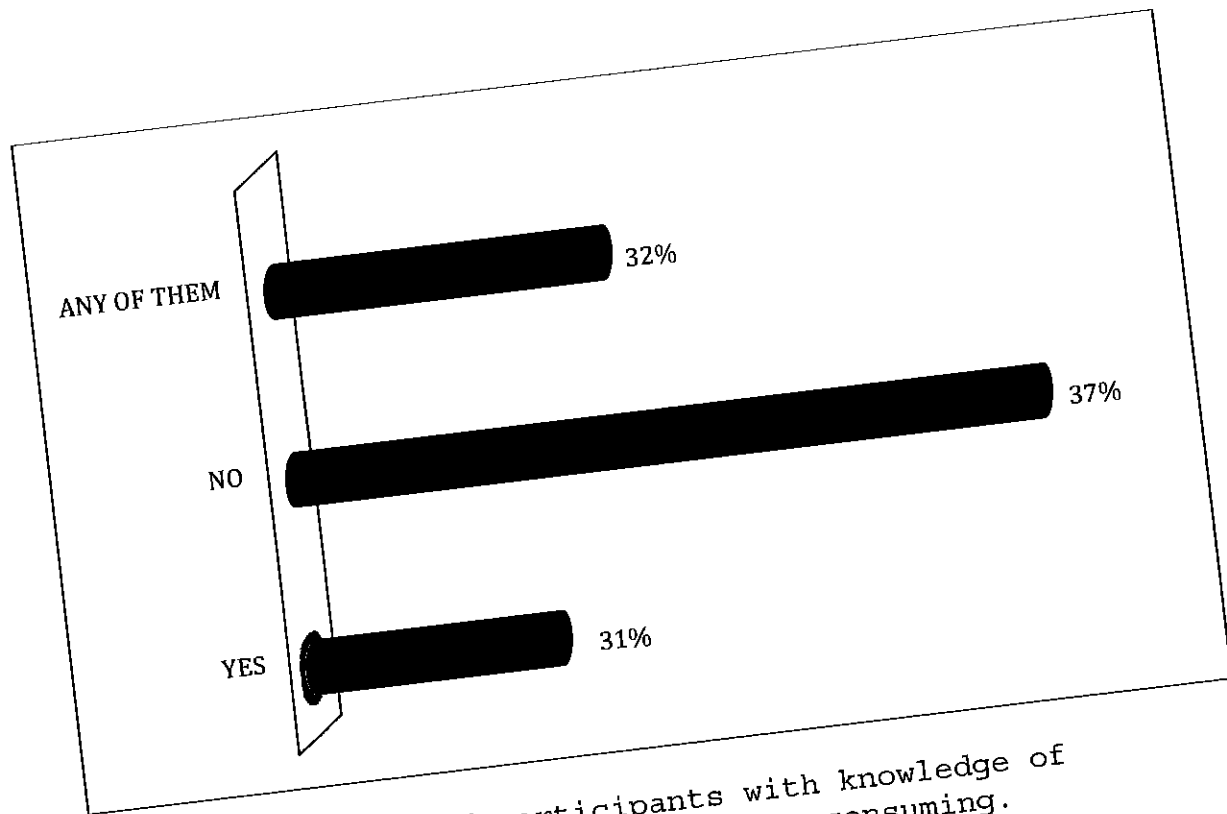
Graph 16: Distribution of participants on their knowledge about birth control pills.

The according of data to the knowledge of the participants on the pill birth control varied. Most know nothing about the subject with 50%, however, 44% did not know anything about the birth control pills, and 6% indicated knowing everything about the subject to 6%.



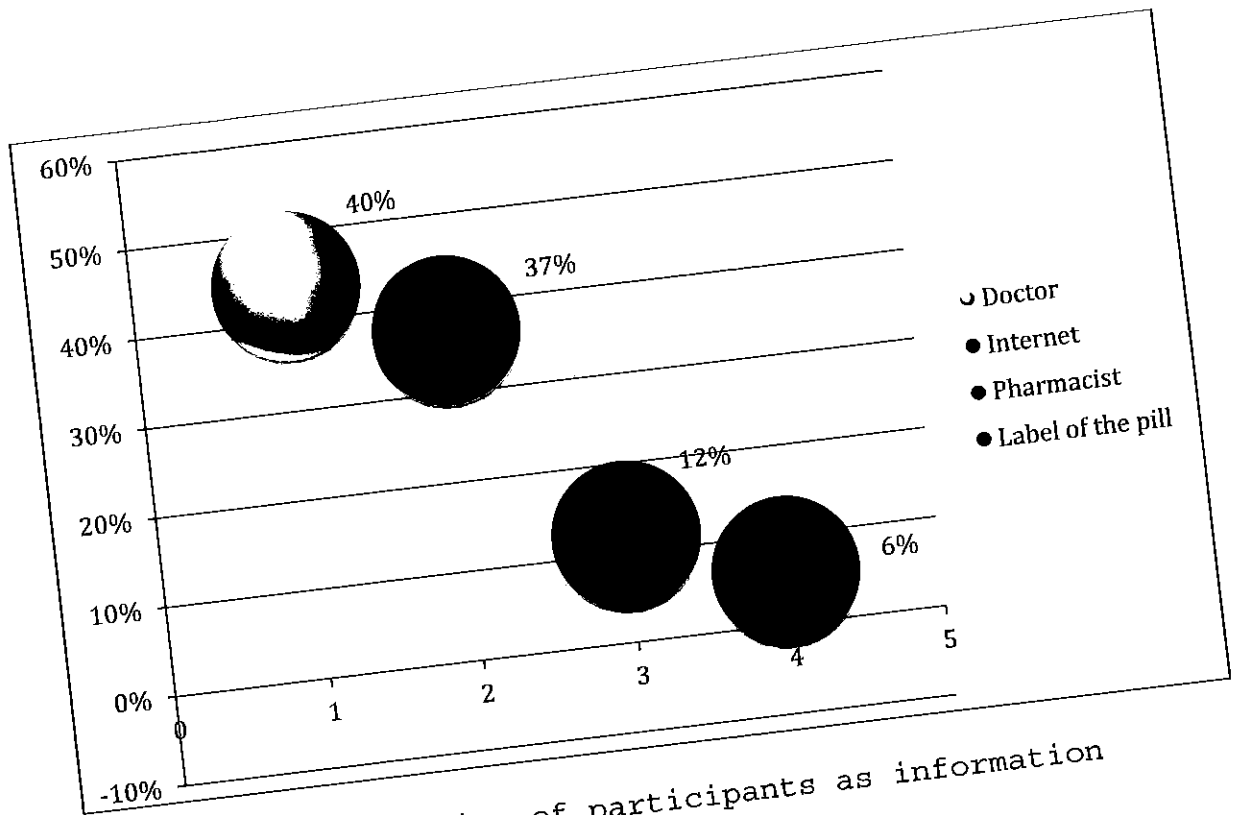
Graph 17: Distribution of participants who have had some effect after using birth control pills.

