OPEN ACCESS

GAVIN PUBLISHERS

International Journal of Nursing and Health Care Research

Stigger KF, et al. Int J Nurs Res Health Care: IJNHR-111.

Research Article

DOI: 10.29011/ IJNHR-111.100011

Prevalence of Self-Medication During Pregnancy in an Outpatient Clinic of a University Hospital

Kaiane Fuhrmann Stigger, Karen Amaral Tavares Pinheiro*, Ricardo Tavares Pinheiro

Catholic University of Pelotas (Catholic University of Pelotas), Graduate Program in Women's, Children's and Adolescents' Health, Pelotas, RS/Brazil

***Corresponding author:** Karen Amaral Tavares Pinheiros, Programa de Pós-Graduação em Saúde e Comportamento, Centro de Ciências da Vida e da Saúde, Universidade Católica de Pelotas, Rua Gonçalves Chaves 373, 96015560, Pelotas, Rio Grande do Sul, Brazil. Tel: +555321288404; Email: karenap@terra.com.br

Citation: Stigger KF, Pinheiro KAT, Pinheiro RT (2018) Prevalence of Self-Medication During Pregnancy in an Outpatient Clinic of a University Hospital. Int J Nurs Res Health Care: IJNHR-111. DOI: 10.29011/ IJNHR-111.100011

Received Date: 15 May, 2018; **Accepted Date:** 05 June, 2018; **Published Date:** 12 June, 2018

Abstract

Objective: To determine the prevalence of self-medication during pregnancy in users of an outpatient clinic of a University Hospital located in the city of Pelotas, Rio Grande do Sul, Brazil.

Methods: This was an analytical, cross-sectional study carried out between December 2016 and June 2017 through a questionnaire applied to 297 pregnant women that collected data on self-medication, socioeconomic characteristics and medication use.

Results: Among the pregnant women, 191 (64.3%) received some information about the risk of self-medication during pregnancy, and 16 (5.4%) used drugs without a medical prescription. The most commonly used drugs without a prescription were analgesics and anti-inflammatory drugs, in 12 cases (3.9%).

Conclusion: Although most pregnant women are advised about the risks of self-medication during pregnancy, there are still pregnant women who do it. Therefore, it is very important for health professionals to address this issue with pregnant women and their partner and family during prenatal care.

Introduction

Between the end of the 1950s and the beginning of the 1960s, the use of drugs by pregnant women became a concern of the scientific community. Scientists' concern about the use of drugs during pregnancy stemmed from the birth of approximately 10 thousand children with phocomelia due to the use of the drug thalidomide [1]. Several studies on the biosafety of drugs used during pregnancy have been conducted [2]. There are still situations that limit this knowledge, as studies with pregnant women face difficulties related to ethical aspects and concern for the safety of women during pregnancy [3]. Drugs should be used sparingly during pregnancy due to the potential risks to the pregnant woman and developing fetus [4,5]. Given the risks of drug therapy for pregnant women, the use of drugs should be avoided [1-4]. A detailed evaluation of the risks and benefits of the use of drugs for the pregnant woman and her fetus is very important [2,4].

A study conducted in the State of Rio Grande do Sul, Brazil, showed that 53.3% of the respondents reported self-medicating [1-3,6]. Another study in the same state involving pregnant women who underwent prenatal care in three Basic Health Units (BHUs) found that 50% of pregnant women were self-medicating [7]. Among pregnant women, 57% reported not having been advised by any healthcare professional about the risks of using drugs during pregnancy. A study also carried out in the southern region of Brazil, observed that 60.15% of the pregnant women did not receive information about the losses of self-medication

during the gestational period [3]. On the other hand, a study that evaluated pregnant women in the northeast of the country showed that only 19.5% of them did not receive any information about the deleterious effects of self-medication.

Moreover, studies in the state of São Paulo in the city of Campinas and in the municipality of Bandeirantes, located in the north of the state of Pará, showed a lower prevalence of self-medication during pregnancy, with prevalence values of 11.2% and 8.2%, respectively [8,9]. In other recent studies conducted in two cities: Fortaleza and Pernambuco, the prevalence of self-medication obtained was respectively 11.3% and 28.1%. In the city of Maringua, however, only 2,03% of pregnant women reported having used any medication during pregnancy [6,2]. Due to the frequent reports of self-medication, women of childbearing age should be informed by health professionals about the potential risks of using drugs during pregnancy and the dangers of self-medication during the gestational period [8,9,10].

