

## IDENTIFICATION OF HEALTH RISK FACTORS AMONG WOMEN USING HORMONAL CONTRACEPTIVE METHODS

Identificação de fatores de risco à saúde entre mulheres usuárias de métodos contraceptivos hormonais

Identificación de factores de riesgo a la salud entre mujeres usuarias de métodos anticonceptivos hormonales

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### ABSTRACT

**Objective:** To identify risk factors for the use of hormonal contraceptives in users of these methods. **Method:** Descriptive study of a quantitative approach carried out between January and April 2016 in Redenção, Ceará, Brazil. The women were invited to respond to a structured form. The ethical principles of this research have been secured. The data were tabulated and analyzed by descriptive statistics through SPSS 20.0. **Results:** 100 women participated. Mean age = 26.91 years. 75% had performed Reproductive Planning. The most prevalent risk factor was migraine (59%). In the family history, the most frequently reported disease was systemic arterial hypertension (75%). **Conclusions:** Previously related diseases of patients with high ages are increasingly present in young women, who need more assistance in reproductive planning, focusing on anamnesis and general physical examination, responsible for revealing significant findings for the eligibility of contraceptive methods, aiming to the reduction of health risks.

**Descriptors:** Contraception; Primary Care Nursing; Risk Factors; Women's Health.

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## RESUMO

**Objetivo:** Identificar fatores de risco para uso de anticoncepcionais hormonais em usuárias desses métodos. **Método:** Estudo descritivo de abordagem quantitativa realizado entre janeiro e abril de 2016 em Redenção, Ceará, Brasil. As mulheres foram convidadas a responder um formulário estruturado. Os princípios éticos desta pesquisa foram assegurados. Os dados foram tabelados e analisados por estatística descritiva através do SPSS 20.0. **Resultados:** Participaram 100 mulheres. Média de idade = 26,91 anos. 75% haviam realizado Planejamento Reprodutivo. O fator de risco mais prevalente foi a enxaqueca (59%). No histórico familiar, a doença mais relatada foi Hipertensão Arterial Sistêmica (75%). **Conclusão:** Doenças antes relacionadas a pacientes com idades elevadas estão cada vez mais presentes em mulheres jovens, que necessitam de maior assistência no planejamento reprodutivo, com foco na anamnese e exame físico geral, responsáveis por revelar achados significantes para a elegibilidade de métodos contraceptivos, visando a redução de riscos à saúde.

**Descritores:** Anticoncepção; Enfermagem de Atenção Primária; Fatores de Risco; Saúde da Mulher.

## RESUMÉN

**Objetivo:** Identificar factores de riesgo para el uso de anticonceptivos hormonales en las usuarias de estos métodos. **Método:** Estudio descriptivo de abordaje cuantitativo realizado entre enero y abril de 2016 en Redención, Ceará, Brasil. Las mujeres fueron invitadas a responder a un formulario estructurado. Los principios éticos de esta investigación fueron asegurados. Los datos fueron tabulados y analizados por estadística descriptiva a través del SPSS 20.0. **Resultados:** Participaron 100 mujeres. Media de edad = 26,91 años. El 75% habían realizado Planificación Reproductiva. El factor de riesgo más prevalente fue la migraña (59%). En el historial familiar, la enfermedad más relatada fue Hipertensión Arterial Sistémica (75%). **Conclusión:** Las enfermedades antes relacionadas con los pacientes con edades elevadas están cada vez más presentes en mujeres jóvenes, que necesitan una mayor asistencia en la planificación reproductiva, con foco en la anamnesis y examen físico general, responsables de revelar hallazgos significantes para la elegibilidad de métodos anticonceptivos, visando la reducción de los riesgos para la salud.

**Descritores:** Anticoncepción; Enfermería de Atención Primaria; Factores de Riesgo Salud de la Mujer.

## INTRODUCTION

Hormonal contraceptives are medicines used by women who wish to postpone or avoid pregnancy, in addition to having other therapeutic effects. They are characterized as reversible methods and are available in the form of pills, injectables, adhesives, etc. Moreover, they present high effectiveness rates, which favors their use.<sup>1</sup> In Brazil, progestin-only hormonal contraceptives, as well as combined estrogen and progestin ones, are most commonly used and indicated in the form of pills or injectables.<sup>2</sup> It is estimated that more than 60% of Brazilians use oral contraceptive methods to prevent pregnancy.<sup>3</sup>

Such methods may have health risks, especially if long-term risk factors, such as cardiovascular disease (CVD), deep-vein thrombosis (DVT)<sup>1</sup> and breast cancer

are present.<sup>4</sup> Given this, the correct prescription of these drugs is essential to prevent serious side effects on women.