According to the data shown in the graph 17, the majority of participants (81%) suffered from any effect to after using birth control pills. While 19% said they had not suffered any effect.



Graph 18: Distribution of participants with knowledge of side effects of birth control pills before consuming.

According to the data shown in the graph 18 only 31% of participants had knowledge of the side effects of birth control pills. A 37% of respondents indicated no knowledge of these side effects before starting treatment, and 32% also said to have some prior knowledge about the treatment start birth control pills.



Graph 19: Distribution of participants as information source.

According to data presented in the graph 19, the majority of the participants knew of the side effects of birth control pills. The 40% knew on this issue through his doctors, followed by those who reported being aware of side effects through the Internet with 37%. Less percentage are those who reported being aware of the side effects of 12% knew the side effect by the pharmacist and 6% by reading the label of the birth control pills.

Presentation of data according to the questions and study objectives.

Then the survey data based questions and objectives of the study are presented. The research questions were:

1. What are the Secondary Effects Due To The Use Of The Birth Control Pill?
2. What are the Level of Medical Education Received By Patients Prior To Its Use?

While the objectives of the study were:

1. Determine which are the most common side effects of long term use of birth control pills.
2. Identify less common side effects of birth control pills.
3. Determine the Level of Medical Education Received By Patients Prior To Its Use?
4. Identify women's level of education of the birth control pill's side effects.

The first objective of the study was aimed to determine the most common side effects of long term use of birth control pills are. Table 3 shows those results.

Table 3. Distribution of participants who have had side effects after using birth control pills.

Side effects	f	%
Headache	7	44
Weight gain	6	37
Swollen breast	6	37
Irritability	5	31
Changes in metabolism	4	25

A 44% of the participants suffered from headache because the use of birth control pills, followed by those who reported suffering weight gain and swollen breast, both groups with 37% respectively. Other side effect of birth control pills reported a 31% with irritability and 25% changes in metabolism. These results answer the first question of the study that is following: What are the Secondary Effects Due to The Use Of The Birth Control Pill? It was determined that headache was the most common side effect in women using birth control pills.

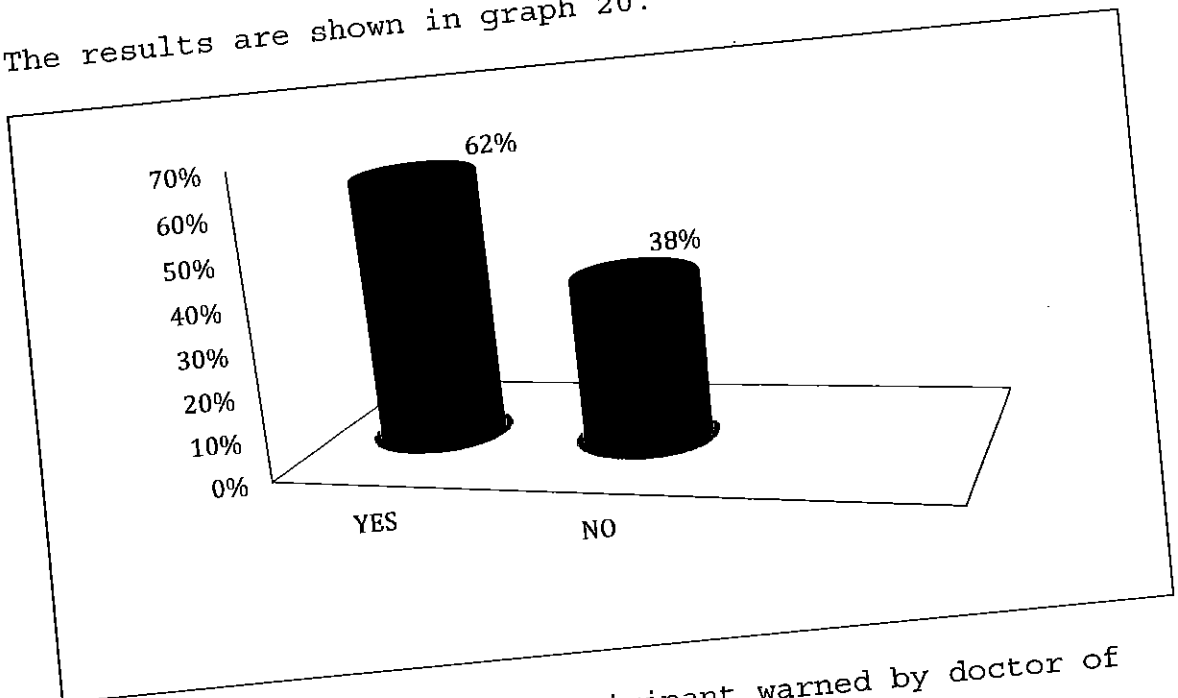
The second objective of the study was aimed at identifying less common side effects of birth control pills.

Table 4. Distribution of participant which are less common side effects of birth control pills.

Side effects	f	%
Cancer of cervix	1	6
Hair loss	2	12
Depression	2	12

According to the data in Table 4 show the less common effects that birth control pills are: Hair loss and depression, both with 12%, followed by those participants who reported cervical cancer with 6%.

The third objective was to determine the Level of Medical Education Received by Patients Prior to Its Use. The results are shown in graph 20.



Graph 20: Percentage of participant warned by doctor of possible side effect produced by the pill before prescribing them.

According to the data are reflected in the graph 20, the majority of participants (62%) the doctor warned of the possible side effects that could be taking birth control pills, followed by those participants who indicated that they received no warning of the medical with 38%. These results could answer the second question of the studio it was: What is the Level of Medical



Education Received By Patients Prior To Its Use? According to the data obtained in the study 62% of participants received education from your doctor about the side effects of such treatment before starting birth control pills.

The fourth objective was addressed to identify women's level of education of the birth control pill's side effects. Fifty six percent of those that answered the question indicated that they had a lot or some knowledge of the birth control pill. Of those 56%, 31% indicated that they had knowledge of the side effects before using the pill and 15% obtained knowledge about side effect after using the pill. Those results can be seen in Table 5, which follows.

Table 5. Knowledge of participants about the pill and its effects.