The indiscriminate use of drugs during pregnancy becomes a high-risk behaviour because the drugs are capable of harming the fetus [11]. Because of this, the irrational use of drugs during pregnancy should be considered a public health problem because it is very easy to acquire several drugs without a prescription in Brazil [12,13]. Therefore, the present study aimed to evaluate the prevalence of self-medication during pregnancy in women who were seen at the Outpatient Clinic of the São Francisco de Paula University Hospital of the Universidade Católica de Pelotas (Catholic University of Pelotas) in Rio Grande do Sul.

Methods

This was a cross-sectional study with pregnant women who underwent prenatal care at the São Francisco de Paula University Hospital (HUSFP) of Universidade Católica de Pelotas (UCPEL) in Rio Grande do Sul, Brazil, in the period from December 2016 to July 2017. The sample size was calculated from the mean of the prevalence's found in the literature review. A confidence level of 95% and power of 80 were used, considering the possible losses (10%) and possible refusals (15%), generating a final sample of 297 pregnant women. The interviews were conducted weekly on Mondays, Wednesdays, Thursdays and Fridays, from December 2016 to December 2017. The following questions were used to evaluate the use of drugs during pregnancy: a) Did you use any drugs not recommended by the doctor during pregnancy? b) If you used any drugs not recommended by the doctor, during which gestational period did you use the drug without medical prescription? Which drug(s) did you use each trimester? c) Did you receive guidance on the harm of using drugs during pregnancy? d) Where did you obtain information about the harm of using drugs during pregnancy?

For evaluation of the economic class, the 2015 criterion of the Brazilian Market Research Association (ABEP) was adopted, which uses a point system by adding the score for the possession of certain items to that of the head of household's education level and access to public services, which creates an ordinal variable, stratified from 1 to 5, and classifies the individuals into five classes (A, B, C, D and E). Statistical analysis was conducted using SPSS software. For the description of the sample characteristics, univariate analysis was used. The chi-square test was used to assess the associations between the outcome and the independent variables.

Regarding the ethical aspects, all the pregnant women were informed about the research study and its objectives. Pregnant women who received prenatal care in the outpatient clinic of the São Francisco de Paula University Hospital and were able to read and understand the questionnaire were included, and pregnant women younger than 18 years were excluded. The pregnant women who agreed to participate in the study read and signed an informed consent form. This project is in accordance with Resolution 466 and was submitted to the Research Ethics Committee of the Universidade Católica de Pelotas, under opinion number 1,801,242.

Results

The study sample comprised 297 pregnant women. The prevalence of self-medication during gestation was 5.4% and the gestational period during which self-medication was most prevalent was the first trimester with 11% (Tables 1, 2). Regarding sociodemographic characteristics, most pregnant women (55.5%) were between 20 and 30 years of age; 74.7% were married or living with a partner; 40.9% worked; 62.9% belonged to economic class C (Table 3). In regard to the pregnancy, 52.6% of pregnancies were planned and 51.9% had a high-risk pregnancy. In terms of the information received about the harmful effects of self-medication during pregnancy, 64.3% received some information about the risk of self-medication during pregnancy. The physician was the health professional who provided the most guidance on self-medication, corresponding to 58.7% of the cases (Table 2).

Variables	N (%)	Self-medication N (%)	P-value
Age*			0.797
Up to 25 years	128(43.4%)	6(2.3%)	
Older than 25 years	167(55.5%)	10(3.4%)	

Education level			0.961
Incomplete basic education	61(20.5%)	3(1.0%)	
Complete basic education	27(9.1%)	1(0.4%)	
Incomplete/complete secondary education	146(49.2%)	8(2.7%)	
Higher Education	63(21.2%)	4(1.3%)	
Marital status			0.24
Without partner	75(26.0%)	6(2.0%)	
With partner	221(74.0%)	10(3.4%)	
Work status			0.08
Yes	121(40.9%)	7(2.4%)	
No	175(59.1%)	9(3.0%)	
Class**			0.044
A/B	52(17.8%)	6(2.0%)	
C/D/E	242(82.2%)	10(3.4%)	
Total	296(100%)	16(5.4%)	
*Total = 295 (100%) **Total = 294 (100%)			

Table 1: Sociodemographic characteristics and self-medication in pregnant women.

