

WOMEN'S PERCEPTIONS OF ADVERSE EFFECTS AND DRUG INTERACTIONS ASSOCIATED WITH HORMONAL CONTRACEPTIVES

PERCEPCIÓN DE LAS MUJERES SOBRE LOS EFECTOS ADVERSOS Y LAS INTERACCIONES FARMACOLÓGICAS ASOCIADAS A LOS ANTICONCEPTIVOS HORMONALES

REAÇÕES ADVERSAS E INTERAÇÕES MEDICAMENTOSAS DOS ANTICONCEPCIONAIS HORMONAIS: PERCEPÇÃO DE MULHERES

¹Milena de Oliveira
²Silvana Cruz da Silva
³Adriana Dall'Asta Pereira
⁴Andressa da Silveira
⁵Lairany Monteiro dos Santos
⁶Júlia Oliveira Silveira
⁷Josi Barreto Nunes
⁸Keity Laís Siepmann Soccol

¹Universidade Franciscana, Santa Maria, RS, Brazil. ORCID: <https://orcid.org/0000-0001-8242-5931>

²Universidade Franciscana, Santa Maria, RS, Brazil. ORCID: <https://orcid.org/0000-0002-4563-3704>

³Universidade Franciscana, Santa Maria, RS, Brazil. ORCID: <https://orcid.org/0000-0003-2698-2711>

⁴Universidade Federal de Santa Maria, Palmeira das Missões, RS, Brazil. ORCID: <https://orcid.org/0000-0002-4182-4714>

⁵Universidade Federal de Santa Maria, Palmeira das Missões, RS, Brazil. ORCID: <https://orcid.org/0000-0001-8099-8381>

⁶Universidade Franciscana, Santa Maria, RS, Brazil. ORCID: <https://orcid.org/0000-0001-5947-8875>

⁷Universidade Franciscana, Santa Maria, RS, Brazil. ORCID: <https://orcid.org/0000-0001-9364-841X>

⁸Universidade Franciscana, Santa Maria, RS, Brazil. ORCID: <https://orcid.org/0000-0002-7071-3124>

Corresponding Author

Keity Laís Siepmann Soccol
 Rua Silva Jardim nº 1175, bairro Nossa Senhora do Rosário, Santa Maria-RS, Brazil. CEP: 97010-491
 contact: +55 (55) 3025-1202. E-mail: keitylais@hotmail.com

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ABSTRACT

Objective: To analyze the perception of women followed up in primary health care about the adverse reactions and drug interactions of hormonal contraceptives. **Methods:** This is a qualitative, descriptive and exploratory study carried out in a Family Health Strategy in a municipality in the state of Rio Grande do Sul, in which 17 women aged between 18 and 43 took part. Data was collected through semi-structured interviews between January and March 2022, and the data was analyzed using thematic content analysis. **Results:** Women have limited knowledge about the possible adverse effects of hormonal contraceptives. When they experience adverse effects, they change their contraceptive method without taking the necessary precautions to avoid an unplanned pregnancy. They are also unaware of drug interactions. **Final considerations:** it is necessary for women to receive more detailed information about adverse effects and drug interactions and for ongoing health education actions to be developed to encourage professionals to address this issue in their day-to-day care of women.

Keywords: Nursing; Women; Contraceptives, Oral, Hormonal.