Level of knowledge	Percent
Know much and knows enough about what are birth control pills	56%
Before consuming the pill knew all their side effects	31%
<b>TOTAL AVERAGING</b>	<b>44%</b>

## Summary

This descriptive study is intended to determine how much information gynecologists provide their clients concerning the possible side effects of birth control pills, before prescribing them. This study was conducted with 16 women (age's average 31 years old) in two gynecologists' offices in San Juan, Puerto Rico. The variable was measured using a questionnaire developed by the researcher. The participants all had used some type of birth control pill. According to the family history information about half of the participants had suffered some medical illness in the past; the most common of these was having headache (50%). Regarding academic preparation, thirty one percent (31%) had a technical college level course and the same percentage had a college degree. None of the participants smoked. Fifty-six percent (56%) of the participants have been pregnant at some point. Sixty-nine percent (69%) of the women stated that they had no intention of becoming pregnant within the next twelve months and seventy-five percent (75%) of them stated they had no intention of getting pregnant within the next five years. Thirty-seven percent of the participants have never given birth. Seventy-five percent of the participants

stated that they have not had or suffered an abortion. The participants have used different types of birth control pills. The most commonly used, in order of number of women using it, being: Ortho Tricyclen (25%), Lo Loestrin Fe (19%), Yas Yazmia (19%). About fifty-six percent of the women had some type of problem with their birth control pills; therefore they had stopped using them on several occasions (four or more times). Thirty-seven percent of the women have stopped using the pills once or twice. Half of the women in the study were given a complete physical examination by their physicians before being prescribed their birth control pills. Half of the participants had some knowledge about the effects of the birth control pills. Eighty-one percent of the participants experienced some side effects from the use of their birth control pills.

The study has revealed that the most common side effect of the birth control pills was having headache (44%). One very important, the less common side effect of the use of birth control pills is the development of cervical cancer in about six percent of the women who take

them. The study revealed that sixty-two percent (62%) of the participants were informed about the possible side effects of their birth control pills by their physicians. Finally, the study evidenced that only 44% of women who use birth control pills known about them and their side effects.

## Chapter V

### Analysis and Discussion of Results

#### Introduction

The objectives and questions of this study are presented in this chapter and analysis and discussion of the results. According to Polit & Hungler (2000) analysis of the results is performed when the researcher interleaves the data and results found in the research with the theoretical background. In this case, the data was analyzed based on literature review and a selected nursing theory. Conclusions, nursing implications, limitations, and recommendations grounded in data analysis developed in this chapter are then presented.

#### Analysis of Findings

The evidence from this study shows that the most common side effects in women who use birth control pills were headache, swollen breasts, and weight gain. According to Barden O Fallon, J., Speizer, I., Rodriguez, F. & Calix, J. (2008) the side effects of oral contraceptives include spotting or irregular bleeding, nausea and vomiting, breast

tenderness, increased weight and mood swings. These side effects usually go away after three cycles. Ivankovic, M. (2014), states that birth control pills in some women can increase the retention of water and sodium or instead alter their metabolism. Scientific studies show that eighty percent of women did not change their body weight and the remaining twenty percent go up or down four pounds in a year. This seems to be the pattern in the participants of this study, which had a tendency to gain weight after beginning their use of birth control pills; nevertheless the participants of the study stated that their most common side effect associated was having a headache, which is evidenced in studies by Barden O Fallon, J., Speizer, I., Rodriguez, F. & Calix, J. (2008), although not common in studies by Rakel, R.E. (2011). Amy, J.J., & Tripathi, V. (2009), mentioned that although having a headache is common, having a migraine and nausea have been reported more frequently. Spencer, AL, Bonnema, R., & McNamara, MC (2009) and Ivankovic, M. (2014) cataloged that having migraine, vomiting, nausea and no bleeding are possible side effect, they identify these symptoms as unexpected events.

Despite the many side effects of birth control pills, their benefits outweigh their risks. The effectiveness or side effects of birth control pills can be altered depending on the time of day when the woman takes them. She could take them at the same time each day to help her body get used to the hormonal changes (a result in the woman's body), according to Planned Parenthood of Maryland, 2014. Side effects such as cervical cancer, hair loss and depression are also side effects of the pills, not mentioned by any of the participants. These findings are in accordance with Raigosa, G. (2012) which states that there is evidence that women who use contraceptives have lower risk of ovarian cysts, cervical cancer. She also states that they are less prone to genital tract infections (common cause of infertility by blocking the fallopian tubes). The chances of birth control pills causing cervical cancer and hair loss are very unlikely. Less than five percent of the participants reported any adverse effects on their nerves or any mood swings. In that regard, Spencer, AL, Bonnema, R., & McNamara, MC (2009) and Ivankovic, M. (2014) emphasize that birth control pills are often used to treat and slow the growth of endometriosis (a common cause of infertility). It can be said that birth

control pills in some ways protect fertility. Other benefits of birth control pills are a decrease in menstrual bleeding and in menstrual cramps.

Sixty-two percent of the participants received information about the birth control pills from their physicians concerning the possible side effects of the prescribed pills. This percent indicates that gynecologists and family practitioners are not insuring that all of their clients are well educated on this subject. According to Abreu, I. (2014) it is important for clients to ask their physicians which contraceptive method best suits them. If these pills are prescribed the client should make sure it is the one that fits your body. The prescribed contraceptives should be offered by a competent gynecologist or doctor who explains to the client how to take the contraceptives and is responsible for providing guidance on possible side effects, advantages and disadvantages. Before prescribing the pills the gynecological should assess the client's medical history and perform a thorough physical examination. Certain diagnostic tests should be performed prior to prescribing contraceptives to verify sexual health, depending on the age of the client. A complete breast exam should be



performed. About fifty percent of the participants stated that they do not know how to perform the self-breast exam correctly. There is evidence of an increase in the growth of pre-existing tumors in women who use contraceptive pills. It is important to detect this prior to beginning the use of contraceptive pills.

Rosemarie Orellana as stated by Benitez Espinoza, M. (2014) distinguishes a number of specific categories to consider when prescribing a contraceptive. The categories are: Category 1: A condition for which there are no restrictions for the use of contraception. Category 2: A condition where the advantages of using the method generally outweigh the theoretical or proven risks. Category 3: A condition where the theoretical or proven risks outweigh the benefits of using the method. Category 4: A condition in which the use of the method represents an unacceptable health risk. Benitez Espinoza, M. (2014) emphasizes that the aspects to consider when choosing a pill are: age, weight, cardiovascular disease, mental health problems, use of other medications, uterine malformations, gastric diseases, smoking, allergies, and social conditions, among others. It is important that each client find their own right fit. Just because there are

many methods self-medication it is not recommended. He also specifies that client education is vital before using a specific contraceptive method.

