



The alcohol effect on the performance of athletes of a Medical School in the Northwest of São Paulo: a cross-sectional observational study

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Abstract

Introduction: The medical schools of the São Paulo region perform sports competitions as a way of socialization and integration between them. Thus, each medical school has its training routine and focuses on performance during the year. However, these study places also have parties, which have as a characteristic the high consumption of alcoholic drinks. **Objective:** The present study aims to analyze the constancy of alcohol consumption by the students of a medical school in the northwest of São Paulo who practice physical exercises, as well as to evaluate the reasons and possible consequences of this substance in the organism of these academics. **Methods:** The research is observational and transversal, done by a virtual formulary, via "Google Forms". **Results:** It observed the ingest of alcohol, mostly, twice a week by 75% of the interviewed, as approximately 74% reported loss or failure in the efficiency at the next day's activities. Some of the symptoms by the majority were tiredness, sleepiness, fatigue, dehydration, and low concentration, and in the minority, cramps, spasms, and photosensitivity. Furthermore, 94% of the academics practice some exercise in their daily, third times a week. Finally, 86% of the interviewees who are competitors and ingest alcohol don't consume it when the competition date is close. **Conclusion:** The medical students' routine has parties and sports, as well as the incentive for alcohol consumption. In this way, the alcohol effects, one day after ingestion, already show up and are malefic not only to the sports performance but also to the academic and personal performances. It can

also be concluded that sports competitions are very important to some students since they don't consume alcoholic drinks days before the championship.

Keywords: Alcohol. Academics. Sports. Medicine.

Introduction

Alcohol is a legal drug widely consumed by the world population. According to the World Health Organization (WHO), in 2016, around 43% of the population aged 15 or over used alcohol, with approximately 2.3 billion individuals being current consumers [1]. Thus, due to its consequences, its high adherence and abusive use have become worrying, especially in the sporting world, as this substance directly affects the Nervous System and other systems of the body, damaging all performance and all preparation carried out for official competitions [1-3].

At universities, places with the largest number of teenagers, the use of this legal drug is prominent in social events promoted by the students themselves, as well as in sports competitions, such as MedInterior, CaloMed, and Intermed. According to the National Collegiate Athletic Association (NCAA, 2018), alcohol is among the substances most abused by athletes, which causes its impact to affect their performance [4]. Competitors are harmed by dehydration, reduced nutrients, interference with sleep, mood swings, and inability to control motor functions. In this way, the body becomes fatigued, resulting in a decrease in muscle strength, dizziness, and even loss of sensitivity [5].

Given this, the present study aimed to analyze the

majority of students at the Faculty of Medicine in the northwest of São Paulo, located in the city of Catanduva-SP, who participate in sports competitions, are athletes in sports such as football, tennis, futsal, judo, athletics, among others, but they are also alcohol consumers. These are ordered, by local athletics, to stay 1 month before competitions without drinking alcohol. Therefore, the relationship between sport and alcohol is a fine line, since, even if we are not professional athletes, the consumption of this drug can affect performance in sporting competitions.

Methods

Study Design

The present study followed a prospective observational and cross-sectional model, following the STROBE (Strengthening the Reporting of Observational Studies in Epidemiology) rules. Available at: <https://www.strobe-statement.org/checklists/>. Accessed on 10/12/2023.

Research Instrument

The present study was developed by applying a form, via "Google Forms", to 96 students from the first to the sixth year of the Medicine course at a college in the northwest of São Paulo, in the city of Catanduva-SP, from May 2022 until August of the same year. The document consists of two parts: personal questions (name, age, sex, whether you are a student at the Catanduva Faculty of Medicine and the year you are studying) and questions involving the performance of student-athletes in training, their routine, and the consumption of alcoholic beverages. The data collected was stored confidentially and with access only by researchers.

Ethical Aspects

All participants agreed to participate in the research and signed the Free and Informed Consent Form, filed with the Research Ethics Committee of Centro Universitário Padre Albino (UNIFIPA) under protocol 4.787.498, following Resolution 466/12 of the National Health Council, which deals with research involving human beings.

Questionnaire Validation - Cronbach's Alpha (α)

The validation of the questionnaire proposed in this study was determined using the statistical technique of Cronbach's alpha (α), to know the reliability and measure of internal consistency. The calculation of Cronbach's alpha coefficient (α) required the administration of just one test to provide a single estimate of the reliability of the entire survey. The

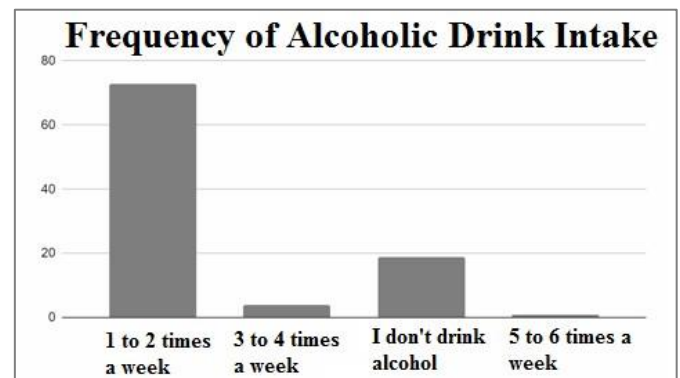
reliability of Cronbach's alpha coefficient varies between 0 and 1 as standard. The Cronbach's alpha coefficient reliability classification obeyed the following limits: A. $\alpha \leq 0.30$ – Very low; B. $0.30 < \alpha \leq 0.60$ – Low; C. $0.60 < \alpha \leq 0.75$ – Moderate; D. $0.75 < \alpha \leq 0.90$ – High; E. $\alpha > 0.90$ – Very high [6].

