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SELF-MEDICATION IN PREGNANCY: A CROSS SECTIONAL STUDY IN PRIMARY HEALTH CARE

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ABSTRACT

Gestation is a unique period during which exposure to a particular drug involves two organisms: the mother and the fetus. The risk of self-medication and the ingestion of tablets without medical evaluation comes at a double dose for pregnant women: both the woman and the fetus can fall victim to the side effects of medications, ranging from a simple allergy to poor fetal formation. The objective of this study was to describe the profile of self-medication in pregnant women in a municipality of Cariri Cearense. It is a cross-sectional study in a pregnant population of the city of Porteiras, Ceará. In order to calculate the sample size, the total population of 118 pregnant women and a 5% tolerable sample error were used to allow a 95% confidence interval. In this way, a group of 51 agents was initially obtained as an ideal sample for the development of this study. Of the 51 pregnant women interviewed, 13.7% corresponded to 17 to 20 years of age, 17.64% reported having up to eight years of study, 5.8% reported consensual union as a civil status, 80.3% did not have a job 60.78% reported family income less than one minimum wage and 1.96% were smokers. It was verified a existence of a pattern of prescription in the gestation that deserves to be discussed aiming at the minimization of risks unnecessary adverse effects, that can compromise the results of prenatal care offered. It is therefore recommended that intervention mensures be taken.

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INTRODUCTION

In Brazil self-medication is a cultural and public health problem. This phenomenon occurs because Brazilian legislation is weak associated with ineffective supervision by sanitary agencies, as well as the lack of sufficient human resources to oversee pharmacies and drugstores.

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Associated to this there is a profit in parts of the pharmacy owners who are merchants and non-health professionals, always putting the sale ahead of the basic pharmaceutical care. Thus, this phenomenon occurs in the general population, children and pregnant women. Gestation is a unique period during which exposure to a particular drug involves two organisms: the mother and the fetus. The latter, much more sensitive to its effects and toxicity, can suffer serious problems, even irreversible (Gomes, 1999).

Pregnancy represents a remarkable process of change in a woman's life. It is a set of phenomena that involve women from conception to the birth of a new human being, including changing their social role in society. It produces an unstable biological balance, since the hormonal changes that occur during the process are sources of behavioral, physiological and biochemical changes (Rezende, 2000). The ability to discern individuals, whether educated or not, about the ability to administer a drug is decadent, consolidating a harmful, curative habit that can be costly to followers. The practice of self-medication affects both sexes and several social strata, but the woman may be at greater risk for several reasons, such as hormonal differentiated metabolism and pregnancy where they are at risk for fetal teratogens (LEITE *et al*., 2016).

The use of drugs during pregnancy has always posed a challenge for the medical profession, since it implies potentially damaging action not only for the woman, but also for the concept (Guerra *et al*., 2007). Most of the drugs administered to pregnant women cross the placental barrier and expose the developing embryo to its pharmacological effects (Della-Giustina; Chow, 2003). Thus, in no other clinical specialty are the therapeutic risks as large as those occurring in pregnancy, since many of the effects of the medications used by the mother can lead to significant, irreversible morphological changes that may occur at different stages of fetal development (Rezende, 2000). Drugs have more intense effects when given during the first trimester of pregnancy. This period is said to be of embryological differentiation of the systems and the introduction of chemical substances, such as medicines, can interfere with this process, resulting in fetal malformations (Monteiro, 2008).

In daily medical practice a multitude of medications are prescribed for different clinical conditions. These drugs often present a chance of interacting with each other and influencing certain physiological conditions of the patients, such as pregnancy causing undesirable effects including the possibility of congenital malformation (Ciconelli, 2001). Among the ways in which self-medication can be practiced are the acquisition of over-the-counter medications, the sharing of medicines with other members of the family or social circle, the reuse of leftovers from previous treatments and the use of old prescriptions.