RESUMEN

Objetivo: analizar la percepción de las mujeres atendidas en Atención Primaria sobre las reacciones adversas e interacciones medicamentosas de los anticonceptivos hormonales. **Método:** Se trata de un estudio cualitativo, descriptivo y exploratorio, realizado en una Estrategia de Salud de la Familia en un municipio del estado de Rio Grande do Sul, en el que participaron 17 mujeres con edades entre 18 y 43 años. Los datos fueron recolectados por medio de entrevistas semiestructuradas entre enero y marzo de 2022 y analizados de acuerdo con el análisis temático de contenido. **Resultados:** Las mujeres tienen un conocimiento limitado sobre los posibles efectos adversos de los anticonceptivos hormonales, y cuando experimentan algún efecto adverso cambian a otro método anticonceptivo sin tomar las precauciones necesarias para evitar quedarse embarazadas durante el cambio, lo que da lugar a embarazos no planificados. Tampoco son conscientes de las interacciones entre medicamentos. **Consideraciones finales:** es necesario que las mujeres reciban más información sobre los efectos adversos y las interacciones de los medicamentos y que se desarrolle una educación sanitaria continuada para animar a los profesionales a abordar esta cuestión en su atención diaria a las mujeres.

Palabras clave: Enfermería; Mujeres; Anticonceptivos Hormonales Orales.

RESUMO

Objetivo: analisar a percepção das mulheres acompanhadas no âmbito dos cuidados de saúde primários sobre as reações adversas e interações medicamentosas dos contraceptivos hormonais. **Métodos:** Trata-se de um estudo qualitativo, descritivo e exploratório realizado numa Estratégia de Saúde da Família, num município do estado do Rio Grande do Sul, no qual participaram 17 mulheres com idades entre os 18 e os 43 anos. A recolha de dados ocorreu por meio de entrevistas semiestructuradas entre janeiro e março de 2022, e os dados foram analisados segundo a análise de conteúdo temática. **Resultados:** as mulheres têm conhecimentos limitados sobre os possíveis efeitos adversos dos anticoncepcionais hormonais. Quando manifestam algum efeito adverso, trocam o método contraceptivo sem ter as devidas precauções para evitar uma gravidez não planeada. Além disso, desconhecem as interações medicamentosas. **Considerações finais:** é necessário que as mulheres recebam informações mais detalhadas sobre os efeitos adversos e interações medicamentosas e que sejam desenvolvidas ações de educação permanente em saúde que estimulem os profissionais a abordarem esta temática no seu dia a dia de cuidados às mulheres.

Palavras-chave: Enfermagem; Mulheres; Anticoncepcionais Oraís Hormonais.



INTRODUCTION

Contraception involves the use of methods that prevent unplanned pregnancies. Hormonal contraceptives are considered reversible contraceptive methods, which from the 1960s, their use had a gradual growth, enabling family planning. However, the first drug formulations had high hormone doses, which resulted in adverse effects⁽¹⁻²⁾.

Currently, there are different types of contraceptives that can be used from the needs presented by each woman. Among the reversible contraceptive methods, we highlight the female and male condoms, the birth control pill, the mini pill, the monthly and quarterly injectable drugs, the intrauterine device (IUD), the emergency birth control pill, the diaphragm and the measuring rings⁽¹⁻³⁾.

In Brazil, due to the easy access and practicality of use, hormonal contraceptives are one of the preferred methods. The use of oral hormonal contraceptives presents high safety in relation to other methods, with efficacy that can reach up to 99.9% when used continuously and properly. In addition to preventing unplanned pregnancy, it can contribute to the reduction of acne, episodes of menstrual cramps, incidence of anemia, regularization of the menstrual cycle, among other benefits⁽¹⁻⁵⁾.

Thus, in addition to contraceptive issues, hormonal contraceptives are also used in the treatment of hormonal imbalances that trigger acnes, dysregulation in the menstrual cycle, strong menstrual cramps and for the treatment of

women with polycystic ovaries⁽²⁾. In this sense, it is essential that women are guided during the medical evaluation in order to ensure therapeutic functionality according to the need of each one⁽⁶⁾.

Despite the facilities for women to access contraceptives, there is still a gap related to information on proper and continuous use, presence of side effects and drug interactions. Thus, it is observed that in addition to making contraceptive methods available, it is important to guide women on the safe and correct way of using hormonal contraceptives^(1,4).