Results and Discussion

A total of 96 medical students were interviewed in the Northwest of São Paulo, 93 of which were from the Faculty of Medicine of Catanduva, with an age range between 18 and 26 years old, with 57.3% being male. The validation analysis of the questionnaire proposed in this study using Cronbach's alpha (α) statistical technique showed that the reliability rating was high, with alpha (α)=0.82, considering $0.75 < \alpha \leq 0.90$. Of the responses collected, 60 responses were from the second year, 18 were from the first year, nine were from the third year, eight were from the fourth and one respondent was from the fifth year. Of those interviewed, 91.7% drink alcoholic beverages.

Figure 1 contains an analysis of the frequency of alcohol intake among athletes from medical schools in the Northwest of São Paulo. With 75% of the 96 interviewees drinking at most twice a week. In contrast, only one person eats more than five times a week.

Figure 1. Analysis of the frequency of alcohol intake among athletes.



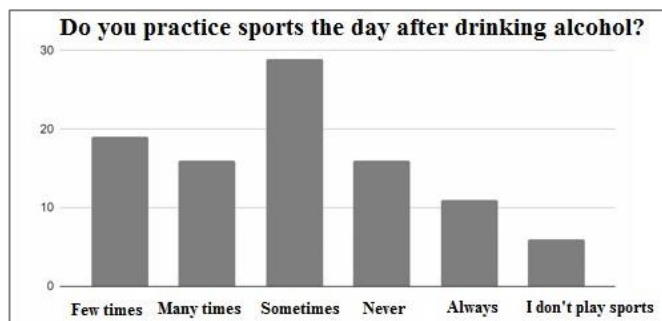
Source: Own Authorship.

It can also be noted that 71 interviewees reported loss or failure in performance in the following day's activities after consuming alcoholic beverages, with loss of balance being one of the factors that received the most complaints, as approximately 60% complained about this deficit. Of all those interviewed, the main influences that make university students use them are between fun and socialization, although there is a minority who specified consuming drinks with alcoholic content due to anxiety and social pressure, as also observed in literary findings [2, 7-10].

It was found that 90 people of all those interviewed practice some physical activity in their daily lives, which indicates the strong presence of athletic sports in higher education courses, such as Medicine, in addition to the importance of the mental health of university students during this period of high activity. academic [3,4]. Most of the interviewees reported that they practice sports more than three times a week, and this can be done through weight training, aerobic sports, or Academic Athletics sports.

In Figure 2, it is represented whether students usually play sports the day after drinking alcohol, with results dividing opinions for those interviewed. With 30.2% of respondents saying that they sometimes play sports and 19.8% reporting that they play sports a few times. This is confirmed when 78.6% of respondents who consume alcoholic beverages report that they feel that their performance in sports is affected the following day. According to the Brazilian Journal of Sports Medicine (1997) [9], it has been demonstrated that alcohol intake can reduce dynamic muscular strength, static strength, dynamometer strength (a device responsible for measuring strength intensity), and power.

Figure 2. Practice sports the day after drinking alcohol.



Source: Own Authorship.

Despite the reduced number of interviewees who practice sports the day after drinking alcohol, there are some complaints and symptoms that they mentioned, with the majority being exposed to tiredness, drowsiness, fatigue, dehydration, and reduced concentration, and a minority also reported situations of cramps, spasms, and photosensitivity.

Although the presence of alcoholic beverages is present at university parties, especially during sports competitions [4,5,11], it can be seen that 86% of those interviewed who participate in competitions and drink alcohol at all do not consume it near such events.

Conclusion

The routine of university students generally

includes parties and sports - which are highly encouraged in this environment. And because of this routine, alcohol becomes present in students' daily lives, often directly affecting the athletes' performance. Through the questionnaire applied to medical students in the northwest of São Paulo, it was possible to verify that athletes use alcohol, predominantly once or twice a week (75% of those interviewed). Furthermore, they reported a drop in training performance after drinking alcohol. The harmful effects of acute alcohol intake hurt health in a wide variety of psychomotor skills, reducing strength, power, and localized muscular endurance, speed, and cardiovascular endurance. As seen in the research, the most reported symptoms were drowsiness, tiredness, fatigue, dehydration, and reduced concentration, thus indicating the negative influence of alcohol on the practice of physical activities.

Acknowledgement

Not applicable.

Ethical Approval

All participants agreed to participate in the research and signed the Free and Informed Consent Form, filed with the Research Ethics Committee of Centro Universitário Padre Albino (UNIFIPA) under protocol 4.787.498, following Resolution 466/12 of the National Health Council, which deals with research involving human beings.

Informed consent

It was applicable.

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Data sharing statement

No additional data are available.

Conflict of interest

The authors declare no conflict of interest.

Similarity check

It was applied by Ithenticate®.

Peer Review Process

It was performed.

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