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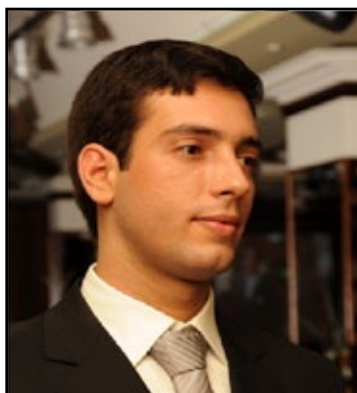
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Brief Communications



## Relationship between alcohol consumption and violence between intimate partners: a sectional study

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### ABSTRACT

**Aim:** to analyze the correspondence between the consumption of alcohol and the co-occurrence of violent episodes between intimate partners in a sample composed by the users of the Family Health Strategy program from the city of Nova Iguaçu, Brazil. **Methods:** researchers performed a sectional study from a sample composed by 476 women, ages varying from 25 to 64 years old, and with intimate partners for at least one year. The instruments used were validated and transculturally adapted for Brazilian use. **Results:** it was observed statistically significant correspondence between the use of alcohol by the woman, and the co-occurrence of intimate violence (OR:4.2), including the psychological (OR:4.6), physical (OR:2.7), and sexual (OR:2.2) formats. **Conclusion:** the results call attention to a possible relationship between alcohol consumption and violence between intimate partners. **Practical implications:** the systematized tracking of alcohol consumption can be used as an important marker when there are suspicious evidences in abuse cases under family care practice, thus amplifying the possibilities of intervention of Family Health teams.

**Descriptors:** Alcohol Drinking; Violence; Domestic Violence; Violence Against Women; Primary Health Care.

## RESEARCH DIFFERENTIAL

What is known?	Consumption of alcohol is associated to violence.
Contribution to the known content?	Alcohol can become a marker for suspect co-occurrence of violence under family health.

## AIM

To analyze the association between alcohol consumption and the co-occurrence of violence between intimate partners in a sample composed by users of the Family Health Strategy program in the city of Nova Iguaçu, Brazil.

## METHODS

This is a observational study, with a sectional approach, developed from control groups that participated in the research called "Barriers in the access of cervical cancer tracking: a study on the relationships between intimate violence and abusive alcohol consumption in users of the Family Health program", which used a methodological design based on case-control, in four family health units in the downtown area of Nova Iguaçu, Brazil.

The source population was established as women between 25 to 64 years old, with intimate partners for at least one year, and residents in the covered areas of the family health teams, reanalyzing the 476 users of the control group of the previously mentioned study. The sample strategy used was based on gathering data on the opportunity, when those women voluntarily arrived in the health units. Data collection took place from November 2012 to July 2013, with face-to-face interviews, with interviewees being questioned by four female nurses.

There was a structured and multidimensional questionnaire to collect data. The first dimension embraced the socio-demographical and economical characteristics of the interviewees, using the same criteria suggested by the Brazilian Association for Public Opinion Institutes<sup>(1)</sup>. To evaluate the occurrence of physical and psychological intimate violence (dependable variables), and the consumption of alcohol (interest independent variable), the the following dimensions used, in the described order, the instruments *Revised Conflict Tactics Scales* (CTS2) and TWEAK (Tolerance, Worried, Eye-opener, Amnesia and K/C Cut down), both validated and transculturally adapted for Brazilian use. It was considered a positive result when at least one item of each subscale presented positive results during the interview. The abusive consumption of alcohol was considered when scoring two or more points in the scale of measurements. The co-occurrence of violence was considered when there was the report of simultaneous violent episodes experienced by the partners.

The calculation of prevalence and confidence intervals was performed, with a 95% score, using the software Stata SE 13 as a support for these elements of analysis. For the bivariate analysis – such as the calculations for the Odds Ratio (OR) –, it was used the Fishers' Exact tests, considering the statistically significant relationship when the results were lower than 0.05. The OR are also adjusted through non-conditional logistic regression, using the independent variables with p-values  $\leq 0.25$  under bivariate analysis. This measure was taken to guarantee the insertion of the highest number of variables that could possibly confuse the adjustment model. It is important to highlight the forced entry in the model when a variable related to the literature did not present statistical significance. In this last case, the p-values were calculated through Likelihood Ratio Test.

Due to the ethical standards in studies with human beings, the research was sent and approved by the Committee of Ethics under protocol #01724512.6.0000.5259, also signing under the Free and Informed Consent Form to all respondents.