Other ways to do this occur when there is noncompliance with the prescription, prolonging or interrupting the indicated treatment early (Carvalho, 2008). Thus, verification of the knowledge and attitude of pregnant women about self-medication is a fundamental step for the elaboration of training programs for primary care professionals so that they can intervene in a positive way in the educational, preventive and curative processes, minimizing the effects negative effects that self-medication can cause in pregnant women and the concept. Allied to this it is verified that there is a pattern of consumption of medicines in the gestation which can jeopardize some women. In this context, medicalization of pregnancy associated with irrational medication use is a high-risk behavior, since no drug is free from toxicity to the mother or fetus and should be considered a public health problem (Brum*et al*., 2011).In addition, such a scenario supports the importance of expanding the evidence on the risks and benefits of drug use during pregnancy and suggests the need for safe prescribing practices for pregnant women (Riley *et al*., 2005).

The risk of self-medication without medical evaluation comes at a double dose for pregnant women: both the woman and the fetus can fall victim to the side effects of medications, ranging from a simple allergy to poor fetal formation. Based on these premises the objective of this work was to describe the profile of self-medication in pregnant women of a municipality of CaririCearense.

METHODOLOGY

A cross-sectional study was carried out in a pregnant population of the city of Porteiras, Ceará, located in the Cariri region of Ceará. The structure of a cross-sectional study is similar to that of a cohort study, however, in cross-sectional studies all measurements are made in a single "moment", therefore there is no follow-up period of individuals as in longitudinal studies, this type of study is controlled and observational. The cross-sectional study is also known as a prevalence, cross-sectional, cross-sectional, or "survey" study (Pereira, 1995; Bordalo, 2006; Rouquayrol, 1994). To calculate the sample size, the total population of 118 pregnant women and a 10% tolerable sample error were used to allow a 90% confidence interval. In this way, a group of 51 pregnant women was initially obtained as an ideal sample for the development of this study (Oliveira *et al*., 2005). A sample of 51 pregnant women who accepted to participate in the study were selected. For data collection, a structured and standardized questionnaire was used based on the model Freitas *et al*., (2005) modified by Cerqueira *et al*. (2010) and carried out through individual interviews in the months of June to August. The data were collected through a single instrument, validated in a previous pilot study and standardized by the researcher. Data collection was done by the researcher herself. It was used to organize the database computer program "Excel" version 2003 and as instrument of statistical analysis the application GraphPadPrisma version 5.0. Data analysis was descriptive in order to identify drug consumption. The chi-square test (c2) was applied to verify the association between the variables studied, at the significance level of 5% (LEITE *et al*., 2016; GUEDES *et al*., 2010). The Excel 2003 computer program was used to organize the database, and the Graph Pad Prisma version 5.0 application was used as statistical instrument. This study was derived from a rain umbrella project approved by the research ethics committee derived from the master's dissertation of INEZ LEITE approved (CAAE: 21327813.8.0000.5183) (Leite, 2015). This study does not have any conflict of interests following the norms of the national health council, which regulates the research involving human beings and all the pregnant women signed the informed consent form (Brasil, 1996).

RESULTS AND DISCUSSION

Of the 51 pregnant women interviewed, 13.7% corresponded to 17 to 20 years of age, 17.64% reported having up to eight years of study, 5.8% referred to consensual unions as civil status, 80.3% did not have a job 60.78% reported family income less than one minimum wage and 1.96% were smokers. It was observed that the majority of the women that the average age was of 27.49 ± 0.84 years, being the maximum age was 37 years and minimum age 17 years (Table 1). It was observed that among the pregnant women with less than eight years of study, 29.41% used more than two medications, and

Table 01. Distribution of pregnant women according to age

Pregnant	Mean± SD	Median	Max	Min
Age				
	27,49± 0.84	27	37	17

this figure rises to 60.78% in those with more than eight years of study. The use of more than two drugs was reported by pregnant women with income above a minimum wage. According to studies by Guerra et. al. (2007), there was a statistical significance in the relationship between drug use and the following variables: schooling (predominance of use the higher the level of education) and family income (higher purchasing power implied greater use).