Finally, the study demonstrated that the participants have little knowledge about the possible side effects of the contraceptive pills. Forty-four (44%) of the participants reported knowing about the use of birth control pills and their effects. These results are consistent with the findings in the study by Maiztegui (2006) in which the level of knowledge of women aged 22 -34 years was about the same. To the surprise of the researcher, about eighty-five percent of the women in his study knew about birth control pills; nevertheless, only twenty-four percent knew about the best method for them. In Hernández Cabrera (2001) research he found that only forty-seven percent of the women between the ages 20 to 29 had knowledge deficiencies. This information contradicts the statement by Vazquez Jiménez & Suarez Lugo (2005), which found that 98% of women surveyed (ages of 15 and 44) knew some contraceptive methods. When asked about the contraceptive pills about eighty percent knew about them. The authors emphasized the need to educate women on how to make the best selection of the correct contraceptive

method. They also stated that the selection should be discussed in the family context to promote good family planning.

#### Analysis Based on Nursing Theory

The nursing theory used in this research study to analyze the results was The Model of Health Promotion by Nola J. Pender. This theory focuses on educating people on how to care for themselves and promotes a healthy living lifestyle. This theory identifies the individual cognitive-perceptual factors that are modified by situational, personal and interpersonal characteristics, which results in participation in health-promoting behaviors, when there is a pattern for action. The professional practitioner must identify the deficiencies in knowledge in the women who use birth control pills. Nola Pender states that health promotion is achieved through health education, emphasizing the use of birth control pills and their possible effects.

According to Nola Pender, health education is any combination of learning experiences designed to predispose, enable and reinforce voluntary adoption of individual or collective behaviors that lead to health. The goal of health education is not only to get a quantitative change

of knowledge, but a qualitative change in the attitudes that lead to a real change in behavior. It's not about having a lot of knowledge, but having the skills and abilities that allow the person to behave differently. When women use these educational strategies they learn about the different types of treatments increasing their levels of knowledge concerning the contraceptive pills.

The use of the Model Health Promotion proposed by Nola J. Pender is appropriate to help solve the problem identified in this study. The Nurse Practitioner who can apply this model integrates the client in the use of behaviors that promote a healthy physical, mental and social person. The Nurse Practitioner should be the primary motivator for clients who use birth control pills. Nola J. Pender considers health as a positive state of high level, and takes it as an objective, to which the person should strive in order to lead a healthy life. The professional practitioner needs to use the Model Health Promotion Theory as a guide for observation and exploration of the biopsychosocial processes that are to become the model for the women on the reproductive stage of their lives. These women will be motivated to behave in a way that will improve the quality of their lives.

## Conclusions

The findings of the research presented conclude that women between the ages of 21-45 years have a knowledge deficiency concerning the possible side effects of birth control pills. This deficiency is due in part to the education they receive from their doctors who prescribe birth the birth. According to the participants the physicians did not educate them correctly about the possible side effects of birth control pills. Despite extensive information on the benefits of using the pill and their low rate of side effects, there was evidence that some of the participants had suffered some side effects. The most common side effect was headache and the least common was cancer of the cervix. We concluded that the knowledge of the participant about the side effects of birth control pills is not appropriate, making it necessary to develop educational strategies targeted to this population. It is also necessary to emphasize on the physicians their responsibility to educate their clients prior to prescribing birth control pills. The advanced practice nurse that provides care for these women can assist in this process by creating systematized educational

plans aimed to remedy educational deficiencies in women using contraceptives in Puerto Rico.

### Implications for Nursing

Today the couples are in a situation to limit the size of their family by choice rather by chance. The appropriate decisions about family planning are those that people make for themselves, based on accurate information and range of contraceptive options. People who make informed choices are better able to use family planning safely and programs have a responsibility to help people make informed family planning choices. Lack of knowledge of contraceptive methods can be a major obstacle for their consistent and continuous use. So it is an important and necessity for clearing their doubts and misconceptions about the side effects of family planning methods, by the health care providers, workers and counselors. Professional Nursing Interventions including cognitive, behavioral and affective domains were considered the most effective in improving attitude and adaptation to the method of practice by women and couples. Also, the Programs of nursing education should play an active role in conducting education programmers, workshop and continuing education programmers to educate

nursing personnel of the hospital regarding temporary contraceptive methods. The nurse educators can target the nurses and multipurpose health workers in the community areas. Continuing Nursing Education programs along with training of trainers programs can be organized to help them in imparting education on contraceptive methods.

#### Limitations of the Study

1. The sample size was very small and was selected for convenience. These characteristics make it impossible to state generalizations concerning the researched subject.
2. This study could not confirm whether there is a relationship between what the participants know about the possible side effects of birth control pills, and the type of education provided by the physician.
3. The questionnaire did not identify which actions if any did the nurses in the educational process have on these clients, since it only included the role of the physician.
4. The study could not determine whether age, education level, experience in the use of contraceptives could affect their level of knowledge.

5. Could not verify if the use of the contraceptive pills occurs in a context of dating or whether there was some family planning considered.
6. The study did not explore whether the pill is the preferred contraceptive method for women, or if you use of this method is in combination with others.
7. Did not explore whether the side effects identified on some women were with a specific type of contraceptive pills or with all the types of pills.

#### Recommendations

The recommendations of the study present strategies to minimize the identified problem.

1. Conduct a similar study with a larger sample of participants in order to establish, conclusions, inferences and applications that can be generalized for all women taking birth control pills in Puerto Rico.
2. Develop a correlation study to verify if there is a relationship between the knowledge that women have on possible side effects of control pills before going to a doctor and the specific information they receive from their physicians.



3. Revise the questionnaire to include the nurse's action as part of the client's educational program.
4. Provide further research on the subject of whether age, educational level, and the experience in using contraceptive methods may affect the level of knowledge of the women receiving the pills.
5. Research the subject of the male participation concerning family planning in reference to the use of contraceptives.
6. Develop a correlation study to determine the best type of birth control method for each particular woman, how much knowledge they have on it and whether they combine more than one method.
7. Research whether the specific side effects are of a particular brand or of all the types of birth control pills.
8. Investigate how the religious beliefs influence the selection of contraceptive methods used by women.
9. Research how female nurses using birth control help their clients in acquiring knowledge on how to select the most appropriate contraceptive method.
10. Develop a standard protocol tool that will help in the assessment of the level of knowledge of women about

contraception in order to help them make the best possible selection.