High-risk pregnancy*			0.052
Yes	154(51.9%)	7(2.4%)	
No	139(46.9%)	9(3.0%)	
Guidance about drug use			0.59
Yes	191(64.3%)	9(3.0%)	
No	106(35.7%)	7(2.4%)	
Who provided guidance**			0.86
Physician	128(58.7%)	5(2.3%)	
Nurse	25(11.4%)	0(0.0%)	
Other	65(29.9%)	6(2.8%)	
Gestational trimester			0.001
First	11(3.7%)	11(3.7%)	
Second/third	5(1.7%)	5(1.7%)	
Did not self-medicate	281(94.6%)	281(94.6%)	
Total	297(100%)	16(5.4%)	
*[1]Total = 293 (100%); self-medication N (%) = 15 (5.1%) *Total = 293 (100%) **Total= 218 (100%); self-medication N (%) = 11 (5%)			

Table 2: Pregnancy-related characteristics and information on self-medication.

Variables	N (%)	Self-medication N (%)	P-value
Planned pregnancy*[1]			0.06
Yes	152(52.6%)	4 (1.4%)	
No	106(47.4%)	11(3.8%)	

Variables	N (%)	Self-medicationN (%)	P-value
UDHHB*			0.84
Yes	257(86.8%)	12(4.0%)	
No	39(13.2%)	4(1.3%)	

UDHTH**			0.37
Yes	223(75.3%)	11(3.7%)	
No	73(24.7%)	5(1.7%)	
Total	296(100%)	16(5.4%)	
*Using drugs harms the health of their baby **Using drugs harms their health			

Table 3: Knowledge of pregnant women about self-medication.

Regarding the knowledge of pregnant women about the problems that can be caused by self-medication during pregnancy, 86.8% of pregnant women believed that using drugs during pregnancy harms the health of the baby and 75.3% of pregnant women believed that using drugs during pregnancy impairs their health (Table 4). The drugs most prescribed by the physician were vitamin supplements, which were used in 297 of cases (100%), that is, by all the pregnant women. These drugs, however, were seen by pregnant women as vitamin supplements and not as medication. The most commonly used drugs without medical prescription during pregnancy were analgesics and anti-inflammatory drugs, in 12 cases (3.9%) (Table 5).

Drug	N (%)
Drugs prescribed by the doctor	
Vitamin supplements*	297(100%)
Analgesics / Anti-inflammatory drugs / Prokinetic agents / Hormone T4 / Progesterone**	232(78.1%)
Antibiotics / Anti-hypertensive agents / Oral hypoglycemic agents / Insulin***	64(21.7%)
Psychotropic drugs****	2(0.6%)
Drugs not prescribed	
Analgesics / Anti-inflammatory drugs*****	12(3.9%)
Drugs for gastrointestinal system******	3(0.9%)
Psychotropic drugs*******	3(0.9%)
Total	297(100%)
* Folic acid, Ferrous sulfate and Combiron - considered as vitamin supplements ** Vonal, Dramin, Ibuprofen, Paracetamol, ASS, Dimethicone, Buscopan and Dipyrone *** Progesterone, Methyldopa, Metformin, Purant4, Antibiotic, Synthroid and Insulin **** Carbamazepine and Fluoxetine ***** Diclofenac, Flanex, Dorflex, Dipyrone, Paracetamol and Ibuprofen ****** Sonrisal, Plasil and Dramim ******* Amplictil, Diazepan and Domperidone	

Table 4: Drugs prescribed and not prescribed by the doctor.