## RESULTS

The prevalence of co-occurrence of violence between intimate partners was identified in 89.7% (n=427; IC 95%:86.6/92.1) of the studied sample, being 13.0% of the cases from the physical type (n=62; IC 95%:10.3/16.4), 89.1% (n=424; IC 95%:85.9/91.6) from the physiological type, and 12.6% from the sexual type (n=60; IC 95%:9.9/15.9). Table 1 presents the unvaried analysis of the dependent variables, and the socio-demographic characteristics of the studied sample. The magnitude of abusive alcohol consumption by the female users was identified in the presence of two or more points in the measurement scale, resulting in 21.0% of a sample that is predominantly composed by 40-years-old or older, black or mixed race, married women, with educational level of eight years of study, and belonging to the economical class "C".

**Table 1.** Unvaried analysis of independent variables (alcohol consumption) and socio-demographic aspects of the female users of the Family Health Strategy program in Nova Iguaçu, Brazil, 2013. (n=476)

Variables	Distribution	
	N	% (IC 95%)
<b>Alcohol consumption by women</b>	<b>476</b>	-
No	376	79.0 (75.1/82.4)
Yes	100	21.0 (17.6/24.9)
<b>Alcohol consumption by the partner</b>	<b>476</b>	-
No	331	69.5 (65.2/73.5)

Yes	145	30.46 (26.47/34.76)
<b>Age group</b>	<b>473</b>	-
< 30 years old	73	15.4 (12.4/19.0)
From 30 to 39 years old	129	27.3 (23.4/31.5)
From 40 to 49 years old	120	25.4 (21.6/29.5)
From 50 to 59 years old	120	25.4 (21.6/29.5)
60 years old or more	31	6.55 (4.6/8.2)
<b>Ethnicity</b>	<b>476</b>	-
Black/Mixed	260	54.6 (50.1/59.1)
Others	216	45.4 (40.9/49.9)
<b>Marital status</b>	<b>476</b>	-
Married	264	55.5 (50.9/59.9)
Others	212	44.5 (40.1/49.0)
<b>Schooling</b>	<b>476</b>	-
Up to 8 years	258	54.2 (49.7/58.6)
More than 8 years	218	45.8 (41.3/50.3)
<b>Economic class</b>	<b>475</b>	-
A/B	95	20.0 (16.6/23.8)
C	342	72.0 (67.8/75.9)
D/E	38	8.0 (5.9/10.8)

Table 2 presents the results of the bivariate analysis among the dependent, independent, and control (socio-demographic and economical characteristics) variables. The abusive alcohol consumption pattern by women is significantly statistically associated to all tested outcomes. The age group and schooling years were variables which presented significant relationship to the phenomena.

Table 3 presents the adjustment, using the technique of logistic regression, of the OR among the independent variables and the outcomes. It was not found any significantly statistically relationship between the violent episodes and the consumption of alcohol by the partner. It was not found any interactions in the conditional logistic regression.

## DISCUSSION

The results for the association between abusive alcohol consumption and the violence between intimate partners corroborate with the

**Table 2.** bivariate analysis among dependent variables (co-occurrence of violence and its variations), and the independent variables of the female users of the Family Health Strategy program in Nova Iguaçu, Brazil, 2013. (n=476)

Variables	OR (IC 95%)	Variations of co-occurrence of violence		
		Psychological	Physical	Sexual
<b>Consumption by women</b>				
No	Reference	Reference	Reference	Reference
Yes	4.5(1.4/14.8)	4.8(1.5/15.9)	2.8 (1.6/4.9)	2.1 (1.2/3.8)
p-value	0.013	0.009	< 0.001	0.014
<b>Consumption by partner</b>				
No	Reference	Reference	Reference	Reference
Yes	1.6 (0.8/3.2)	1.7 (0.9/3.4)	1.4 (0.8/2.5)	1.6 (0.9/2.8)
p-value	0.201	0.126	0.225	0.088
<b>Age group*</b>				
< 30 years old				
From 30 to 39 years old				
From 40 to 49 years old	1.0 (1.0/1.1)	1.0 (1.0/1.1)	1.0 (0.9/1.0)	1.0 (0.9/1.0)
From 50 to 59 years old				
60 years old or more				
p-value	0.031	0.012	0.752	0.403
<b>Ethnicity</b>				
Black/Mixed	Reference	Reference	Reference	Reference
Others	0.8 (0.4/1.4)	0.8 (0.5/1.4)	1.1 (0.6/1.8)	1.0 (0.6/1.7)
p-value	0.403	0.479	0.813	0.950
<b>Marital status</b>				
Married	Reference	Reference	Reference	Reference
Others	0.9 (0.5/1.6)	0.8 (0.5/1.5)	1.6 (0.9/2.7)	0.7 (0.4/1.3)
p-value	0.721	0.587	0.082	0.302
<b>Schooling</b>				
Up to 8 years	Reference	Reference	Reference	Reference
More than 8 years	0.4 (0.2/0.7)	0.4 (0.2/0.7)	0.8 (0.5/1.3)	0.8 (0.5/1.4)
p-value	0.002	0.001	0.354	0.492
<b>Economic class*</b>				
A/B				
C	1.0 (0.9/1.1)	1.0 (0.9/1.1)	1.0 (1.0/1.1)	1.0 (0.9/1.0)
D/E				
p-value	0.837	0.955	0.108	0.803