11. The advanced practice nursing professional should be involved in developing educational campaigns for all women intending to use contraceptive pills. This would improve the quality of nursing care, help to promptly identify the possible side effects of birth control pills and avoid possible complications.
12. Refocus nursing studies on contraception. Some of the research studies focus on measuring the levels of knowledge about contraception; nevertheless, they should focus them on education about possible side effects and how to deal with them.
13. Educate the nurses on how to properly educate women about birth control, especially the use of birth control pills and their possible side effects.
14. The nurse practitioner should educate young females on sexuality and the proper use of contraception on those already sexually active to prevent unwanted teenage pregnancies.
15. Re-educate nursing professors in updated contraceptive methods, who will in turn educate their nursing students with updated and current contraception information.

16. Advanced professional practice nurses should promote family planning in women in their reproductive stage. They should encourage women to visit family planning centers for counseling.
17. Assess how much do nurses know about contraceptive methods, especially the use of birth control pills and their possible side effects and based on the results develop workshops aimed at increasing knowledge levels.

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APPENDIX A

Perception of Mentoring  
(Questionnaire)



Ana G. Méndez University System  
Institutional Review Board (IRB)

Protocol No. 01-450-14  
Approval Date September 16, 2014  
Expiration Date September 15, 2015



Ana G. Méndez University System  
Metropolitan University  
School of Health Sciences  
Graduate Program of Nursing

### Information about Being in a Research Study Informational Letter

Secondary Effects Due To Long Term Use Of Birth Control Pill and Level Of Medical  
Education Received By Prior To Its Use

#### Description of the Study and Your Part in It

Giovanna Echevarria Colon along with Dra. Fruge is inviting you to take part in a research study. Giovanna Echevarria Colon is the student performing the research. The purpose of this study is to describe the possible side effects associated with the use of birth control pills and to identify the level of medical education that was provided to women by their gynecologist prior to being prescribed the birth control pill. While many will assert that the use of hormonal birth control pills is safe, it is important to understand what the risks and side effects of these methods are, as each birth control pills carries its own risk factors. In addition, the individuals who may be at greater risk of experiencing complications vary depending on their medical history as well as the product being used.

This questionnaire will be distributed in order to gather information regarding the side effects of oral contraceptive as well as, medical history and demographic information. Through your participation, the study will be able to make possible recommendations that will highlight the functions of a normal reproductive system. The

following questions that you will read below pertain to your perception on the use of birth control pills. Kindly circle the letter and/or all that may apply of your choice in answering this questionnaire. Please answer the questions as honestly as possible.

It will take you about 15-25 minutes to fill out the questionnaire in this study.

### **Risks and Discomforts**

The only potential risk to participants is to feel slightly tired while completing the instrument.

### **Possible Benefits**

This investigation is intended to allow the reader to understand the impact on their decision in birth control pills. It will give them the opportunity to verify the sources used in birth control pills, in further reading and to extend their knowledge in secondary effect due to long term use of birth control pills, since participants have not received compensation, The researcher will be available at all times to answer questions or concerns about the study. In fact, the risk of participating in this research is minimal and commitment of filling the questionnaire.

### **Protection of Privacy and Confidentiality**

We will do everything we can to protect your privacy and confidentiality. We will not tell anybody outside of the research team that you were in this study or what information we collected about you in particular. This research report will follow all ethical, legal and responsible guidelines and will support and be part of an ethical and responsible for the investigation. The primary investigator has taken the IRB and HIPAA

Ana G. Mendez University System  
Institutional Review Board (IRB)



Protocol No. 01-450-14  
Approval Date September 16, 2014  
Expiration Date September 19, 2015

certifications related to the federal laws of confidentiality and protection of human rights. To ensure the protection of the subjects, there will be a form that they have read with the principles of confidentiality and protection of identity. The questionnaire will be concealed in a locked place for five years.

**Choosing to be in the Study/Research**

You do not have to be in this study. You may choose not to take part and you may choose to stop taking part at any time. You will not be punished in any way if you decide not to be in the study or to stop taking part in the study.

**Contact Information**

If you have any questions or concerns about this study or if any problems arise, please contact Giovanna Echevarria Colon at University Metropolitan of Bayamon at 787-288-1100.

If you have any questions or concerns about your rights in this research study, please contact the AGMUS Office of Regulatory Compliance (ORC) at 787-751-3120 at [compliance@suagm.edu](mailto:compliance@suagm.edu).

A copy of this form will be given to you.



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Protocol No. 01-450-14  
Approval Date September 16, 2014  
Expiration Date September 15, 2015



Ana G. Méndez University System  
Institutional Review Board (IRB)

Protocol No. 01-450-14  
Approval Date September 16, 2014  
Expiration Date September 15, 2015



Ana G. Méndez University System  
Metropolitan University  
School of Health Sciences  
Graduate Program of Nursing

### Información sobre estar en un Estudio de Investigación Carta Informativa

Efectos secundarios debido a uso prolongado de la pildora anticonceptiva y el nivel de educación médica recibidos antes de su uso

#### Descripción del estudio y su participación en el mismo

Giovanna Echevarría Colón junto con la Dra. Fruge le invita a participar en un estudio de investigación. Giovanna Echevarría Colón es la estudiante que realiza la investigación. El propósito de este estudio es describir los posibles efectos secundarios asociados con el uso de píldoras anticonceptivas y para identificar el nivel de educación médica que fue proporcionada a la mujer por su ginecólogo antes de ser recetada la píldora anticonceptiva. Mientras muchos afirmarían que el uso de anticonceptivos hormonales es seguro, es importante entender cuáles son los riesgos y efectos secundarios de estos métodos, así como que cada pastillas anticonceptivas tiene sus propios factores de riesgo. Además, las mujeres que pueden estar en mayor riesgo de experimentar complicaciones varían dependiendo de su historial médico, así como del producto que está utilizando. Este cuestionario se distribuirá con el fin de recopilar información sobre los efectos secundarios del anticonceptivo oral, además del historial médico e información demográfica. A través de su participación, el estudio será capaz de hacer posibles recomendaciones que pondrán de relieve las funciones de un sistema de reproducción normal. Las siguientes preguntas que usted leerá a continuación corresponden a su

percepción sobre el uso de píldoras anticonceptivas. Por favor circule la letra o todas las que puedan aplicar a su elección al responder a este cuestionario. Por favor, conteste las preguntas lo más honestamente posible. Tardará unos 15-25 minutos para completar el cuestionario de este estudio.

**Riesgo e Incomodidad**

El único riesgo o molestia potencial a los participantes de este estudio es sentirse un poco cansado mientras completa el cuestionario.