Variables			
	RISK	**CI (95%)**	**P-value**
Work status			
Working	1		0.63
Not working	1.12	0.377 – 3.370	
Class			
A/B	1		0.027
C/D/E	3.44	1.151 – 10.305	
Planned pregnancy			
Yes	1		0.042
No	3.4	1.047 – 11.069	
High-risk pregnancy			
No	1		0.625
Yes	1.32	0.426 – 4.133	
Use of prescribed medication			
No	1		0.625
Yes	3.49	1.001 – 12.400	

Table 5: Multivariate analysis.

The variables associated with self-medication during pregnancy in the bivariate analysis that were included in the multivariate analysis were the following: work status, social class, planned pregnancy and high-risk gestation (Tables 1, 2 and 3). After the multivariate analysis, the following variables were associated with the outcome: social class, planned pregnancy and use of prescribed medication. Pregnant women belonging to social classes C, D and E were 3.44-fold more likely to self-medicate when compared with pregnant women in classes A and B. Women who did not plan to get pregnant were 3.40-fold more likely to self-medicate when compared with those who did. Finally, pregnant women who had a medical prescription for a drug showed a 3.49 higher chance of self-medicating when compared with those who did not have a prescription for drugs.

Discussion

This study sought to assess the knowledge of pregnant women seen at the Outpatient Clinic of the São Francisco de Paula University Hospital of the Universidade Católica de Pelotas on the harm of self-medication during pregnancy, to determine the prevalence of self-medication in pregnant women, and to investigate which drugs were used without medical prescription by women during pregnancy. Self-medication was a little used

practice according to information from the pregnant women. Most women reported not having used drugs without medical prescription, which differs from a study conducted in 2011 in the state of Rio Grande do Sul, which showed that 50% of pregnant women were self-medicating. However, it is similar to that found in studies carried out in the city of Natal, Maringá, and in the municipality of Bandeirantes. Of the interviewed pregnant women who used drugs without prescription, most said they did not know they were pregnant, and so they used the drugs they normally used [2,3,6,8].

Analgesics were the most used drug therapy without prescription by the pregnant women, which is similar to another study carried out in the state of Rio Grande do Sul. Among pregnant women who self-medicated, 69% used drugs without medical prescription in the first trimester of pregnancy, which should serve as a warning because according to a study carried out in 2014 in the state of Santa Catarina, the first months of pregnancy are the ones with a higher risk of miscarriage and congenital malformation due to the use of drugs [3]. Regarding the knowledge of the risks caused by self-medication during pregnancy, most interviewees seemed to understand the damage that can be caused by the use of drugs without medical guidance during pregnancy [13,14]. A significant portion of women received guidance on the harm caused by using drugs without prescription during pregnancy.

This result is consistent those of a study carried out in Pernambuco and Bandeirantes but differs from a study carried out in Campina. The results of this study should be evaluated in light of its limitations [2,9,11]. The low prevalence can be explained by information/memory bias because self-medication was evaluated by self-report. The use of self-medication may also have been omitted by pregnant women. Because they were aware that using drugs during pregnancy could harm their health and the fetus, many may have avoided admitting self-medicating, which would mean that the prevalence found in this study was underestimated. In addition, the use of drugs during pregnancy is not widely accepted by society, a fact that may also have contributed to the underestimation of the prevalence measured. Public health campaigns targeting women of childbearing age should be developed because many of the participating pregnant women reported using drugs because they did not know they were pregnant. Such measures may actually reduce self-medication during the gestational period when it is potentially more harmful, the first trimester, when most congenital malformations occur.

The association between self-medication and less-favoured socioeconomic classes can serve as a warning for this vulnerable population, on whom efforts should be concentrated to reduce self-medication, especially during pregnancy. In addition, women who were not working and who did not plan the pregnancy were also at greater risk of self-medication, pointing out the importance of concentrating efforts in educating this population to reduce the practice of using drugs without medical guidance. It is worth mentioning that despite the fact that the vast majority of pregnant women who undergo prenatal care in the HUSFP outpatient clinic receive guidance on the potential consequences of the use of drugs without prescription during pregnancy, this study showed that there are still pregnant women who self-medicate. Therefore, it is very important to take measures to ensure clear and objective information is provided to pregnant women, their relatives and companions to minimize the risks to which pregnant women are exposed when using a drug without a medical prescription. Public health policies with such goals are still not common at the general population level. Campaigns that convey this information in mass media and social networks may possibly contribute to a significant reduction in the risks of congenital malformation arising from the irrational use of drugs during pregnancy.

