



Incidence of mental and behavioral disorders due to the use of alcohol in the state of Tocantins associated with the COVID-19 pandemic

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Anaís Aguiar Ferrer Pinto

Medicine student; Centro Universitário Presidente Antônio Carlos - UNITPAC; Av. Filadélfia, 568; Setor Oeste; CEP: 77.816-540; Araguaína - TO
E-mail: anafp321@gmail.com

Tales Aguiar Ferrer Pinto

physician and professor; Centro Universitário Presidente Antônio Carlos - UNITPAC; Av. Filadélfia, 568; Setor Oeste; Zip Code: 77.816-540; Araguaína - TO

Rodolfo Lima Araújo

physician and professor; Centro Universitário Presidente Antônio Carlos - UNITPAC; Av. Filadélfia, 568; Setor Oeste; Zip Code: 77.816-540; Araguaína - TO
E-mail: rodolfolima18@hotmail.com

ABSTRACT

With the pandemic status declared on March 11, 2020 by the World Health Organization, countries adopted non-pharmacological social protective measures. The article relates how the pandemic directly entailed to the increase in the number of hospitalizations for mental illness associated with alcohol use, relating the

difference of age groups, gender and the spending of the public health system in this area referring to the years 2018 to 2020 in the state of Tocantins. This is a descriptive quantitative epidemiological study, the data were obtained through the Department of Informatics of the Unified Health System in the periods 2018 to 2020. After analyzing the data, it was possible to observe a 41.41% increase in the number of hospitalizations in the year 2020, being mostly men between 40 and 49 years old. Furthermore, there was an increase in the amounts spent on hospital services, where there is a causal relationship of a decline between the amounts spent in 2018 to 2019, before the Covid-19 pandemic. In the year 2019 to 2020, there was a 51% increase. Therefore, there was an increase in the events examined in this paper, which may be related to a worsening mental health of this population due to the social isolation measures implemented in the world. Thus, it is necessary that the Family Health team program in Primary Care has an efficient and satisfactory preparation to serve this population in order to prevent these excessive expenses in Public Health that are avoidable.

Keywords: Alcoholism, Pandemic, Mental Health

1 INTRODUCTION

The global pandemic caused by the Sars- CoV-2 or Covid-19 virus was decreed on March 11, 2020 by the World Health Organization, with the first case recorded in Brazil on February 26, 2020. Due to the high infectivity of the virus itself, its uncontrolled spread and the lack of a vaccine, the WHO advised governments to adhere to non-pharmacological measures, among which are the social isolation associated with the total closure of public places and establishments (lockdown) in an attempt to reduce the contamination curve. (MALTA et al, 2020).

Due to such events, the habit of consuming alcoholic beverages has also changed and has become something that some Brazilians do in their own homes. The habit of drinking alcohol is associated with more than 230 diseases and health complications, mainly due to the fact that the substance ethanol is immunosuppressive, carcinogenic, toxic to cells and teratogenic (GARCIA et al, 2020).

Repeated ingestion of high doses of alcohol can affect virtually every organ system, especially the gastrointestinal tract, the cardiovascular system, and the central and peripheral nervous systems. (APA, 2014).

Concatenated with this, in the early moments of the pandemic there were misleading reports circulating on the internet that drinking alcohol would provide protection against Covid-19, the WHO had to intervene, issuing a note about such misleading information due to cases of people becoming intoxicated through the use of alcohol of unknown origin (GARCIA et al, 2020).

In this context, the consequences that a pandemic at this level can have on the mental health of individuals is associated with triggers for some mental disorders such as anxiety, depression, and increase in suicidal behavior, due to its stressful factors of social isolation such as: estrangement from friends, family, loss of collective conviviality, concern, fear, uncertainty regarding the time of isolation, among others (FARO et al, 2020).

It is also important to mention that due to isolation, people face the fear of going to the Basic Health Units in search of physical help and also psychological support, which has been discussed more openly in recent years due to social changes about mental health being as important as physical health. Furthermore, studies indicate that mortality due to excessive alcohol consumption exceeds 3 million every year, an alarming fact, noting that these deaths are preventable (GARCIA et al, 2020).

Thus, this study seeks to analyze a causal relationship between the increase in alcohol-related mental and behavioral disorders in relation to the COVID-19 pandemic in the state of Tocantins, due to the lack of literature on the subject in this state.

2 OBJECTIVES

This study has as its main objective to analyze the data collected through the Department of Informatics of the Unified Health System on the number of hospitalizations due to mental and behavioral disorders due to alcohol abuse in the state of Tocantins, analyzing age range, gender, and hospital spending amounts in the period from 2018 to 2020 correlating to the Covid-19 pandemic.

Thus, it became necessary to analyze the data regarding the compulsory notification, evaluation of the profile of involvement and morbidity and mortality of the disease in order to make a deeper understanding possible.

3 METHODS

The research refers to a retrospective cross-sectional study, of quantitative and descriptive approach, using data offered by the Department of Informatics of the Unified Health System (DATASUS). The criterion examined was the causal relationship between the increase in events associated with alcohol use

in the periods from January 1, 2018 to December 31, 2020 in the state of Tocantins associated with the Covid-19 pandemic.

The variables determined for analysis were the number of hospitalizations, gender, age group, and hospital expenditures in this time frame. From this, a simple analysis was performed and the results were presented in tables using the Microsoft Excel program.

For the literature search we used data collected through Google Scholar and Scientific Electronic Library Online (SciELO) using the descriptors "alcoholism and covid-19", "mental health and pandemic", "social isolation and alcohol" with the selection of articles published in the years 2018 to 2020 with selected languages in Portuguese and English. In addition, psychiatric books on the diagnosis and statistics of mental disorders were also used.