**Posibles Beneficios**

Esta investigación pretende permitir al lector comprender el impacto en su decisión de usar las píldoras anticonceptivas. Les dará la oportunidad de verificar las fuentes utilizadas en las píldoras anticonceptivas en otras lecturas y ampliar sus conocimientos en el efecto secundario a largo plazo debido al uso de pastillas anticonceptivas. Debido a que los participantes no han recibido indemnización, el investigador estará disponible en todo momento para contestar preguntas o preocupaciones acerca del estudio. De hecho, el riesgo de participar en esta investigación y completar este cuestionario es mínimo.

**Protección de Privacidad y Confidencialidad**

Haremos todo lo posible para proteger su privacidad y confidencialidad. No le diremos a nadie fuera del equipo de investigación que usted participó en este estudio o qué información recopilamos sobre usted en particular. Este reporte de investigación sigue todas las directrices éticas, jurídicas y guías responsables y será parte de una investigación ética y responsable. El investigador principal ha tomado las certificaciones de IRB y HIPAA relacionadas con las leyes federales de confidencialidad y protección de los derechos humanos. Para asegurar la protección de los sujetos, habrá un formulario



Ana G. Mendez University System  
Institutional Review Board (IRB)  
Protocol No. 01-450-14  
Approval Date September 16, 2014  
Expiration Date September 15, 2015

que han leído con los principios de confidencialidad y protección de la identidad. El cuestionario se mantendrá en un lugar cerrado con llave durante cinco años.

**Elegir ser parte de este estudio**

Usted puede elegir no ser parte de este estudio de investigación. Usted puede decidir no tomar parte y usted puede optar por dejar de tomar parte en cualquier momento. No será sancionado de alguna manera si usted decide no participar en el estudio o que deje de tomar parte del mismo.

**Contacto para información**

Si usted tiene alguna pregunta o inquietud acerca de este estudio o si surge algún problema, póngase en contacto con Giovanna Echevarría Colón en la Universidad Metropolitana de Bayamón al 787-288-1100. Si usted tiene alguna pregunta o inquietud acerca de sus derechos en este estudio de investigación, póngase en contacto con la oficina del SUAGM de cumplimiento regulatorio (ORC) al 787-751-3120 o en [compliance@suagm.edu](mailto:compliance@suagm.edu). Una copia de este formulario le será entregado.



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## Birth Control Pill

### Secondary Effects Due To Long Term Use Of Birth Control Pill and Level Of Medical Education Received By Prior To Its Use

Author: Giovanna Echevarria Colon Date: August 2014

This questionnaire will be distributed in order to gather information regarding the side effects of oral contraceptive as well as, medical history and education received by the use of birth control pills. Through your participation, the study will be able to make possible recommendations that will highlight the functions of a normal reproductive system. The following questions that you will read below pertain to your perception on the use of birth control pills. Kindly circle the number of your choice in answering this questionnaire. Please answer the questions as honestly as possible. Thank you very much for your cooperation.

#### Part I. Profile of the Respondent

Direction: Kindly fill the following with the correct details about yourself. Please don't leave any item unanswered.



## Birth Control Pill

## 1. Age

What is your age? \_\_\_\_\_

## 2. Medical History

Have you ever had the following?

- A. Migraine
- B. Headaches
- C. Breast disease/Discharge
- D. Stroke
- E. Epilepsy
- F. Depression
- G. Thyroid problems
- H. Liver disease
- I. Hepatitis\_\_Heart disease/murmur
- J. High blood pressure
- K. Blood clots
- L. Bleeding disorders
- M. Cancer
- N. High cholesterol
- O. Kidney problems
- P. Loss of monthly period
- Q. Anxiety

Other medical History? \_\_\_\_\_

## Birth Control Pill

## 3. Education completed

What is the highest grade or year of school you completed?

- A. Never attended school or only attended kindergarten
- B. Grades 1 through 8 (Elementary)
- C. Grades 9 through 11 (Some high school)
- D. Grade 12 or GED (High school graduate)
- E. College 1 year to 3 years (Some college or technical school)
- F. College 4 years (College graduate)
- G. Graduate School (Advance Degree)

## 4. Smoker?

- A. Yes
- B. No

5. Have you ever been pregnant? A. Yes \_\_\_ B. No \_\_\_

6. Do you plan to get pregnant within the next 12 months?

- A. Yes
- B. No

## Birth Control Pill

7. Do you plan to get pregnant within the next five years?

A. Yes

B. No

8. How many live births have you had? \_\_\_\_\_

9. How long did you try to conceive?

A. 1-3 months

B. 4-6 months

C. 7-9 months

D. 10-12 months

E. longer than 1 year

10. How many abortions or miscarriages have you had? \_\_\_\_\_

Part II. Usability and Reliability of Birth control pills Questionnaire

11. What is the pill brands name?

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## Birth Control Pill

12. Have you ever had a problem with a birth control method? Yes \_\_\_\_\_ No \_\_\_\_\_

Explain \_\_\_\_\_  
\_\_\_\_\_

13. How many times have you stopped using oral contraceptive?

- A. 1 time
- B. 2 times
- C. 3 times
- D. 4 or more times

14. How many different oral contraceptive have you tried?

- A. 1 different oral contraceptive
- B. 2 different oral contraceptive
- C. 3 different oral contraceptive
- D. 4 or more different oral contraceptives

15. Did the Doctor give you a full physical examination (blood pressure, weight, etc.) before prescribing the pill?  
Yes \_\_\_\_\_ No \_\_\_\_\_

## Birth Control Pill

16. Did the doctor ever ask about your family medical history (Diabetes, heart condition, etc.) before prescribing the pill? Yes \_\_\_\_\_ No \_\_\_\_\_

17. Did the doctor warn you of any possible effects which might result from the pill before he prescribed for you? Yes \_\_\_\_\_ No \_\_\_\_\_

18. How long have you been of the birth control pill?

- A. 1-3 months
- B. 3-6 months
- C. 6-9 months
- D. 9-12 months
- E. More than 1 year

## Birth Control Pill

19. Would you say you know a little, you know a lot or you know everything about use of birth control pills?

- A. Know nothing
- B. Know a lot
- C. Know everything
- D. Don't know

20. Have you had any side effects from the pill?

Yes \_\_\_\_\_ No \_\_\_\_\_

If Yes, Please check any of the following which you have had.