Reproductive Planning (RP) is important to evaluate these risk factors. It is the most indicated and adequate method according to the patient's health condition, reducing risks.<sup>1</sup>

Nevertheless, because they are easily accessible methods and does not require a medical prescription to be commercialized, many women use them on their own. They do not seek medical or nursing evaluation before using these medications, which may cause future adverse effects.

Considering the aforesaid, it is necessary to investigate the aspects related to the use of these methods, which may highlight important points in RP appointments, in addition to providing the users' characteristics relevant to determine the use or replacement of the chosen method.

In Ceará State, Brazil, few current data were found in databases and epidemiological bulletins regarding contraception. This makes it difficult to know about this reality, especially in the countryside, where little research has been carried out. Furthermore, it is important to observe how RP presents itself in this social space. Its fragilities, which demands intervention, and its competences should also be observed, thus characterizing the service offered by Primary Health Care (PHC) for women's health.

This study aimed at verifying whether women using hormonal contraceptives presented risk factors for diseases.

## METHODS

This descriptive study with a quantitative approach was conducted between January and April 2016 in four Basic Health Units (BHUs) of a municipality in the countryside of Ceará State, Brazil.

A non-probabilistic sample, composed of 100 women, was used. They were at BHUs at the time of data collection. Inclusion criteria were women using oral or injectable hormone contraceptives and signing the informed consent document. Legal guardians of patients under 18 years old signed this document, but the latter had to sign a special informed consent document designed specifically for them. The exclusion criterion was unreachable BHUs.

The data were collected by means of interviews and recorded on structured forms which included sociodemographic and gynecological-obstetrical variables, RP aspects, and personal and family risk factors associated with the use of hormonal contraceptive methods.

The information obtained was tabulated using Microsoft Excel. Descriptive statistics and frequency distribution were performed using the *Statistical Package for the Social Sciences* (SPSS) version 20.0.

The study followed the guidelines of the Brazilian National Health Council and complied with the Resolution No. 466/12, which regulates research involving human participants.<sup>5</sup> This research was approved by the Research

Ethics Committee from the *Universidade da Integração Internacional da Lusofonia Afro-Brasileira* under the *Certificado de Apresentação para Apreciação Ética (CAAE)* [Certificate of Presentation for Ethical Appreciation] No. 47775015.0.0000.55.76.

## RESULTS

The average age of 25.5 years old was found (SD=6.99). Of the total number of women, 3% aged 18 years old and 6% aged over 40 years old. The average study time was 12 years (SD=2.6). This group is composed of administrative housekeepers (21%), students (18%), housewives (16%), farmers (9%), among other occupations (36%). The majority (51%) of women live with their partner. Most of the women interviewed had an income higher than a minimum wage and 71% of them live with two to four people. Of the study participants, 81% were Catholics and 16% were Protestants, i.e., Christian religions were prevalent.

The gynecological-obstetrical data showed that 51% of the participants had their menarche at the age of 12 years old or more and 76% became sexually active between the ages of 13 and 18 years old. Thirty percent of the women reported having nulliparity, while 66% had from one to three previous pregnancies. Eighty-five percent of the women reported having no spontaneous or provoked abortions, while 12% reported having an abortion.

As for the number of partners over the lifetime, 73% reported having between one and three partners. Over the last three months, 89% of the participants pointed out that they had a sexual partner. Furthermore, 90% of them said that they were tested for cervical cancer at least once. Of these, 57% said they were tested last year.

**Table 1** presents the personal and family medical history of these women regarding diseases caused or exacerbated by the use of hormonal contraceptives.

**Table 1** - Personal and family risk factors for diseases among users of hormonal contraceptives.

Risk factor	Personal		Family*	
	N	%	N	%
Migraine	59	59%	10	10%
Systemic Arterial Hypertension	8	8%	75	75%
Stroke	2	2%	17	17%
Diabetes Mellitus	1	1%	52	52%
Cardiovascular disease	1	1%	35	35%
Breast Neoplasia	0	0	8	8%

\*Most users reported more than one pathology present in their family medical history. Regarding the degrees of kinship, first-degree and second-degree family links were found.