Table 2. Socio demographic data of pregnant women

Data	n	%
Schooling		
Illiterate	2	3,92
Complete primary education	9	17,64
Incomplete elementary school	1	1,96
Incomplete high school	6	11,76
Complete high school	27	52,94
Graduated	5	9,8
	1	1,96
Income		
Less than one salary		60,78
One Salary		29,41
One to two salaries		5,88
More than salaries		3,92
Number of pregnancies		
One	24	47,06
Two	21	41,17
Three	6	11,77

Regarding the obstetric past, 47.05% were in the first management, 41.17% in the second or third and 11.76% in the fourth or more.

Prenatal follow-up was reported as started in the first trimester of pregnancy by 84.31% of women, in the second by 15.68%. It was verified that 23.53% of the pregnant women self-medicated, while 76.47% did not self-medicate. In a study of self-medication in pregnant women in the city of Braço do Norte, Southern Santa Catarina, Lunardi-Maia *et al*. (2014) found that the highest percentage of self-medication occurred before the onset of prenatal care (64, 9%). Already Neuwald; Neuwald, (2007) showed that 49.38% of the interviewed women reported having self-medication and 50% reported being pregnant with their first child, which indicates a lack of experience in dealing with physiological changes specific to gestation, possibly resorting to greater medication in an unadvised manner by an appropriate professional. Drug use during pregnancy still poses a challenge for the drugs, as most drugs cross the placental barrier with potential to cause various congenital problems to the fetus and most of them have not been clinically tested in pregnant patients (Araujo*et al*., 2013). The source of indication of drugs occurred by prescription in 76.47% of the time, and therefore, 23.53% by self-medication. It is worth noting the non-prescribed use of herbal tea by 08 pregnant women, and cephalexin, by 05 who used it (Table 02). According to the data obtained, folic acid (82.35%) was the most commonly used, all of which were prescribed (100%) and ferrous sulfate (80.39%), being 97.56% prescribed (Table 2). Some authors put the use of this medication as a routine procedure (Mengue, 2001). In favor of the prescription of ferrous sulfate is also the world health organization that highlights the procedure due to the high rates of anemia in the third world countries, where there is a high prevalence of malnutrition (Carmo, 2005). A study carried out in the state of Pernambuco Brazil found that among the most commonly used pharmacological groups are antianemics (46.3%), non-opioid analgesics (17.6%), antiinfectives (14.2%), antacids (6.2) and antispasmodics (5.6%) (Brum *et al*., 2011).

Table 3.Total number of prescription and over-the-counter medications

Medicine	Number of people	% prescribed	% Self medication	ATC
FerrousSulphate	41	97,56	2,44	B03A
Folic Acid	42	100	0	A11/B03
Phenobarbital	2	100	0	N03A
Vitamins	5	100	0	A11/B03
Amoxicilin	1	0	100	J01
Cephalexin	5	60	40	J01
Dipyrone	1	100	0	N02
Acetaminophen	7	71,43	28,57	N02
Bromide N Butyl Scopolamine	3	66,67	33,33	A03
Dimenidrinate	3	100	0	R06A, D04A, A04A
Medicinal Plant	8	0	100	-
Vaccines	43	100	0	J07A

They were in the first quarter of the current gestation 23,52%, in the second, 35,29% and in the third, 41,17%.

