







## SCREENING OF ALCOHOLIC CONSUMPTION IN PREGNANT WOMEN

### RASTREIO DO CONSUMO DE BEBIDAS ALCOÓLICAS EM GESTANTES

### SEGUIMIENTO DEL CONSUMO DE BEBIDAS ALCOHÓLICAS EN MUJERES EMBARAZADAS

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#### ABSTRACT

**Objective:** to screen the alcoholic consumption in pregnant women assisted in primary care in *Piauí*, Brazil. **Method:** this is a cross-sectional study with 75 pregnant women assisted at basic health units in five municipalities in *Piauí*. We applied Questionnaires about socioeconomic characteristics, health conditions, and the Alcohol Use Disorders Identification Test. We used the Statistical Package for the Social Science software for descriptive statistical analysis. **Results:** the prevalence of alcohol consumption in the last 12 months was 40.0%, 80.0% with low-risk use, and 20.0% with risk use. The age group was predominant from 20 to 29 years old, non-white, Catholic, with a partner, eight years or more of study, income less than or equal to two minimum wages, without previous pregnancy and morbidities. **Conclusion:** the prevalence is considered high, with a monthly and weekly consumption pattern and in young pregnant women. The screening of alcohol consumption in women of childbearing age should be considered a priority action due to the possibility of redirecting practices with a focus on intervention measures.

**Keywords:** Alcoholic Beverages; Pregnant Women; Primary Health Care; Women's Health.

#### RESUMO

**Objetivo:** rastrear o consumo de bebidas alcoólicas em gestantes atendidas na atenção primária do Piauí, Brasil. **Método:** estudo transversal com 75 gestantes atendidas em unidades básicas de saúde de cinco municípios piauienses. Aplicaram-se questionários sobre características socioeconômicas, condições de saúde e o instrumento Alcohol Use Disorders Identification Test. Utilizou-se o software Statistical Package for the Social Science para análise estatística descritiva. **Resultados:** a prevalência do consumo de álcool nos últimos 12 meses foi de 40,0%, 80,0% com uso de baixo risco e 20,0% com uso de risco. Houve predomínio da faixa etária de 20 a 29 anos, não brancas, católicas, com companheiro, oito anos ou mais de estudo, renda inferior ou igual a dois salários mínimos, sem gestação anterior e morbidades. **Conclusão:** a prevalência é considerada elevada, com padrão de consumo mensal e semanal e em gestantes jovens. O rastreamento do consumo de álcool entre mulheres em idade fértil deve ser considerado ação prioritária, pela possibilidade de redirecionar práticas com foco nas medidas de intervenção.

**Palavras-chave:** Bebidas Alcoólicas; Gestantes; Atenção Primária à Saúde; Saúde da Mulher.

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## RESUMEN

**Objetivo:** efectuar el seguimiento del consumo de bebidas alcohólicas en mujeres embarazadas atendidas en unidades de atención primaria de salud de Piauí, Brasil. **Método:** estudio transversal con 75 mujeres embarazadas atendidas en unidades básicas de salud de cinco municipios de Piauí. Se aplicaron cuestionarios sobre características socioeconómicas, condiciones de salud y la Prueba de identificación de los trastornos por consumo de alcohol. El análisis estadístico se realizó mediante el paquete estadístico para el software de Ciencias Sociales. **Resultados:** la prevalencia de consumo de alcohol en los 12 últimos meses era del 40.0%, 80.0% con uso de bajo riesgo y 20.0% con uso de riesgo. Hubo un predominio del grupo de edad de 20 a 29 años, no blanco, católico, con pareja, ocho o más años de estudio, ingresos menores o iguales a dos salarios mínimos, sin embarazo ni morbilidades previas. **Conclusión:** la prevalencia se considera alta, con patrón de consumo semanal y mensual, en mujeres jóvenes embarazadas. La detección de consumo de alcohol entre mujeres en edad fértil debe considerarse una acción prioritaria, debido a la posibilidad de redireccionar las prácticas centradas en las medidas de intervención.