Migraine (59%) was the disease affecting most of the women. This can be characterized as a pre-existing pathology and is associated with the use of a hormonal contraceptive method. Hence, it can be viewed as an adverse effect of hormonal contraceptive use. It should be noted that this was a self-reported complaint, and it is important to conduct a medical evaluation for the differential diagnosis of the disease, distinguishing it from other problems such as headache.

Although rare, some participants reported having CVD, systemic arterial hypertension (SAH), stroke, and diabetes mellitus (DM), which deserve more attention because their association with hormonal contraceptive methods can threaten the women's health.

Furthermore, the family medical histories showed a high incidence of these diseases. More than one pathology per family was found for different degrees of kinship. SAH, CVD, and DM lead the list of pathologies most present in the family medical history of the participants, although all they have pointed out that all the diseases were present.

In addition to personal and family medical history, other factors contribute to the quality of life of women using hormonal contraceptives. The results regarding RP appointments reported by the users are shown in **Table 2**.

**Table 2** - RP activities influencing the women's quality of life.

Variable	%		
	Yes	No	Not applicable*
Have you ever had a reproductive planning appointment?	75	25	-
Did you have a general physical examination?	41	34	25
Did you receive guidance on the correct use of the method?	64	11	25
Did you receive guidance on risk factors?	35	40	25

\*Number of women who reported never having had an RP appointment.

Although hormonal contraceptive methods require prior medical or nursing evaluation before its use, there were still cases (25%) in which users did not have an RP appointment. This indicates that these women use hormonal contraceptives without any guidance. Of those who had RP appointments, only 41% underwent a physical examination. According to the women, guidance in using contraception correctly was provided by professionals during the appointment.

## DISCUSSION

The average age found was similar to that of Canada according to a study aimed at evaluating contraceptive use in this country.<sup>6</sup> This suggests that women seek contraception as a means to avoid or delay pregnancy throughout the fertile period. From the age of 40 onward, hormonal contraceptive use should be restricted because the risk of developing diseases such as those affecting the circulatory system tends to increase.<sup>1</sup>

The number of years of formal education are considered Social Determinants of Health (SDHs) because they can influence the search for health care services to promote self-care.<sup>7</sup> Thus, professionals are responsible for investigating this factor, aiming at providing greater guidance to users, which should be carried out with accessible language and technologies that facilitate their understanding.

Although there is no significant difference between the number of women with and without a partner, the fact that in both cases they choose to use a reversible contraceptive indicates that they seek to exercise their reproductive rights.

Socioeconomic conditions are also configured as SDHs; therefore, the *Sistema Único de Saúde* (SUS) [Brazilian Unified Health System] provides some contraceptive methods for free, aiming at patients with lower economic status.<sup>8</sup> This explains the popularity of hormonal contraceptives among Brazilians as indicated by the study results, representing a benefit regarding the user's decision to become pregnant or not.

Although the use of contraceptives still is a taboo in many religions, which consider them barriers to spreading life, no such reality was observed in this study. This suggests that women have been adhering to practices that separate sexuality from reproduction.<sup>9</sup>

From the menarche onward, when a woman has a sexual relationship without any kind of protection, she has a chance to get pregnant. So, the adolescent experiencing the first menstruation needs guidance and care to avoid early pregnancy and prevent Sexually Transmitted Infections (STIs). Accordingly, it is understood the importance of RP in leading women to perform self-care and promoting conscious contraception from this stage onward. The use of condoms, whether or not associated with other forms of contraception, is essential.<sup>1</sup>

Additionally, early menarche is a predisposing factor for breast cancer. If associated with prolonged use of hormonal contraceptives, it can increase the chances of developing the disease.<sup>4</sup> Therefore, health care actions toward female adolescents should be broader. Breast self-examination practices are important, being responsible for detecting early changes and minimizing possible damage to women's health. This should be encouraged in PHC, and printed material or other technologies can be used to raise awareness among women.<sup>10</sup>

Another risk factor for breast cancer is nulliparity.<sup>11</sup> The presence of these isolated or associated factors should

be investigated by RP professionals before promoting hormone therapy, providing information on these risk factors so that women can actively participate in the choice of using a contraceptive method. A study of 139 women with breast cancer showed that 10.8% of them were nulliparous. Although this rate is relatively low, a relationship is observed between the absence of protective factors against cancer while breastfeeding.<sup>12</sup>

The number of sexual partners influences the choice of using a contraceptive method. However, this factor is also associated with the need to seek a barrier method that prevents women and couples from contracting STIs.<sup>1</sup> Double protection, which is the combination of two methods, should be encouraged, especially by the nurse, who has an important role in health education for the empowerment of the individual.