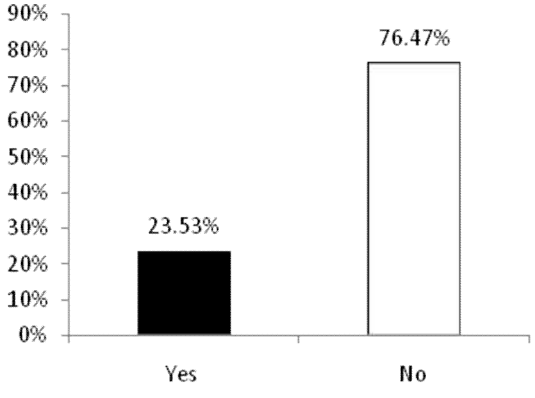

Figure 1. Self-medication index in pregnant women

These data corroborate with our results where we find the greatest use of antianemics. The existence of assistance protocols, guiding technical conduct regarding the use of medicines, is not enough to ensure a risk-free practice, since it involves social dimensions that go beyond the act of prescription. The safety of pregnant women should be monitored through careful assessment, based on their social conditions, follow-up examination of the physiological status and pharmacological history. In this aspect it is desirable that there be systematic actions of orientation and education in health, as compulsory strategies, in order to develop recommended values in the promotion and prevention of affections (Maeda, 2005). It was verified that 44.44% of the women used medicinal plants during pregnancy, the use of plants in pregnancy is not safe, since no in-depth clinical studies to certify the insurance during pregnancy. The health of women in pregnancy has attracted special attention, both in the

Table 4. Medications and plants used for self-medication according to the therapeutic class, according to Anatomical Therapeutic Chemical Classification (ATC)

Medicines	n	%	ATC
Cephalexin	5	27,77	J01
Medicinal Plant	8	44,44	-
Acetaminophen	2	11,11	N02
Bromide N Butyl Scopolamine	1	5,56	A03
Ferrous Sulphate	1	5,56	B03A
Amoxicilin	1	5,56	J01

field of science and in popular culture. The use of medicinal plants during pregnancy may have implications for maternal and fetal health, including abortion and congenital malformations (Silva *et al*., 2012). According to Alvim (2003), the results of their research show that the use of medicinal plants by pregnant women corresponds to an empirical knowledge, inherited from their socio-cultural affiliation. Although some of them are contraindicated in the gestational period, these women use them for lack of knowledge of their undesirable effects at this stage, and may even cause abortion in extreme cases. However, along with its adverse effects, the plants have been constituting a more affordable alternative economically, and also, according to the reports of study participants, less harmful to the body. According to the data obtained, the most used drug in the first trimester was vaccines (83.72%), followed by folic acid (100%) and ferrous sulphate (82.93%) (Table 03).

Medicines have played an important role in reducing human suffering. They produce a cure, prolong life and delay the onset of complications associated with the disease, thus facilitating the coexistence of the individual with the disease, but the indiscriminate use of drugs during pregnancy can lead from abortion to congenital malformations (Costa *et al*. 2017). An agent may be teratogenic when it produces a change, greater or lesser, in the normal morphology and / or physiology of the fetus. These changes, especially congenital malformations, are more likely to occur when the teratogenic drug is used in the first trimester of pregnancy (period of embryological differentiation). Other fetal damage may occur due to changes in maternal physiology, pharmacological effects on the fetus and interference with fetal development (Niebyl, 1989). In the studies of Carvalho (2004), in the treatment of urinary infection, antimicrobials of easy administration, low cost, free of side effects and that offered security to the mother and to the fetus were used. These characteristics are present in ampicillin and cephalexin, which were prescribed to the pregnant women who presented this clinical condition. Ampicillin was prescribed in the third trimester of gestation, from the third to the 38th week, and only one pregnant woman used cephalexin at week 12. It was observed in the research that 5 pregnant women self-medicated with cephalexin, medicine of category B, that poses some risk to the fetus, the pregnant women in using this medication has to be cautious. There was a predominance of the use of medication of risk category A, B and C in the analysis of table 02 and 03, which was verified self-medication of 23.53% of the pregnant women, being more used in the first quarter period considered of greater risk of adverse effects to the fetus. The first trimester of gestation is a critical period for drug exposure (BRUM *et al*., 2011; Alshammari *et al*., 2014) due to the formation of basically all anatomical and physiological structures of the fetus, which can lead to malformations and abortion.

Conclusion

It was verified a existence of a pattern of prescription in the gestation that deserves to be discussed aiming at the minimization of risks unnecessary adverse effects, that can compromise the results of prenatal care offered. It is therefore recommended that intervention measures be taken to promote the rational use of medicines and available resources, such as: a patient awareness program to avoid self-medication. It is incumbent upon all health professionals to inform women of childbearing age about the risk of using medications in pregnancy, drawing attention to the potential danger of self-medication. Knowing the profile of the drugs used in pregnancy, educational interventions aimed at pregnant women and continuing education activities can be planned for health professionals, thus reducing undesired drug effects on the concept.