- |                          |                             |
|--------------------------|-----------------------------|
| _____ Headache           | _____ Skin Discoloration    |
| _____ Nauseas            | _____ Enlarged Uterus       |
| _____ Skin Blemish       | _____ Cancer of Cervix      |
| _____ Blood Clots        | _____ Cancer of Breast      |
| _____ Infertility        | _____ Hair loss             |
| _____ Stroke             | _____ Depression            |
| _____ Weight gain        | _____ Irritability          |
| _____ Epilepsy           | _____ Changes in Metabolism |
| _____ Swollen Breast     | _____ High Blood Pressure   |
| _____ Changes in Thyroid | _____ Other                 |

## Birth Control Pill

21. Before starting the Birth Control Pill were you aware of these side effects?

22. How did you become aware of these side effects?

- A. Doctor
- B. Internet
- C. Pharmacist
- D. Label of the pill

Efectos secundarios debido al uso extendido de la pastilla de control de natalidad y el nivel de educación médica recibida antes de su uso

Autor: Giovanna Echevarría Colón

Este cuestionario es distribuido con el propósito de obtener información relacionada a los efectos secundarios del contraceptivo oral, así como historial médico e información demográfica. A través de tu participación, el estudio podrá hacer recomendaciones que exalten la importancia de las funciones de un sistema reproductivo normal.

Las siguientes preguntas establecerán tu percepción relacionada con el uso de las pastillas de control de natalidad. Haga un círculo o una marca en la contestación que usted seleccione adecuada a la pregunta correspondiente. Por favor conteste las preguntas con toda honestidad. Gracias por su participación.

#### Parte I. Perfil del participante

Instrucciones: Complete la siguiente información sobre usted en su totalidad. Por favor no deje ningún tópico sin contestar.



Pastillas Control de Natalidad

1. Edad

¿Cuál es su edad? \_\_\_\_\_

2. Historial médico

¿Ha sufrido usted de las siguientes condiciones?

- A. Migraña \_\_\_\_\_
- B. Dolor de Cabeza \_\_\_\_\_
- C. Condiciones de seno \_\_\_\_\_
- D. Infartos \_\_\_\_\_
- E. Epilepsia \_\_\_\_\_
- F. Depresión \_\_\_\_\_
- G. Problema de tiroides \_\_\_\_\_
- H. Condiciones del hígado \_\_\_\_\_
- I. Hepatitis\_Condiciones del corazón \_\_\_\_\_
- J. Alta presión \_\_\_\_\_
- K. Coágulos de sangre \_\_\_\_\_
- L. Sangrados \_\_\_\_\_
- M. Cáncer \_\_\_\_\_
- N. Colesterol alto \_\_\_\_\_
- O. Condiciones de los riñones \_\_\_\_\_
- P. Menstruaciones irregulares \_\_\_\_\_
- Q. Ansiedad \_\_\_\_\_

R. Otras condiciones de salud, explique

---

3. Educación

Grado académico más alto obtenido

A. Nunca asistí a la escuela o solo asistí a pre-escolar

\_\_\_\_\_

B. De primer a octavo grado (elemental/intermedia) \_\_\_\_\_

C. De noveno a undécimo grado (superior) \_\_\_\_\_

D. Duodécimo grado o graduado de escuela superior \_\_\_\_\_

E. Post-secundario: de 1 a 3 años (universidad o colegio técnico vocacional) \_\_\_\_\_

F. Cuarto año de universidad o bachillerato \_\_\_\_\_

G. Escuela graduada (maestría y/o doctorado) \_\_\_\_\_

4. Fumador

Sí \_\_\_\_\_

No \_\_\_\_\_

5. ¿Ha estado usted embarazada? Sí \_\_\_\_\_ No \_\_\_\_\_

## Pastillas Control de Natalidad

6. ¿Planifica usted quedar embarazada dentro de los próximos 12 meses? Sí \_\_\_\_\_ No \_\_\_\_\_

7. ¿Planifica usted quedar embarazada dentro de los próximos 5 meses? Sí \_\_\_\_\_ No \_\_\_\_\_

8. ¿Cuántos bebés ha parido usted? \_\_\_\_\_

9. ¿Cuánto tiempo tuvo que esperar antes de quedar embarazada?

A. 1-3 meses

B. 4-6 meses

C. 7-9 meses

D. 10-12 meses

E. Más de un año

10. ¿Cuántos abortos o pérdidas de embarazo ha tenido?

Pastillas Control de Natalidad

Parte II - Uso y confiabilidad de la pastilla de control de natalidad

11. ¿Cuál es la marca de las pastillas de control de natalidad usadas por usted?

\_\_\_\_\_

12 ¿Ha tenido algún problema con algún método de control de natalidad?

Si \_\_\_\_\_

Explique \_\_\_\_\_

No \_\_\_\_\_

13. ¿Cuántas veces usted ha dejado de usar su contraceptivo oral?

A. 1 vez

B. 2 veces

C. 3 veces

D. 4 o más veces

## Pastillas Control de Natalidad

15. ¿Cuántos contraceptivos orales diferentes ha utilizado?

- A. Uno
- B. Dos
- C. Tres
- D. Cuatro o más

16. ¿Realizó su médico un examen físico completo (presión sanguínea, peso, etc.) antes de recetarle la pastilla contraceptiva?

Sí \_\_\_\_\_ No \_\_\_\_\_

17. ¿Preguntó su médico acerca de su historial médico familiar (diabetes, condiciones del corazón, etc.) antes de recetarle la pastilla contraceptiva?      Sí \_\_\_\_\_ No \_\_\_\_\_

18. ¿Le advirtió su médico sobre los posibles efectos secundarios que puede producir la pastilla contraceptiva antes de recetársela?      Sí \_\_\_\_\_ No \_\_\_\_\_

19. ¿Cuánto tiempo hace que usted dejó de utilizar la pastilla contraceptiva?

- A. 1-3 meses
- B. 3-6 meses

## Pastillas Control de Natalidad

C. 6-9 meses

D. 9-12 meses

E. Más de un año

20. ¿Podría decir usted que sabe poco, sabe mucho o sabe todo sobre el uso de las pastillas de control de natalidad?

A. Sé poco

B. Sé mucho

C. Sé todo

D. No sé nada

21. ¿Ha tenido usted algún efecto secundario por el uso de la pastilla contraceptiva?

Sí \_\_\_\_\_

Explique:

No \_\_\_\_\_

## Pastillas Control de Natalidad

Si la contestación es SI, por favor marque una o varias de las siguientes:

- |   |   |
|---|---|
| <input type="checkbox"/> Dolor de cabeza        | <input type="checkbox"/> Piel descolorada         |
| <input type="checkbox"/> Nauseas                | <input type="checkbox"/> Útero engrandecido       |
| <input type="checkbox"/> Marcas en la piel      | <input type="checkbox"/> Cáncer cervical          |
| <input type="checkbox"/> Coágulos sanguíneos    | <input type="checkbox"/> Cáncer del seno          |
| <input type="checkbox"/> Infertilidad           | <input type="checkbox"/> Pérdida de cabello       |
| <input type="checkbox"/> Derrames/Infartos      | <input type="checkbox"/> Depresión                |
| <input type="checkbox"/> Aumento de peso        | <input type="checkbox"/> Irritabilidad            |
| <input type="checkbox"/> Epilepsia              | <input type="checkbox"/> Cambio en el metabolismo |
| <input type="checkbox"/> Inflamación de senos   |   |
| <input type="checkbox"/> Alta presión sanguínea |   |
| <input type="checkbox"/> Cambios en la tiroides |   |
| <input type="checkbox"/> Otros _____            |   |

22. Antes de comenzar la píldora anticonceptiva era usted consciente de estos efectos secundarios?

Pastillas Control de Natalidad

23. ¿Cómo se enteró usted de estos efectos secundarios?