Cervical cancer tests are responsible for the early detection of changes that may evolve into cervical cancer and for the clinical examination of the breasts, in addition to screening for other diseases. Because of this, it is essential that women have the examination every year or, depending on their health conditions, at greater or lesser intervals. The Brazilian Ministry of Health recommends that the oncotic cytology/cervical cancer test should be performed during RP appointments, including breast examination.<sup>1</sup> Nonetheless, it can be observed in this study that the opposite also occurs, since there were reports of cervical cancer tests or child growth and development follow-up being performed during RP appointments.

These are not considered inappropriate practices; however, the professional must recognize the relevance of the RP in its entirety, with attention to the general physical and gynecological examination. Anamnesis focusing on the personal and family medical history of the patient, in addition to appropriate records, should be performed. Thus, it is highlighted the importance of encouraging these professionals to deliver this care through training, implementation of checklists and record sheets that contribute to the quality of appointment without slowness, giving it practicality.

Migraine is a disease that can be associated with both genetic and acquired factors. In addition to headache, the most common symptom, there may be other manifestations such as visual and olfactory sensitivity, nausea, etc.<sup>13</sup> The use of hormonal contraceptives constitutes a risk factor for this disease, which is one of the eligibility criteria used by the Ministry of Health during the choice of the most appropriate method for the patient. Moreover, the risks and benefits should be evaluated before the use of hormonal contraceptives by women with migraines.<sup>1</sup>

A study conducted with 197 undergraduate students in Santa Catarina State, Brazil, highlighted migraine as a predominant risk factor among the participants.<sup>14</sup> Although in the present study there is a high rate of migraine, there is a need for research in health care since

it can often be confused with a headache. So, if migraine cases are confirmed, an evaluation should be performed to replace the contraceptive because of the greater chance of developing a stroke. PHC teams play an important role in identifying health risks to prevent this condition.<sup>15</sup>

Six out of ten women die due to stroke worldwide.<sup>16</sup> Ischemic stroke affects most users of hormonal contraceptives and is characterized by the obstruction of blood vessels in certain areas of the brain, preventing oxygenation.<sup>17</sup>

Combined contraceptives are the most likely to increase the risk of developing a stroke because they contain estradiol. On the other hand, this risk is decreased by using progestogen-only contraception as long as the women's clinical and behavioral condition is respected and guidelines on their correct use are carried out. The reason is that there are still myths about this type of contraception. For instance, it is believed that their use is recommended only during lactation and they are less effective among women who do not breastfeed.<sup>18</sup>

SAH is a clinical condition caused by several factors and described as the increase and maintenance of blood pressure (BP) levels, which can cause several health problems.<sup>19</sup> A study conducted in Japan showed that prolonged use of hormonal contraceptives directly influences the occurrence of hypertensive crises, which are capable of causing sequelae that compromise heart muscle function.<sup>20</sup>

In the present study, the need for intervention is emphasized in relation to the reported cases of patients with SAH using hormonal contraceptives. This is because the risk of developing cardiovascular complications tends to increase over the years.<sup>6</sup> In other cases, carrying out a BP evaluation every six months is indicated, as well as evaluation of associated factors such as smoking, thromboembolic diseases, and migraine.<sup>1</sup>

CVD represents the most prevalent pathology worldwide. It is estimated that they have increased the mortality rate over four years in the Northeast Region of Brazil.<sup>21</sup> Moreover, CVD is the greatest cause of hospital admissions in the country, especially among the elderly.<sup>22</sup> Although only one case of CVD was reported in this study, it is necessary to investigate other cases among users considering their family history and use of contraception.

It should also be noted that the presence of several associated risk factors constitutes an important eligibility criterion that makes the use of hormonal contraceptives unfeasible.<sup>1</sup> Given the presence of cases such as those presented in this study, it is essential to check also how the anamnesis has been performed during RP. Also, it is important to check whether there are records of these pathologies and appointments, ensuring the continuity of care.