The use of contraceptives without prescription and guidance may hinder adherence to use, as well as cause women's withdrawal due to incorrect use or adverse effects². When associated with other drugs, it is possible to alter the effectiveness of contraceptives, which can result in synergism, that is, the potentialization of the effect of a drug, or may result in antagonism, when the effect is blocked⁽⁴⁾.

Women adapt specifically to the contraceptive method, and some adverse reactions are often described that are unique to each of them^(1,4). In this sense, the need to use hormonal contraceptives is reinforced after the evaluation of the woman's clinical and family history, through consultation with health professionals⁽⁷⁾. The use of contraceptives without proper professional follow-up can compromise the user's health and lead to unplanned pregnancies. Given the above, this study aims to analyze the perception of women



assisted in Primary Health Care about adverse reactions and drug interactions of hormonal contraceptives.

METHODS

This is a qualitative, descriptive and exploratory study carried out in a Family Health Strategy (FHS), located in a municipality of the state of Rio Grande do Sul.

The inclusion criteria were adult women between 18 and 49 years of age, who used oral or injectable hormonal contraceptives and were being assisted in the health service where the research was carried out. The exclusion criteria were those who had some difficulty in communication, speech deficit, or were pregnant.

The women were invited to participate in the research while waiting for a doctor's appointment or with a nurse in the FHS waiting room. Some interviews were scheduled for other days and times, according to the availability of participants. The study was composed of 17 women, who were interviewed in a room at the service. Data collection took place between the months of January and March 2022.

The study participants answered a structured script consisting of three open questions: Have you ever had any difficulty/when using contraception? Do you know what adverse effects contraceptive can have? What do you know about drug interactions?

The interviews were recorded through digital media, and were later transcribed in full

in the Microsoft Word® Program. Two pilot interviews were conducted in order to improve the technique of data collection, which were not used in this study. After, the transcripts were reviewed along with the audio by the study's teacher, who has a PhD degree and also has experience in qualitative research. The interviews lasted between 17 and 35 minutes.

To guarantee the participants' anonymity, the interviews were coded with the letter M referring to the word woman and a cardinal number related to the chronological order of conducting the interviews. The inclusion of new participants was closed when the data saturation criterion was reached, that is, when the information began to be repeated⁽⁸⁾.

The interviews were transcribed and the data were submitted to thematic analysis⁽⁸⁾. In order to apply this technique, some steps were followed. In the pre-analysis stage, the interviews were transcribed in the Microsoft Word program, in which it was possible to highlight the words, terms and/or expressions significant in the material exploration stage. After, the units of meaning and categories were identified. And, at the end, there was the treatment of the results obtained and interpretation from scholars who discuss the area of women's health.

The research was approved by the Research Ethics Committee on December 7, 2021 under the Certificate of Presentation for Ethical Appreciation (CAAE) 53708621.3.0000.5306, opinion number



5.151.514. Resolution n. 466/12 of the National Health Council of the Ministry of Health followed. It should be noted that all women signed the Informed Consent Form in two copies.

For the elaboration and writing of this study, the criteria established in the Consolidated Criteria for Reporting Qualitative Studies (COREQ) were followed, which consists of a checklist of 32 items for interviews.

RESULTS

The participants were 17 women, aged between 18 and 43 years, of which one had technical course, seven had completed high school, three incomplete high school, one had completed elementary school, five women had incomplete elementary school. Regarding marital status, five were single, three married and nine in stable union. Regarding the type of hormonal contraceptive, the use of oral hormonal contraceptives for women

The thematic analysis originated three categories: perceptions and experiences about adverse effects of hormonal contraceptives, adverse effects of hormonal contraception and unplanned pregnancies, and knowledge about drug interactions of hormonal contraceptives.

Perceptions and experiences regarding adverse effects of hormonal contraceptives

The participants' statements reveal about the adverse effects of hormonal contraceptives,

with emphasis on physical changes such as increased body weight and water retention.