Conclusion

The results obtained in the present study are significant both for the academic area and for clinical practice. The results show that the majority of pregnant women receive guidance about the risks and harms of the use of medicines that can be obtained without a prescription, although there are still pregnant women who are self-medicating. Research, therefore, serves as a warning to health professionals. Simply reporting the harm of self-medication is not enough to avoid it during the gestational period. Obtaining clearer and more effective information methods is mandatory. Awareness campaigns about the risks of congenital malformation with material that can be delivered to pregnant women with clear and accessible language during prenatal follow-up, as well as campaigns in social networks and mass media can be strategies that are more effective than the simple information, often neglected by the future mothers.

References

1. Osorio-de-Castro CGS, Paumgartten FJR, Silver LD (2004) The use of self-medication in pregnancy. Rev Ciência & Saúde 9.
2. Sabaini MSCC, Marisa PS, de Barros CMD, Batista ONL (2007) Use of medicines by pregnant women users of the Unified Health System. Rev ACTA PAUL Enferm 22.
3. Brum LFDS, Pereira P, Felicetti LL, Silveira RDD (2011) Use of medications by pregnant women users of the Unified Health System in the municipality of Santa Rosa (RS, Brazil). Rev Ciência & Saúde 16.
4. Castro CGSO, Paumgartten, Lúcia PV, Lucia LV, Aparecida CM, et al. (2004) Indicated use and referred use of medications during pregnancy. Rev Caderno de Saúde Pública do Rio de janeiro 20.
5. Moreira AA, Alves RA, Jorge KR, Maria DL, Aquino CMD, et al. (2014) Factors Associated with the use of drugs in gestation in prim gravidae in the municipality of Rio Branco, Acre, Brazil. Rev Caderno de Saúde Pública do Rio de janeiro 30.

6. Bernardo GGC, Bezerra SAQ, Barroso FL, Carvalho APM, Xavier CR, et al. (2008) Ferreira, Aurigena Antunes de Araújo. Use of medication during pregnancy in the city of Natal, Rio Grande do Norte, Brazil. Rev Brasileira de ginecologia e obstetrícia 30.

7. Jorge V, Iberê S, Cristiane S, Paula RA, Rodrigo B, et al. (1998) Profile of self-medication in a municipality in the South of Brazil. Rev Saúde Pública 32.

8. Satie KD, Inocenti MA, Pagliarini MMA, Silva MS (2015) Prevalence and factors associated with the use of medications by pregnant women attended to in primary care. Rev Texto & Contexto Enferm 3.

9. Dayse AD, Marinho LM, Vasconcelos SEJ, Bastos LL (2013) Consumption of medicines in high-risk pregnancy: evaluation of determinants related to the use of prescription drugs and self-medication. Brazilian Journal of Pharmaceutical Science 49.

10. Silveira RR, Cavalcante BS, Oliveira LJWD, Silva CFD (2013) Consumption of drugs, alcohol and smoking during gestation and evaluation of teratogenic risks. Rev Gaúcha de Enfermagem 34.

11. Costa FMRC, Edson F, Bergsten MG (2002) Prevalence of medication use in pregnancy: A pharmacoepidemiological approach. Rev Saúde Pública 36.

12. Lunardi MT, Shuelter TFB, Dayani G (2014) Use of drugs in the first trimester of pregnancy: Evaluation of drug safety and use of Folic Acid and Ferrous Sulphate. Rev Brasileira de ginecologia e obstetrícia 36.

13. Áurea N, Ritiélly G, Renata M, Cristina L (2016) Evaluation of the use of drugs by pregnant women in basic health units of Rondonópolis, Mato Grosso. Revista eletrônica gestão & saúde 7.

14. Viviane C, Rogério R, Letícia D, Lourdes M (2012) Representations of the use of medicines in assisted pregnant women in the basic health network. Revista de enfermagem 20.