**Palabras clave:** Bebidas Alcohólicas; Mujeres Embarazadas; Atención Primaria de Salud; Salud de la Mujer.

## INTRODUCTION

Alcohol is the most consumed psychoactive substance (PAS) in the world and generates individual, family, social, and work losses. The consumption of this substance has a different connotation than other PASs since it has a legal character and easy access, providing social acceptance and hindering to face it.<sup>1</sup>

It is estimated that 237 million men and 46 million women suffer from alcohol-related disorders, with the highest prevalence in the European region (14.8 and 3.5%, respectively) and the Americas (11.5 and 5.1%, respectively).<sup>2</sup>

Changes in the social paradigm of women have led to an increase in female consumption of PAS. The first approaches are during adolescence and greatly influenced by the social and family context to start using them.<sup>3</sup>

When the risk group has pregnant women and women who have recently given birth, this problem has more repercussions because the results directly affect another life. High prevalence of alcohol consumption by pregnant women has been verified in Canada, with 10.8%, and in the United States with 10.4%.<sup>4,5</sup> In Brazil, a study shows that 12.7% of 251 pregnant women who consumed alcohol during pregnancy did it for more than one standard dose daily over at least one trimester of pregnancy, an example of alcohol abuse.<sup>6</sup>

We should highlight that safe levels of alcohol exposure for pregnant women are not established since even moderate consumption can cause harm to the fetus. In this sense, any pattern

of consumption of this substance during pregnancy is considered a risk, and abstinence between pregnant women and women intending to become pregnant is recommended.<sup>6</sup>

Although there is a statistical overview of different locations on the drug use by pregnant women, it is still a problem in the reality of Piauí, being imperative to carry out and disseminate these studies to contribute to direct women's health care policies during pregnancy, trying to reduce maternal and pediatric morbidity and mortality. Therefore, this study aimed to answer the following research question: are pregnant women drinking alcoholic drinks?

Thus, this study aimed to screen the alcoholic consumption in pregnant women assisted in the primary care in Piauí, Brazil.

## MATERIAL AND METHOD

This is a cross-sectional study performed in five municipalities that are the regional health headquarters in the state of Piauí, Brazil (Teresina, Picos, Parnaíba, Floriano, and Bom Jesus) from August 2015 to March 2016.

We surveyed the women of childbearing age<sup>7</sup> assisted at the UBS of the municipalities (n = 3,350) to calculate the sample. The assumed prevalence of alcohol consumption among adult women was considered to be 39%<sup>8</sup>, with a 95% confidence level and tolerable error of 5%, resulting in a sample of 369 women. Proportional stratification was carried out between the five municipalities.

The inclusion criteria established were women assisted in nursing consultations and whose age range was between 20 and 59 years old.<sup>7</sup> Those women with difficulties in verbal communication were excluded since data collection would be done through dialogue with interviews.

For the operationalization of the draw and subsequent recruitment of women, we used the Excel 2010 software, considering the numerical list of women assisted in the respective UBS. The approach to women was based on a partnership between the nurse and the data collection team during the nursing consultation. The average time to obtain the data was 30 minutes. After screening 369 women surveyed, 75 pregnant women were identified. There were no sample losses.

Trained members of the Study Group on Nursing, Violence, and Mental Health at the *Universidade Federal de Piauí* carried out data collection. They applied a structured form built by the group, containing questions regarding socioeconomic variables and health conditions. The Alcohol Use Disorders Identification Test (AUDIT) was used to screen the excessive use of alcohol. It is an instrument developed by the World Health Organization<sup>9</sup> and validated in Brazil.<sup>10</sup> It is a simple instrument, composed of 10 questions, with a margin from zero to four points. The prevalence of alcohol consumption was detected through the first AUDIT question (how often do you consume alcohol?). Thus, the value "0" (no) was assigned when the interviewee reported never having consumed

alcohol (option 0) and "1" (yes) when consumption was positive at some frequency (options one to four).