“The high weight gain. I haven't had any reactions, it's very easy! I always use it. It's never given me any reactions, except for the fat. Because I know it makes you gain weight!” (W4).

“The only thing I know about it is fluid retention. I think so!” (W12).

“Some say it makes you gain weight.” (W14).

“It makes you gain weight and retain fluid. I know, because I've been through it. I didn't like gaining weight with the medicine.” (W15).

Body weight gain stands out among the reported adverse effects. Women verbalize about their perception of the change in body image, and that this perceived change has a negative impact on body self-image. In addition, for them the use of contraceptives is related to the emergence of diseases of the circulatory system, such as thrombosis and varicose veins:

“They say it can cause thrombosis, but I don't know if it happens to all women.” (W2).

“I know it's thrombosis and some other diseases that I can't remember, because it benefits on one side and harms on the other.” (W13).

“Varicose veins! I had varicose veins from using birth control and my legs always hurt a lot” (W17).



The findings reveal the importance of informing women about the risk factors associated with the use of contraceptives, as well as those related to their lifestyle that may or may not be aggravated by the use. Moreover, inform the situations in which the use is not indicated in order to minimize the possible risks and discomfort.

Furthermore, some women reported having gastric discomfort, headache and loss of libido.

“Sometimes the contraceptive pill makes me feel bad. It makes me feel sick, I feel like vomiting, I get a lot of headaches. And even so, I keep taking it.” (W15).

“Headache, migraine, leg pain, a lot of leg pain and loss of libido too. But I can handle it, I can't stop taking it for fear of getting pregnant.” (W17).

“The injection gives me a lot of pain in my knees, in my body, headaches.” (W19).

Although women manifest several adverse effects they do not stop the use of contraception for fear and fear of an unplanned pregnancy. These effects interfere in the daily life, quality of life and sexuality of women. Offering another hormonal contraceptive method is a possibility, since having to use a drug that can be replaced by another, with fewer adverse effects, may be a behavior to be considered by health professionals.

In addition, women also associate the use of hormonal contraceptives to the development of cancer:

“Actually, I had been taking injections for 9 years. When this cancer appeared in my uterus, the doctor said that the injections were doing me harm. He took them out and started giving me a pill. And so I think that's what gave me cancer.” (W6).

“Some people say that it's bad when you don't menstruate while using birth control and that it can cause uterine cancer. But I always did it even though I knew that. So we ask and depending on the doctor, he says it's all in my head and that people talk too much. So I haven't menstruated with the injection for 16 years.” (W14).

“Sometimes it's uterine cancer, breast cancer or something like that.” (W20)

In women's perception, the use of contraceptives may trigger the diagnosis of cancer. In addition to the need for clarification on the association of the use of hormonal contraceptives with different types of cancer, the need for health professionals to explain to women through a clear dialogue mediated by empathy about what can happen and myths related to the use of contraceptives.

One of the women reported that she had no knowledge about the adverse reactions. This denotes that when the medicine is prescribed by the doctor and administered by the nursing



professionals, they do not receive any information, which evidences a process in which there is no opening for the establishment of dialogue:

“I don’t know exactly. The doctor prescribed it and the nursing technician just applied it. I know it could cause me harm in the future, but I don’t know exactly how much harm it will cause. I have no knowledge of any of that.” (W18)

The statements of the women participating in the study indicate that they have little knowledge about adverse reactions, as well as the lack of information received by health professionals about possible adverse reactions. It is also evident that these reactions can interfere with their routine, sexuality, quality of life and sexual rights.