Conflict of interest

Conflict of interest declared none.

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REFERENCES

Alshammari TM, Alrwisan AA, Aljeraisy MI, Taher KW, Alissa FM, Mahmoud MA, *et al*. 2014. Knowledge and attitude of healthcare professionals toward medication pregnancy category systems in Saudi hospitals. *Saudi Med J.,* 35(7):704-11.

Alvim, N.A.T., Ferreira, M. de A. 2003. Cuidado de enfermagem pela plantas medicinais In: FIGUEIREDO, N.M.A. de. (Ed.). Práticas de Enfermagem: ensinando a cuidar em saúde pública. São Paulo: Difusão Paulista de Enfermagem. cap.10, p. 283-296.

Araujo, Danielle Dayse *et al*. 2013. Consumption of medicines in high-risk pregnancy: evaluation of determinants related to the use of prescription drugs and self-medication. Braz. J. Pharm. Sci., São Paulo, v. 49, n. 3, p. 491-499, set.

Bordalo, AA. 2006. Estudo transversal e/ou longitudinal. Rev. Para. Med., Belém, v. 20, n. 4, dez.

Brasil. Ministério da Saúde. 1996. Conselho Nacional de saúde. Comissão Nacional de Ética em Pesquisa. Normas para pesquisa envolvendo seres humanos. (Res. CNS 196/96 e outros). Brasília, DF.

Brum, Lucimar Filot da Silva *et al*. 2011. Utilização de medicamentos por gestantes usuárias do Sistema Único de Saúde no município de Santa Rosa (RS, Brasil). Ciênc. saúde coletiva, Rio de Janeiro , v. 16, n. 5, p. 2435-2442, maio.

Carmo TA, Nitrini Smoo. 2005. Prescrições de medicamentos para gestantes: um estudo farmacoepidemiológico. Cad Saúde Pública 20(4):1-22.

Carvalho DC, Trevisol FS, Menegali BT, Trevisol DJ. 2008. Drug utilization among children aged zero tosixenrolled in daycare centers of Tubarão, Santa Catarina, *Brazil. Rev. Paul Pediatr* 26:238-44, 2008.

Cerqueira GS, Diniz MFFM, Lucena GT, Dantas AF. 2005. Perfil da automedicação em acadêmicos de enfermagem na Cidade de João Pessoa. Rev Conceitos. 11: 123-6

Cerqueira, G.S., Lima, Taj, Rocha, Nfm, Freitas, A.P.F., Mariz, SR, Vasconcelos, T.C., Exposição ocupacional: Um estudo com trabalhadores de postos de gasolina no sertão Paraibano. Rev. Saúde & Ciênciav.1, n.2, 2010

Ciconelli RM, Magid AT, Silva EE, Souza AWS, Assis LS. 2001. Fármacos utilizados em reumatologia e fertilidade, gravidez e lactação Rev Bras Reumatol. 41(5): 285-91.

Costa, Clarisse Melo Franco Neves *et al*. 2017. Use of medicines by patients of the primary health care of the Brazilian Unified Health System. Rev. Saúde Pública, São Paulo , v. 51, supl. 2, 18s.

Della-Giustina K, Chow G. 2003. Medications in pregnancy and lactation. *Emerg Med Clin North Am.,* 21(3):585-613.

DINIZ, Galdência Cunha; SILVA, Ivanise Freitas da; FÈLIX, Samara Andrade; MENEZES, Hildson Leandro de; FREITAS, Ana Paula Fragoso de; CERQUEIRA, Gilberto Santos; FREITAS, Rivelilson Mendes. Avaliação da Exposição Ocupacional a Solventes e a Material Particulado em Procedimentos de Repintura. RevInter Revista Intertox de Toxicologia, Risco Ambiental e Sociedade, v. 6, n. 2, p. 06-18, Jun. 2013.