Key:

\*Variable presented in its original format – continuous

findings of other studies performed in Brazil, as this research found co-occurrence (OR 4.2) in levels near to the national (approximately OR 3.0), and world average (OR varying from 1.2 to 1.8)<sup>(2,3)</sup>. The debate regarding the relationship is not recent, as a study recently published in Brazil demonstrates, in special when the abusive alcohol consumption is linked to one of the partners (P=38.1%)<sup>(4)</sup>. However, the scenario faced by the professionals that work in the Family Health

Strategy program must be placed as preferential in further investigations, as this research sets the example.

The apparent difficulty to detect cases of intimate violence, as they are mostly hidden due to prejudice and other factors, can be partly confronted by the adoption of systematized tracking programs for alcohol consumption, and for other risky characteristics seen in the users of the services, as suggested by a population

**Table 3.** Multivariate analysis by logistic regression among the dependent and independent variables of a sample (n=476) composed by women under the Family Health Strategy program in Nova Iguaçu, Brazil, 2013.

Alcohol consumption	Adjusted OR (IC 95%)*	Forms for co-occurrence of violence		
		Adjusted OR (IC 95%)		
		Psychological*	Physical**	Sexual****
<b>By the woman</b>				
No	Reference	Reference	Reference	Reference
Yes	4.2(1.3/13.9)	4.6(1.4/15.1)	2.7 (1.5/4.7)	2.2 (1.2/4.1)
p-value	0.019	0.013	0.001	0.008
<b>By the partner</b>				
No	Reference	Reference	Reference	Reference
Yes	1.7 (0.8/3.4)	1.8 (0.9/3.7)	1.4 (0.8/2.5)	1.7 (0.9/2.9)
p-value	0.147	0.086	0.242	0.069

Key:

\*Adjusted OR using the variables age group and schooling

\*\*Adjusted OR using the variables marital status and economic class

\*\*\*Adjusted OR using the variable marital status

enquire performed with more than 34 thousand participants<sup>(5)</sup>. Considering the facility in getting together female users and the professionals of the Family Health program, it is possible to identify the use and abuse scenarios for alcohol consumption, as an important yardstick to suspect cases of intimate violence, which will facilitate the necessary interventions of the institution. At the same time, this drug has better acceptance in society, thus making it easier to approach the topic during any activity performed by the teams.

The type of violent occurrences demonstrated a large association between alcohol consumption and the psychological, physical, and sexual types, followed by the results of a study performed with more than 10 thousand young adults in the United States of America<sup>(6)</sup>. A research performed with 105 women in Rhode Island (USA) showed that, at the same time the consumption of substances by women – alcohol and other drugs – helped to generate a bi-directionality of violent acts, specially perpetrating (OR: 10.6) and being a victim (OR 6.0) of physical violence. However, there were no indications for the relationship with sexual or psychological coercion<sup>(7)</sup>.

Alcohol affects physical and cognitive functions involved in the regulation of self-control of people, and because of that, it can trigger feelings and practices that create barriers in the negotiation of marital conflicts, thus generating a set of favorable elements to violent events<sup>(8)</sup>. The feelings of anger, which can be triggered by many different reasons related to interpersonal relationships, including everyday life events, together with the consumption of alcohol – specially if it is abusively – has also reporters as an important factor for the episodes of violence<sup>(9)</sup>.

It seems to have a bi-directionality in these grievances, as the negative feelings combined with alcohol can generate risks to the couple. On the other side, some authors debate that the experience of violent acts can be a motivational aspect for the consumption of alcohol and other drugs<sup>(10)</sup>. This scenario stimulates the reflection upon the necessity of strategies that effectively take apart the cycle observed in these relationships. The territorial approach and the plurality of views from the actors, a common scenario in the Family Health Strategy teams, can help to place

these actions in the order of the day. However, it is acknowledged that more investments directed to the management of these cases are more urgent and necessary inside Primary Health Care.

## CONCLUSION

Even with the limitations of sectional studies – which evaluate the exposition and the outcome at the same time – the results show for a possible relationship between the consumption of alcohol by women and the occurrence of violence acts between intimate partners, demonstrated by the magnitude of the association with the psychological, physical, and sexual formats.

## PRACTICAL IMPLICATIONS

Tracking and detecting the consumption of alcohol by the female users of family health services can be used as important benchmarks to suspect intimate violent cases, and this element must be deeply investigated during individual and collective consultations by the multi-professional team.

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