Adverse effects of hormonal contraceptives and unplanned pregnancies

The women reported that they had unplanned pregnancies when they stopped using contraception. The reason for discontinuing use was due to adverse effects, which they could no longer live with:

“I started to have a lot of inflammation in my uterus and a lot of cramping and excessive bleeding, so I decided to stop taking the injection. I thought it was abnormal and that I would never get pregnant the way I was bleeding! And it was in that time that I got pregnant.” (W3)

Also, one of the women reports that even though she was using the contraceptive pill continuously, she became pregnant. This condition made her choose to change the contraceptive method:

“I think I took the pill for about three years, and then I got pregnant. And I didn’t want to get pregnant. Suddenly, I got pregnant out of nowhere! Then I went back to the injection because I felt safer. I don’t know how it happened because I always took the pill correctly.” (W6)

As reported above, the woman infers that she became pregnant even taking the pill daily. However, she does not remember if she used any medication that may have caused a drug interaction and consequently interfered with the effectiveness of the hormonal contraceptive.

The lack of availability of contraceptives distributed by the UHS and the difficulty of access contributed to women having unplanned pregnancies, according to the following testimonies:

“One time the health center didn’t have it and I bought it, but since we don’t understand much, I thought the one I bought was the same as the one at the health center and in the interval between changing pills I had my second child. Because I didn’t know that I had to take care of myself in the first few days, that’s when I got pregnant.” (W7)

“I had already stopped taking the pill because it made me feel bad, it made me feel sick,



gave me a headache, it was really bad. So I stopped taking it, which was when I got the IUD inserted, and then I had the IUD removed. But now I didn't have another chance to insert it and I continued taking the pill again. But it's against my health, I can't take it, it's bad for me. And then I got pregnant while using the pill, I don't even know how it happened.” (W11)

“Because I used to take the injection every 3 months. Then I started to gain weight and retain a lot of fluid, and I didn't feel well. So I switched to the pill, to a lower dose of hormones to see if I could feel better, and then I got pregnant.” (W15).

“I used to take it (injectable contraceptive) at the clinic. Then it was a commitment I had, I started working, it was harder to go to the clinic to take it. Then I got pregnant in between.” (W17).

The findings in this category praise the adverse reactions of hormonal contraceptives and that they interfere with the lives of these women, leading them to change the type of hormonal method. The change of method combined with the lack of information about the necessary care and use of condoms during the adaptation of the body to the new hormone, makes them have an unplanned pregnancy. Thus, the need for greater clarification and information for women is pointed out.

Knowledge about drug interactions of hormonal contraceptives

When asked about drug interactions that may interfere with the absorption of contraceptives, women report that the use of antibiotics reduces the effectiveness of the contraceptive:

“It's the antibiotic that reduces the effect. I don't know if there are any more. Cycle 21, I took antibiotics and then it took away the effect of the pill, and then I got pregnant. I have a 3-year-old boy.” (W3)

“Wow! This thing about interactions is curious, because I really don't know! I've never heard of this before.” (W4)

“The antibiotics. And I use antibiotics a lot, that's why I'm afraid. And another thing, since I have a urinary tract infection in my uterus, I'm always treating these infections with strong antibiotics. And then sometimes it seems like it loses the effect of the pill.” (W6)

“I know it's an antibiotic, it seems! I know more or less. I've never looked into the subject in depth.” (W7)

“They told me that it's antibiotics that reduce the effect. Alcohol consumption too, but thank God I don't drink any alcohol.” (W11)

“It's a specific antibiotic, I don't know, but I always take care of it when I'm sick and someone prescribes me one. I always try to research it on



the internet to get an idea.”
(W12)

“I was scared because I always took a lot of antibiotics. Some people say it reduces the effect. Right now I’m taking antibiotics, but I’m really scared.” (W16)

Although some women express that the antibiotic reduces the absorption of contraceptives, others report not being sure or knowing about it. This points to the importance of health education and strengthening the dialogue between health professionals and women in order to avoid unplanned pregnancies.

DISCUSSION

Contraception has become fundamental in recent times, given the high knowledge rate of women regarding family planning. When the woman is assisted in Primary Health Care (PHC) and is in search of a hormonal contraceptive method, it is ideal to provide an excellent service, because granting a quality consultation are essential for health actions seem effective in solving demands, of the problems and requests brought by these women⁽⁹⁾.