We performed a pre-test with 10% of the sample in places not selected from the sampling process to detect possible difficulties in the understanding of the form and the screening instrument by potential participants. The pre-test ensured the use of the instruments.

The data obtained were coded and organized in Microsoft Excel 2010 spreadsheets through a double-entry process, exported to the Statistical Package for the Social Science (SPSS), version 22.0, to carry out the statistical analysis. Descriptive statistics were performed as a measure of central tendency (simple frequency).

The study met the requirements of research with human beings, according to Resolution n°. 466/12 of the National Health Council (*Conselho Nacional de Saúde-CNS*) and authorized by the Research Ethics Committee of *Universidade Federal do Piauí* (Opinion n° 985.391).

## RESULTS

Figure 1 shows the prevalence identified from the AUDIT of 40% ( $n = 30$ ) among pregnant women who consumed alcohol in the last 12 months of the survey. Of them, 28.0% ( $n = 21$ ) reported monthly consumption or less, 10.7% ( $n = 8$ ) reported two to four times a week and 1.3% ( $n = 1$ ) four or more times in the week (Figure 1).

Through the application of AUDIT, we found the risk levels, in which 80.0% ( $n = 24$ ) of the 30 pregnant women who reported the use of alcohol was in the zone I (low-risk use) and 20.0% ( $n = 6$ ) in zone II (risky use) (Figure 2).

In the analysis of alcohol consumption screening and its relationship with sociodemographic data, we observed that among the 24 pregnant women who were using low risk, there

was a predominance of the age group of 20 to 29 years old (62.5%), with more eight years of study (79.2%), income below the minimum wage (70.8%), with a partner (75.0%), non-white (79.2%) and catholic (79.2%). Concerning the pregnant women who use it at risk, the age group of 20 to 29 years old (83.3%), education level over eight years of study (100%), the income of one to two minimum wages (66.7%), with a partner (100%), non-white (83.3%) and Catholic (83.35%) (Table 1).

Considering the gestational variables and health conditions of pregnant women who are in the low-risk zone, most reported having planned the pregnancy (62.5%), and having a previous pregnancy (54.2%) and without morbidity (91.7%). In 83.3% of the pregnant women at risk did not plan the pregnancy, 66.7% had a previous pregnancy (66.7%), and 83.3% without morbidity (Table 2).

## DISCUSSION

In this study, when screening alcohol consumption in pregnant women in the last 12 months, a prevalence of consumption of 40% of the researched group was found, with monthly and weekly consumption patterns and risk use in 20%. In Brazil, the prevalence of alcohol use during pregnancy varies according to geographic location. In Maringá, Paraná,<sup>11</sup> the prevalence reported was 6.1%; in São Luís, Maranhão,<sup>12</sup> was 22.32%; and in the state of Goiás was 17.7%.<sup>13</sup> In all regions, there is a high prevalence of this consumption during the gestational period.

In the international scenario, a survey in Portugal between January 2010 and December 2011 with 753 immigrants and 1,654 Portuguese women with an average age of 29 years old informed that 8.3% of the sample mentioned having drunk alcohol during pregnancy. Among those who drunk alcohol, the highest percentage fell on immigrants (12.0%) and 6.6% among Portuguese women.<sup>14</sup>

