

Alcohol And Soccer: Better Not To Mix Them! A Study Revealing That Alcohol Reduces Physical Activity In Athletes

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Abstract: Alcohol consumption is a causal factor in more than 200 diseases and disorders reported by the World Health Organization (2018). It is associated with the risk of developing health problems such as mental and behavioral disorders and places you at potential risk of an addiction that affects the health of individuals and athletes. The objective of the study was to determine the relationship between alcohol consumption and the physical condition of athletes who attend the Sports Cultural Association. The study was quantitative, correlational and cross-sectional. The population consisted of 80 amateur athletes belonging to a cultural association, from which an intentional non-probability sample of 66 subjects was extracted. The instruments used were the Alcohol-Related Disorders Identification Test (AUDIT) and the endurance test (COOPER). The results indicate that at the level of bivariate analysis, 65.4% of those with high alcohol consumption are in poor physical condition and 42.9% of those with low alcohol consumption are in good physical condition. This relationship was confirmed with a significant chi-square value ($p < 0.005$). At the descriptive level, the level of alcohol consumed by athletes was high (40%) and physical condition was very poor, with an average distance covered of 2144 meters. It is concluded that the majority of the athletes evaluated had high alcohol consumption and was related to poor physical condition. It is necessary to use educational strategies to prevent and minimize health risks.

Index Terms Alcohol, soccer, athletes, activity, physics.

1. INTRODUCTION

According to the World Health Organization (WHO), in 2018, reports that each year there are 3 million deaths in the world due to alcohol consumption and mostly occurs in the age group of 20 to 39 years, in 13.5% of deaths. In addition to being a causal factor of more than 200 diseases and disorders. The health consequences cause social and economic losses within society. Total per capita alcohol consumption worldwide in 2010 averaged 19.4 litres of pure alcohol for men and 7 litres for women. It is also stated that the consumption of alcoholic beverages in family or social gatherings is very frequent in any part of the world and in Latin America, there is evidence of an increase in alcohol consumption by young people [1], [2].

Latin America is the second region where alcohol consumption is highest with 8.4 liters of pure alcohol per capita per year, of which 7.2 liters are effectively tested and 1.2 liters are calculated. In the Americas, Chile is the country with the highest intakes, with Peru in sixth place [3], [4], [5]. With respect to physical condition through time, thanks to athletes, doctors and coaches and to their joint work, improvisation is left behind and a systematization of physical exercise is given way for the achievement of specific objectives [6]. To improve general health, prolonged and effective participation in all types of physical sports activities must be allowed. The adolescent being the person who has ideal conditions and qualities to successfully carry out their integral development [7]. The consequence of excessive alcohol consumption, when more than 3 times a week, has effects at the work level,

expressed in frequent delays in attendance at work, reduces work performance, work absenteeism, slowness, clumsiness and low efficiency. In relation to health, produces premature aging, impairs personal judgment, generates memory loss and inability to concentrate, alters the immune system, predisposes to suffer from chronic gastritis or stomach ulcers, alters liver function leading to liver cirrhosis, pancreatitis, increases triglycerides, cholesterol and reduces testosterone production. At the personal level, deteriorates personal relationships, relationship with family and friends. Chronic consumption reduces quality of life by up to 20 years [6], [7], [8], [9], [10]. The family is fundamental in determining expectations related to alcohol consumption, as well as the interactions and influences of friends, added to this the family, and even through social networks, i.e. the circle or social environment, can influence the behavior that a person has and the way they behave. Therefore, individual influences cannot be separated from other factors that determine perceptions and behaviors [8], [11], [12]. Alcohol has become one of the main substances of drug consumption and this protagonism acquires a prominent character in terms of youth consumption. Alcohol is a depressant of the Central Nervous System. When ingested orally, it immediately penetrates the body, producing a dilation of the peripheral blood vessels. Of all the organs and tissues it is only in the liver where the alcohol is burned, that is to say, metabolized. Chronic consumption of alcohol reduces the quality of life by up to 20 years. The increase and frequency of alcohol consumption favours risky behaviours, and there are occasions (more and more frequent) in which alcohol is present as a cause of work accidents, traffic accidents, altercations, violence, aggressions and vandalism. On the other hand, excessive consumption sometimes leads to loss of consciousness, hinders breathing and causes death from ethyl coma, respiratory paralysis and cardiovascular compromise [13]. Alcohol is implicated in a wide variety of diseases, disorders and injuries, as well as in multiple social and legal problems. It is a leading cause of cancer of the mouth, esophagus, and larynx. Cirrhosis of the liver and pancreatitis often occur as a result of excessive consumption