In order for the appropriate choice of method to occur for each woman, it requires an attentive and responsible assessment of these demands, as there are numerous options of contraceptive methods and ways of use. Therefore, the appropriate way to use it and use it with another drug is in the conduct of clinical consultation, in the elaboration of a sincere

conversation on the use of methods and the understanding of the patient.

Drug interaction is considered when the usual pharmacological effect of a drug is modified by other factors, such as the combined use of two drugs in a way that interferes with the safety and efficacy of the other. The main results are a decrease in the therapeutic effect, which may be lethal, leave sequelae or simply do not offer significant effects⁽¹⁰⁾.

Among the drug class most associated with drug interaction with contraceptives is the class of antibiotics (ATB). Most oral contraceptives (OC) are composed of estrogen and progesterone. This aggregation inhibits ovulation by eliminating the follicle-stimulating (FSH) and luteinizing (LH) hormones. For the expected effect to occur, it is necessary to maintain regular levels of estrogen and progesterone contained in plasma. Its interaction with other drugs, such as ATB, may alter levels and decrease their effectiveness⁽¹⁰⁾.

After use, estrogen and progesterone hormones are absorbed by the gastrointestinal tract (GI) into the bloodstream. Consequently, they are driven to the liver to undergo metabolism and 42-58% of estrogen become conjugated without contraceptive role. These metabolites are secreted in the bile, where part of them is hydrolyzed by enzymes from intestinal bacteria, causing the release of active estrogen. It can be reabsorbed and establishing the entero-hepatic cycle, increasing the level of estrogen in plasma and remaining in feces⁽¹¹⁾.



The ATB cause destruction of intestinal bacteria, responsible for hydralization of the estrogenic combination. As a consequence, the reactions responsible for the release of active estrogen do not occur, causing a decrease in its blood level⁽¹¹⁾.

In addition to its classical use, numerous contraceptives have various functions, such as: prevention of endometrial and ovarian cancer, premenstrual tension, and reduction of acne and excess oil, due to this, widely used by adolescents⁽¹²⁾.

The interviews show that the percentage of women who do not know the drug interaction is relevant, therefore, emphasizes the need for health education, especially with regard to the interaction between hormonal contraceptive and ATB, through qualified consultations, information specific to target groups, using different methodologies to reach those most in need. In addition, studies show the importance of using probiotics concomitantly with ATB (with a 2h difference between one and the other) to reduce dysbiosis with diarrhea caused by ATB and thus decrease the probability of reducing the effectiveness of contraceptive⁽¹³⁾.

Nevertheless, recent studies show that the interaction between ATB and oral contraceptive is rare and generally not clinically significant. Still, as a precaution, it is essential that the patient reports the use during the consultation. It is recommended that combined contraception be used during the use of ATB to reduce the risk of unwanted pregnancy.

Like any other drug, the use of hormonal contraceptives may be accompanied by a number of effects such as weight gain, changes in libido, thinning of hair, headache, nausea, vomiting, dizziness, breast pain and irritability⁽⁴⁾.

Menstrual patterns can be an indicator of general health and self-perception of well-being, the primary amenorrhea that is defined as the cessation of menstruation throughout life in which requires medical evaluation⁽¹⁴⁾.

Breast cancer, venous thrombosis and hypertension are risks of prolonged use of these contraceptives. Without the accompaniment of a health professional, use may compromise the user's health, and therefore the guidelines should consider her clinical history, contraindications and information on other alternative methods according to the woman's health condition⁽⁷⁾.

Already the intense menstrual bleeding is a loss of blood that impairs the quality of life of the woman, physical, emotional, social or material, is not associated with pregnancy or gynecological and systemic diseases, and the treatment used to reduce this blood loss includes prostaglandin synthetase inhibitors, antifibrinolytics, hormonal contraceptives and other hormones¹⁵.