A. Médico

B. Internet

C. Farmacéutico

D. Editorial de la píldora



APPENDIX B  
NIH CERTIFICATION

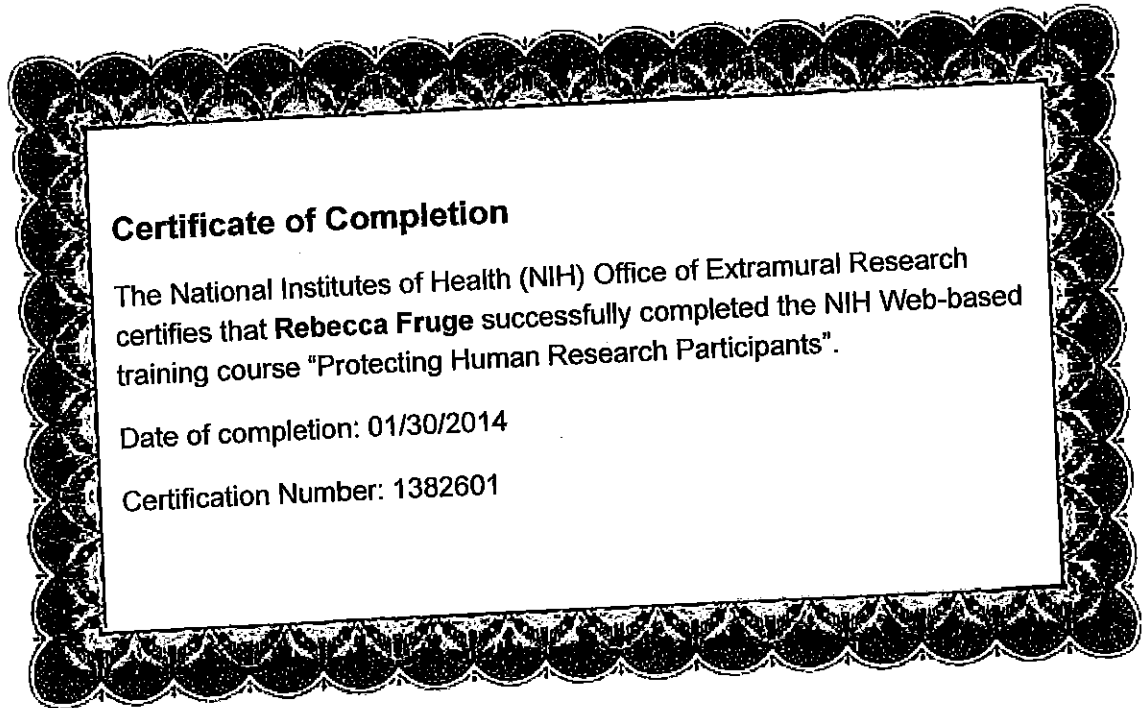
## **Certificate of Completion**

The National Institutes of Health (NIH) Office of Extramural Research certifies that **Giovanna Echevarria** successfully completed the NIH Web-based training course "Protecting Human Research Participants".

Date of completion: 02/05/2014

Certification Number: 1392038

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Birth Control Pill

89

APPENDIX C

HIPPA CERTIFICATION

# Certificate of Completion

The UCSD Human Research Protections Program certifies  
that

**Giovanna Echevarria**

has completed the computer-based training course:

*Research Aspects of HIPAA*

UCSD HRPP HIPAA ID: H27100

Date of Certification: 02/05/2014

Expires: 02/05/2016

## Certificate of Completion

The UCSD Human Research Protections Program certifies that  
**Rebecca Fruge**  
has completed the computer-based training course:

*Research Aspects of HIPAA*

UCSD HRPP HIPAA ID: H39968

Date of Certification: 01/30/2014  
Expires: 01/30/2016

## CITI Programa de Educación en Ética de la Investigación

**SBR Course in the Responsible Conduct of Research Reporte de curriculum  
completado  
Impreso en 5/1/2011**

**Cursante:** Giovanna Echevarria (username: Giovanna11)

**Institución:** Public Access

**Información de** Departamento: Universidad Metropolitana de Bayamon

**Contacto** Email: vanna729@hotmail.com

**Social and Behavioral Sciences RCR Course For The Unaffiliated Learner:**

### Etapa 1. Basic Course Paso en 05/01/11 (Ref # 5960998)

<b>Modulos requeridos</b>	<b>Fecha completados</b>	<b>Puntaje</b>
The CITI Course in the Responsible Conduct of Research	05/01/11	Sin preguntas
Introduction to the Responsible Conduct of Research	05/01/11	Sin preguntas
<b>Modulos electivos</b>	<b>Fecha completados</b>	<b>Puntaje</b>
Research Misconduct 2-1495	05/01/11	4/5 (80%)
Data Acquisition, Management, Sharing and Ownership 2-1523	05/01/11	3/5 (60%)
Publication Practices and Responsible Authorship 2-1518	05/01/11	5/5 (100%)
Peer Review 2-1521	05/01/11	5/5 (100%)
Mentor and Trainee Responsibilities 01234 1250	05/01/11	5/6 (83%)
Using Animal Subjects in Research 13301	05/01/11	7/8 (88%)
Human Subjects 13566	05/01/11	11/11 (100%)
Conflicts of Interest and Commitment 2-1462	05/01/11	5/6 (83%)
Collaborative Research 2-1484	05/01/11	5/6 (83%)

**Para que este reporte de finalización sea válido, el cursante mencionado arriba deberá afiliado con una institución participante de CITI . Información falsificada o uso no autorizado del curso CITI no es ético, y puede ser considerado mala conducta científica por su institución.**

Paul Braunschweiger Ph.D.  
Profesor, Universidad de Miami  
Director de la Oficina de Educacion en Investigacion  
Coordinador del curso CITI

Retornar

## CITI Programa de Educación en Ética de la Investigación

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**Cursante:** Giovanna Echevarria (username: Giovanna11)

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