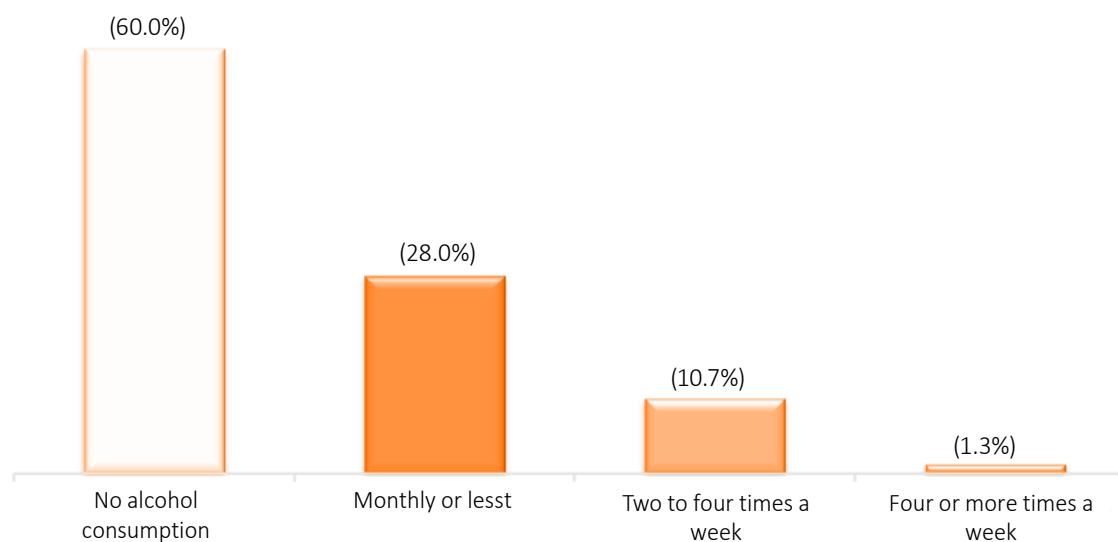


Figure 1 - Prevalence of alcohol consumption and consumption pattern by the pregnant women in the last 12 months. Teresina, Piauí, Brazil, 2019 ( $n = 75$ )

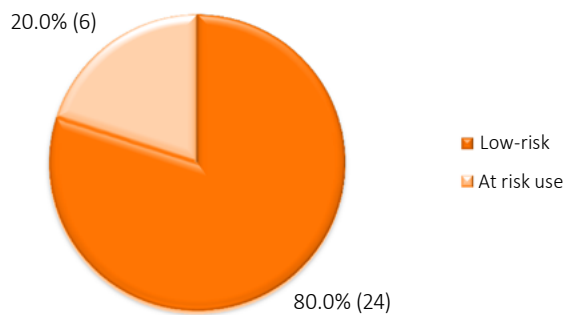


Figure 2 - Risk levels of alcohol consumption by pregnant women in the last 12 months. *Teresina, Piauí - Brazil, 2019 (n=30)*

Table 1 - Screening of alcohol consumption in pregnant women by AUDIT and its relationship with sociodemographic variables. *Teresina, Piauí - Brazil, 2019 (n=30)*

Variables	Alcohol consumption			
	Low-risk use		At risk use	
	n	%	n	%
<b>Age group</b>				
20-29 years old	15	62.5	5	83.3
30-39 years old	9	37.5	1	16.7
<b>Education level</b>				
Up to 8 years of study	5	20.8	-	-
> 8 years of study	19	79.2	6	100.0
<b>Income*</b>				
1 to 2 minimum wages	6	25.0	4	66.7
> 2 minimum wages	1	4.2	-	-
<b>Marital status</b>				
With partner	6	25.0	-	-
Without a partner	18	75.0	6	100.0
<b>Race/Skin color</b>				
White	5	20.8	1	16.7
Non-white	19	79.2	5	83.3
<b>Religion/belief</b>				
Catholic	19	79.2	5	83.3
Evangelic	2	8.3	1	16.7
Spiritist	1	4.2	-	-
None	2	8.3	-	-
<b>Total</b>	<b>24</b>	<b>100.0</b>	<b>6</b>	<b>100.0</b>

\*The minimum reference wage during the data collection period was = R\$ 788.00

The application of AUDIT in this study found that 80% of pregnant women were in the low-risk zone for the use of alcohol and 20% in the high-risk zone. These data are worrying and deserve the attention of women in the pre-pregnancy and pregnancy period, perhaps in all periods of female life, by the serious consequences of this consumption. During pregnancy, the consumption of alcohol

Table 2 - Screening of alcohol consumption and its relationship with gestational data and health conditions. *Teresina, Piauí - Brazil (n=30)*