A study carried out with a group of women evidenced that more than 70.0% who used contraceptives opted for the oral method; of these, 23.4% were of continuous use. About the injectable, 25.2% made use and most, 84.6% opted for quarterly. Some participants stated that they were aware of the effects of contraception



and performed care practices such as stopping contraceptive use, smoking cessation and healthy eating habits⁽¹⁶⁾.

Another study conducted with a group of women, on an unplanned pregnancy, showed that half of them were vulnerable to having an unintended pregnancy (48.3%). In the 25 to 34 years age range, they had more chances compared to women aged 18 to 24 years, and the same was observed in relation to women aged 35 years or older. A significant proportion of women were vulnerable to experiencing an unintended pregnancy, whereas the aspects regarding the experience of an unintended pregnancy was age, not being in a stable union and not having planned the last pregnancy⁽¹⁷⁾.

The hormonal contraceptive is prescribed for adolescents with indication for prevention of pregnancy, acne, hirsutism or dysmenorrhea. Contraceptives can compromise the gains expected in adolescence by altering estrogen and insulin concentrations, use has been associated with slow accumulation of bone mineral density and increased risk of fracture in some studies⁽¹⁸⁾.

Unplanned pregnancy is still high and is associated with socioeconomic, demographic and behavioral characteristics. The study shows that the most vulnerable puerperal women, young people living in precarious households with extended families are the most vulnerable to having an unplanned pregnancy⁽¹⁹⁾. Oral hormonal contraceptives provide women with control over their body and sexuality, contributing to their growth in the labor market,

development of autonomy and reproductive independence, promoting impact on behavior and position in society⁽²⁰⁾.

Estrogen is mainly used for contraception and hormone replacement therapy, it is clear that it increases the risk of arterial and venous thrombosis⁽²¹⁾. Thus the prescription of estrogen also serves to prevent cardiovascular events, osteoporosis and relief of symptoms related to menopause, these are associated with hemostatic changes and contribute to the risk of venous and thromboembolic diseases, this risk depends on the dose and medication, increasing with age⁽²²⁾.

The choice of contraceptive methods has increased in recent years, but the available methods are not recommended for all women, especially those with unique medical conditions or characteristics, in which a pregnancy, especially unwanted, contraception is important for women, and evidence-based guidelines have been published to help health professionals choose an appropriate method⁽²³⁾. The choice of method should always be individualized, and women should know the expected benefits and harms of each method and hormone⁽²⁴⁾.

It is important to emphasize that the knowledge, attitude and practice of women regarding the use of oral hormonal contraceptives and the use of another drug are also investigated, because when inadequate, health professionals can draw up effective strategies for health education on the drug interaction of this contraceptive method with



other drugs, preventing an unplanned pregnancy⁽²⁵⁾.

FINAL THOUGHTS

This study showed that women use contraceptives despite adverse effects, for fear of experiencing an unplanned pregnancy. This interferes with their quality of life, and therefore the importance of strengthening communication and expanding the offer of methods and information through a dialogue that allows women to express their doubts and desires.

It is also evident that they have little knowledge about drug interactions. Given that some drugs may reduce effectiveness, it is important for them to be aware of this and seek guidance from health professionals.

It is common for women to become pregnant even using hormonal contraceptives, which requires more studies in order to point out this cause, given that the methods used by them are safe and effective, so health education is done as something primordial to this population, as well as the development of technological products that assist them in accessing information. In addition, the study points to the need for continuing education of health professionals.

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Authorship criteria

Milena de Oliveira, Keity Laís Siepmann Soccol: 1,2,3

Silvana Cruz da Silva, Adriana Dall'Asta Pereira, Andressa da Silveira, Karoline Ardenghi Marques Baptista, Júlia Oliveira Silveira, Josi Barreto Nunes: 2,3

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Nothing to declare.

Scientific Editor: Francisco Mayron Morais Soares. Orcid: <https://orcid.org/0000-0001-7316-2519>