DM represents a metabolic syndrome that has been affecting an increased number of people worldwide.

Although it is more prevalent among men, the number of women in this clinical condition is also large.<sup>23</sup> Patients with DM may use low-dose hormonal contraceptives after medical evaluation, as long as there are no associated risk factors, such as CVD and neuropathies.<sup>1</sup> It should be emphasized that the use of injectable progestogen is not indicated for women with DM.<sup>23</sup>

It is known that DM causes changes in blood clotting.<sup>23</sup> Thus, the use of hormonal contraceptives can contribute to the increase of these phenomena, causing complications such as DVT and CVD. For this reason, it is important to be careful with patients who wish to use contraceptives even if they do not have DM, which was corroborated by the study results.

When identifying the pathologies reported by the participants, it was noticed that diseases previously considered to affect the elderly population are also present in young women, representing an alert for the prevention of diseases through changes in the lifestyle of these patients.

Hormonal contraceptives allow the emergence of several adverse effects, such as increased cholesterol levels, nausea, weight gain, and depression. Hence, considering the initial clinical evaluation, the user should be followed up during the use of the prescribed method, especially over the first three months, in which it is more common to occur.<sup>1</sup>

In addition to personal risk, family risk factors can increase the chances of developing diseases among contraceptive users, especially when they occur in first-degree relatives. Anamnesis is essential during RP appointments to determine how safe hormonal contraceptive use will be.

A study on the risk factors associated with the use of hormonal contraceptives indicated that having a family history of breast cancer was the most reported factor by the participants. Having a first-degree relative with breast cancer represents a predisposing factor for the development of this disease.<sup>14</sup>

In this study, the participants who reported having arterial hypertension also had DM, strokes or CVD. Moreover, their relatives had the same pathologies. This represents a warning about the importance of evaluating women with a family history of chronic disease for diagnosing any early alterations.

Physical examination is one of the main moments during RP, in which significant changes in the patient's general condition can be identified, providing the professional with information to encourage his/her decision regarding the most suitable contraceptive method. Some points, such as checking BP, blood glucose, weight, and body mass index (BMI), heart rhythm, and breast examination may reveal findings related to important diseases. The Ministry of Health recommends that the woman's general physical

examination should be performed annually, including cervical and breast cancer test screening.<sup>1</sup>

According to the study findings, the quality of the guidance provided by RP professionals was considered low within the BHC context. However, other studies revealed low rates in this aspect.<sup>24-5</sup> Guidance is responsible for the formation of professional-client bonds, contributing to improving self-care. The professional should provide comprehensible information to the clients and erase doubts.<sup>26</sup>

In this way, professionals should be encouraged to provide a more comprehensive health care-related guidance to women in need of RP so that they become closer to the health service. Moreover, these professionals should promote knowledge of the risks and benefits caused by contraceptives.

In view of this, it is emphasized the participation of health care managers in training RP professionals, thus encouraging the execution of essential procedures aiming at the care for women and their adequate record. Audit services are important tools for making high-quality medical records. These services help to identify the main problems in medical records, aiming at excellence and quality of information about the patient's health.<sup>27</sup>

This study aims to contribute to the expansion of the care for RP patients by raising awareness among health care professionals so they could take an integral look at the aspects that can be harmful to women's health.

## CONCLUSIONS

The identification of personal and family risk factors associated with the use of hormonal contraceptives is important for the future of the study participants, who may develop chronic diseases. These chronic diseases can cause, for example, physical and motor limitations for women, especially the elderly ones, which are more likely to contract diseases.

Concerning the RP, it is evident the need for actions performed in accordance with the Brazilian Ministry of Health. The importance of interpersonal relationship (professional-patient) is also underlined, supporting the expansion of the guidelines offered, especially on the risks of hormonal contraception and the risk factors that need monitoring. The goal is to choose the appropriate contraceptive method for women.

It is also necessary to stimulate the demand for health care services before using any contraceptive method through educational activities in BHUs or in schools where there are adolescents because of their high demand for contraception.

This study has some limitations. First, a low sample size was used. Secondly, the participants did not undergo physical examination. Therefore, further research on this topic should be carried out in order to complement the data obtained, contributing to the quality of RP.

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