Freitas, A.P.F., Pinto, R.H., Lima, T.A.J., Vasconcelos, T.C., Cerqueira, G.S., Wanderley, L.W.B., Mariz, S.R., Diniz, M.F.F.M. Exposição ocupacional de trabalhadores de postos de combustíveis do sertão Paraibano. In: XV Congresso Brasileiro de Toxicologia. Rev. Bras. de Toxicologia, v,20, n.1, p. 31, 2007.

Gomes Kro, Moron AF, DE Silva R, Siqueira AAF. 1999. Prevalência do uso de medicamentos na gravidez e relações com as características maternas. *Rev Saúde. Pública.,* 33(3):246-54.

Guedes, RC, Freitas, APFF, Vasconcelos, TC, Cerqueira, GS, Rocha, NFM, Pinto, RH. 2010. Consumo de Alcool em uma Comunidade do Cariri Cearense. Revista Intertox de Toxicologia, Risco Ambiental e Sociedade, vol.3, nº3, out.

Guerra, G.C.B. *et al*. 2007. Utilização de medicamentos durante a gravidez na cidade de Natal, Rio Grande do Norte, Brasil. Rev. Bras. Ginecol. Obstet., v. 30, Â n. 1, Â jan.Â.

LEITE, ICPR. Utilização me medicamentos em pediatria: a prática da automedicação em crianças pelos seus responsáveis. Dissertação (Mestrado em Ciências da Saúde) - Universidade Cruzeiro do Sul., 2015.

LEITE, Inez CristhinaPalitot Clementino Remígio, Monalisa Maria Sá Cavalcante Ayres Furtado, Sussane dos Santos Rocha, Saulo Rios Mariz, Thompson Lopes de Oliveira, Ana Paula Peron, Carlos Murilo Lopes, Iana BantimFelicio Calou, Gilberto Santos CerqueiraSelf-medication in students: a crosssectionalstudy. Boletim Informativo Geum v. 7, n. 1, p. 19-27, jan./mar. 2016

Lunardi-Maia, Tânia, Schuelter-Trevisol, Fabiana, GALATO, Dayani. Uso de medicamentos no primeiro trimestre de gravidez: avaliação da segurança dos medicamentos e uso de ácido fólico e sulfato ferroso. Rev. Bras. Ginecol. Obstet., Rio de Janeiro , v. 36, n. 12, p. 541-547, dez. 2014 .

Maeda ST, Ciosak SI. 2005. Inversióndel Recurso-Tiempoenlamonitorización de Embarazadas de bajo Riesco por el Equipo de salud de la Família. Rev Latino-am Enfermagem; 13(2): 188-94.

Mengue SS, Schenkel EP, Duncan BB, Schmidt MI. 2001. Uso de medicamentos por gestantes em seis cidades brasileiras. Rev Saúde Pública; 35: 415-20.

Monteiro, Mirian Parente. 2008. Universidade Federal do Ceara. Faculdade de Farmácia Odontologia e Enfermagem. Grupo de Prevenção ao Uso Indevido de Medicamentos. Informações para o uso de medicamentos na gravidez e lactação.Fortaleza - CE.

Neuwald, C. Neuwald, U. M. C. 2012. Fatores Associados ao Uso de Medicamentos Sem Prescrição Médica Entre Gestantes. Disponível em uol.com. Br acesso 08-08.

Niebyl JR. 1989. Uso de drogas na gravidez. 2a Ed. São Paulo: Livraria Roca.

Pereira MG. 1995. Epidemiologia: teoria e prática. Rio de Janeiro: Guanabara Koogan.

Rezende J, Aranda OL. 2000. Anamnese e exame físico. In: Rezende J. Obstetrícia. 9ª ed. Rio de Janeiro. 9ª ed. Guanabara Koogan. P.179-200.

Riley EH, Fuentes-Afflick E, Jackson RA, Escobar EJ, Brawarsky P, Schreiber M, Haas JS. 2005. Correlates of prescription drug use during pregnancy.J Women's Health (Larchmt); 14(5):401-409.

Rouquayrol, M. Z. 1994. *Epidemiologia & Saúde*. 4ª Ed. Rio de Janeiro: Medsi.

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