This study offers no harm to the population, since it used data obtained online, with the objective of contributing with information about public health and making society aware of the theme.

4 RESULTS AND DISCUSSION

According to the American Psychiatric Association (2014), alcohol use disorder is classified as a cluster of behavioral and physical symptoms, including withdrawal, tolerance and craving. Because alcohol withdrawal can be unpleasant, individuals continue drinking despite the side effects to avoid withdrawal in an attempt to relieve the symptoms.

Based on the data collected, it was possible to observe that in the time period from 2018 to 2020 a total of 326 hospitalizations occurred in the state of Tocantins for alcohol abuse. In the year 2018 there were 100 hospitalizations corresponding to a total of 30.67%, while in 2019 there were 91 cases representing 27.91% of hospitalizations, showing a slight reduction in the number of interventions. In the period of 2020 with the pandemic state declared by the World Health Organization, the number of cases rose to 135, which corresponds to the highest rate of hospitalizations in the state, reaching 41.41%. (Table 1).

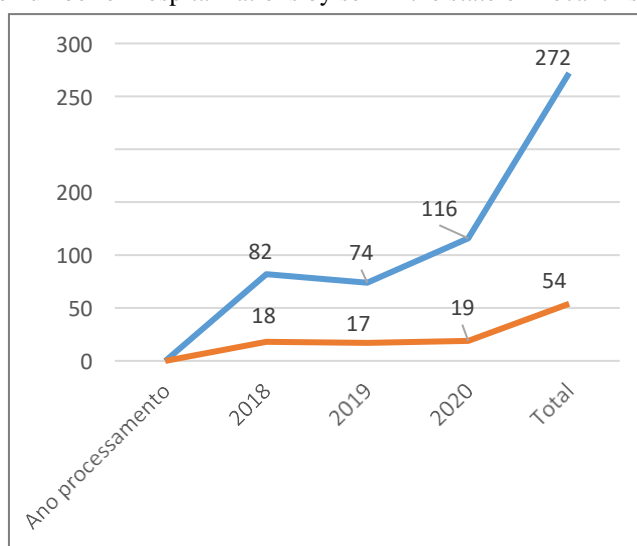
Table 1. Incidence of alcohol abuse hospitalizations by year from 2018 to 2020 in the state of Tocantins.

Year	No. of cases
2018	100,67%
2019	91,91%
2020	135,41%
TOTAL	326,99

Regarding sex in these hospitalizations, there is a higher prevalence of males over females in the years. Although this article has limitations and there is no concrete explanation for the phenomenon described (Graph 1)

As far as, the registered cases according to age group were collected and showed the following results (Table 2). The age range most prevalent was 40 to 49 years old, totaling 110 cases out of a total of 326, in the interval from 2018 to 2020, resulting in 33.77% of the percentage of the total cases. Secondly, the 30 to 39 year old population, accounted for a total of 85 cases which equates to 26.07% of the total percentage. Consequently, the age group with the highest number of cases is the 50 to 59 years, which represents a total of 68 cases, characterizing the percentage of 20.85% of the total of 326 hospitalizations in the time interval of these three years.

Graph 1. Incidence of the number of hospitalizations by sex in the state of Tocantins in the years 2018 to 2020.



Source: Ministry of Health - SUS Hospital Information System (SIH/SUS)

Table 2. Hospitalization for alcohol abuse by age group in the state of Tocantins in the years 2018 to 2020.

AGE RATE	2018	2019	2020	TOTAL
15 to 19 years old	1	3	26	30
20 to 29 years old	7	12	23	42
30 to 39 years old	31	21	33	85
40 to 49 years old	33	28	49	110
50 to 59 years old	22	14	32	68
60 to 69 years old	3	8	5	16
70 to 79 years old	3	5	2	10

Source: DATASUS data (2021).

By analyzing table 3, it is possible to observe that in the year 2018 hospital services due to mental and behavioral disorders due to alcohol use were spent the amount of R\$ 13,354.77 in the year 2019 R\$ 8,298.84 and in the year 2020 R\$ 16,271.42. Comparing the years 2018 and 2019 to 2020 there was an increase respectively of R\$ 2,916.65 and R\$ 7,972.58. **(Table 3).**

Table 3. Amounts spent on hospital services for alcohol abuse in the state of Tocantins in the periods 2018 to 2020.

YEAR	SERVICE VALUES HOSPITALS
201813	.354,77
20198	.298,84
202016	.271,42
TOTAL37	.925,03

Source: Ministry of Health - SUS Hospital Information System (SIH/SUS)

With this, it is possible to observe a relationship causal of a decline between the amounts spent in 2018 to 2019, before the Covid-19 pandemic. Whereas in the year 2019 to 2020, there was a 51% increase in the period from 2020, which corresponds to the start of the pandemic in hospital spending amounts.

Thus, there is possibly an association of the whole pandemic world context with the stressful factors of social isolation affecting the mental health of these individuals, who may or may not be susceptible to certain behaviors and conducts, among them, the alcohol misuse and abuse of this population in the state of Tocantins.

5 CONCLUSION

With this view, the causal relationship of increased events, hospitalizations, and hospital values related to mental and behavioral disorders due to alcohol abuse that may be associated with the Covid-19 pandemic in the state of Tocantins is visible. In this current scenario, alcoholism has a harmful particularity as a result of being a licit drug, low cost and with simple access for people of various age groups.

Thus, it is evident the need for greater attention from Public Health and the Family Health program staff on the subject, seeking a better preparation of these teams, so that they are willing and able to deal, guide, and coordinate the situations as much as possible, through efficient strategies and activities, and above all, empathy for the patients and families involved.

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