Variables	Alcohol consumption			
	Low-risk use		At risk use	
	n	%	n	%
<b>Pregnancy planning</b>				
No	45	62.5	5	83.3
Yes	9	37.5	1	16.7
<b>Previous pregnancy</b>				
No	13	54.2	2	33.3
Yes	11	45.8	4	66.7
<b>Presence of morbidity</b>				
No	22	91.7	5	83.3
Yes	2	8.3	1	16.7
<b>Total</b>	<b>24</b>	<b>100.0</b>	<b>6</b>	<b>100.0</b>

can lead to the development of complications in pregnancy and problems for the mother and newborn.

In *Uberlândia*, Southeast Brazil, data collected by AUDIT showed alcohol consumption in 67.1% of the sample, with low risk or abstinence in 47.3%, risk use in 14.8% and harmful or probable dependence in 5%.<sup>15</sup>

In the data collected in this study, pregnant women between 20 and 29 years old predominated. This predominance of young adults of reproductive age is the result of a culture that influences the use of legal drugs, permeating acceptance, despite the problems from its use.<sup>16</sup>

Most pregnant women had eight or more years of study. We found a similar result in a study with 394 pregnant women of a primary care service, with 48.6% of pregnant women having between nine and 11 years of study.<sup>11</sup> Among the socioeconomic characteristics of pregnant women, the data of income showed a change according to the risk zone. Those with low risk had an income less than one minimum wage and those with risk had an income of one to two minimum wages. The marital situation, in this study, showed a predominance of pregnant women with a partner. Similar data were observed in a study conducted in São Luis, Maranhão, in which 80.2% lived with their partners.<sup>12</sup>

In this research, non-white pregnant women were predominant. This percentage is consistent with the population profile found in another study in which the percentage of non-whites was 12.2%.<sup>17</sup>

Regarding religion, there was a higher frequency of Catholic women. Research carried out with 268 pregnant women in a public maternity hospital in the city of Salvador, Bahia, revealed that religion is indicated as a facilitator for facing and strengthening women to face conditions of domination in the family or social relationships. It enables personal strengthening in the search for solutions to adverse or unwanted situations, as well as providing a

new meaning for pregnancy and consequent care and responsibility in this period.<sup>18</sup>

In the pregnancy planning variable, we found as unplanned. In the variable previous pregnancy and existence of morbidity, there was a predominance of pregnant women inserted in the low-risk zone without previous pregnancy and in the risk zone with a previous pregnancy. Planned pregnancies, unlike those that are not, tend to be peaceful and healthy, as it is usually a child desired by both the woman and the partner and can make the woman overcome an inappropriate lifestyle and adopt new habits, reducing or even abstinence from the consumption of psychoactive substances. Also, the use of PAS is predictive of an unplanned pregnancy and the non-adherence of contraceptive methods among women aged 16 to 44 years old.<sup>19</sup>

When considering the adverse consequences for the health of pregnant women from this consumption, these results can have several implications and alertness to the services such as better coordination between the prevention and support services for pregnant women, and the awareness of nurses and others health professionals on the subject, which should be constantly discussed in health services, especially in primary care.

The use of a cross-sectional design stands out as a limitation of this study since it hinders to define causality between alcohol consumption by pregnant women and its consequences for the mother/fetus.

## CONCLUSION

The results of the study showed a high prevalence of alcohol consumption in a sample of pregnant women, with a monthly and weekly consumption pattern. These findings demonstrated the importance of screening alcohol consumption among pregnant women in primary care. Screening becomes pertinent since the consumption of alcohol is a disease with serious repercussions for the pregnant woman and the fetus. Thus, the knowledge of the consumption of alcohol and the consumption pattern by pregnant women can be used to observe aspects of maternal and child health and to prioritize health education actions.

The screening of alcohol consumption among women of childbearing age as a routine in the area of women's health, family planning, and prenatal care should also be considered as part of the priority actions and to verify the epidemiological situation and design intervention measures.

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