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over long periods of time. Alcohol damages the fetus in pregnant women. Likewise, much more frequent medical problems such as hypertension, gastritis, diabetes and some forms of cerebral infarction can be aggravated even by occasional and short-term consumption, as can mental disorders such as depression. Injuries from traffic and pedestrian accidents, falls and work problems often occur as a result of excessive alcohol consumption. Risks are associated with pattern of drinking and amount of alcohol consumed [13] [14]. In view of this situation, the presence of health professionals, both doctors and nurses, assume the commitment to attend preventively to people who consume alcohol, through the generation of interventions for the reduction of their consumption. International studies carried out on alcohol consumption have evidenced statements that make us reflect on how to address this issue, pointing out that young people have increased alcohol consumption, therefore it is necessary to implement strategies to address this vulnerable population with this problem [15]. They also highlight the urgency of implementing prevention actions to reduce alcohol consumption among young people [16]. It is established that sport is associated with alcohol with various external factors, together with risk behaviors, the perception of not serving for school and the lack of affection experienced by people, which makes it more vulnerable to this type of problem in alcohol consumption. It is evident that 56.2% of sportsmen and women admit to drinking. There is also a need to implement strategies for the prevention of alcohol consumption in football clubs [17]. The prevalence of alcohol consumption after sport is due to extrinsic and intrinsic self-determined and adaptive motivations of habitual behaviors within their group activities [18]. On the other hand, sedentary youths who consume alcohol associated with physical inactivity appear to have an influence on respiratory problems [19]. Physical condition is that which allows daily actions to be carried out with vigour without falling into fatigue, and which is also capable of facing unexpected situations. As with the assessment of the amount of habitual physical activity, the measurement of physical condition is not without its problems. Physical activity is linked to physiological processes, cognitive processes, memory and attention these processes are elevated with the constancy of physical activities [20]. Sport and physical activity also benefit people by taking preventive actions in healthy habits that prevent chronic non-communicable diseases and reduce stress by providing a sense of well-being [21]. A person's physical condition is determined by a number of factors: some are variable and can be modified, others are invariable and cannot be modified. Invariable factors are, for example, our genetics, age or gender. In the same way that genetics gives us a certain skin colour, it also conditions the quality of our muscles, bones, tendons, etc. So that some people are very flexible, others strong, others fast, others very coordinated or, quite the opposite, without forgetting the variable factors. It refers to food, rest, hygiene and above all training, modifying the physical condition [22] [23]. Experience and scientific evidence show that regular participation in appropriate physical activity and sport provide people of both sexes of any age and condition, including people with disabilities, with a wide range of physical, social and mental health benefits. Physical activity and sport complement strategies to improve diet and discourage smoking, alcohol and drug use, improve self-esteem, help manage stress and anxiety, and alleviate

depression. The most frequently mentioned components of physical fitness can be divided into two major groups: One, related to health, composed of cardiorespiratory endurance, muscular endurance, muscular strength, body composition and flexibility, and a second set related to sports performance, composed of agility, balance, coordination, speed, power and reaction time [24]. Finally, the phenomenon of alcohol consumption requires an approach that integrally evaluates the consequences and social impact that each community produces, providing information and fundamental inputs for decision making in areas of prevention and control. In the context of development, sport encompasses all forms of bodily activity that contribute to physical well-being, mental equilibrium and social exchange, regardless of whether or not it is organized [20]. Physical conditions are related to the healthy behaviours and habits people adopt to avoid health problems and ensure their quality of life in the future.

2 METHOD

The approach was quantitative, non-experimental design, correlational level and cross-sectional [25]. The study population consisted of 80 athletes from a cultural association, from which an intentional non-probability sample of 66 subjects was extracted. The measurement instrument used was the Disorder Identification Test (AUDIT), which was developed by the World Health Organization [26] as a method of screening for excessive alcohol consumption and as a support instrument in the brief intervention. The AUDIT is a questionnaire of 10 items, separated into three domains, the first related to alcohol risk consumption, items 1 to 3, the second domain on dependence symptoms, includes items 4 to 6 and the third domain on harmful alcohol consumption, includes items 7 to 10. Its measurement level was established at a low level if it is less than or equal to 8, medium level if the values are from 8 to 15 and high if it is greater than or equal to 16. For the variable, Physical Condition, the observation technique was used and the instrument was the COOPER test [27]. The test consists of covering the maximum possible distance in 12 minutes and that classifies people in very good more or equal to 2800 m, from 2400 to 2800 m good, from 2200 to 2399 m normal, from 1600 to 2199 m bad and from 1600 to less meters, is considered very bad. Both instruments were applied on the day the championship took place, moments before the start of the football match and respecting the willingness to participate. The AUDIT instrument was also validated in the local reality and submitted to a test of expert judges. A pilot test was applied to 30 people and a Cronbach alpha value of 0.842 was obtained. For the analysis of data prior coding, quality control, a database was generated in Excel, from which the descriptive statistic was applied developing frequencies and percentages, for the inferential statistic the information was transferred to the SPSS program version 26, and the chi-square test was developed for the hypothesis.

3 RESULTS

This section details the results found for the 66 amateur athletes who attended a Sports Cultural Association. It is called amateurs because they practice sport in their free time, for health, for exercising their muscles, for conviction, among others, whose characteristic is that they do not receive a salary that compensates for the physical activities they perform.

Table 1: Alcohol consumption and healthy physical condition in amateur athletes

Alcohol consumption	Physical Condition					Total
	Very Bad (%)	bad f (%)	Normal f (%)	good f (%)	Very good f (%)	
Lowly	3 (14,3%)	1(4,8%)	1(4,8%)	7(33,3%)	9(42,9%)	21(100,0%)
Medium	1(5,3%)	7(36,8%)	7(36,8%)	3(15,8%)	1(5,3%)	19(100,0%)
Louder	9(34,6%)	17(65,4%)	0(0,0%)	0(0,0%)	0(0,0%)	26(100,0%)

Table 1, shows that athletes who have a low alcohol consumption, 42.9% have a very good physical condition, 33.3% have good physical condition and 14.3% a very bad physical condition, 4.8% a normal physical condition. While those who have an average alcohol consumption 36.8% have bad physical condition, 36.8% normal physical condition, 15.8% a good physical condition, and 5.3% very good physical condition. Those who have a high alcohol consumption 65.4% have bad physical condition, 34.6% very bad physical condition.

Table 2: Correlation test, alcohol consumption and healthy physical condition – hypothesis

	Value	Df	Asymp. Sig. (2-sided)
Pearson chi-square	63.611 ^a	8	0.000
Likelihood ratio	77.558	8	0.000
Linear-by-linear association	44.357	1	0.000
N of valid cases	66		

TABLE 2 SHOWS THE PROOF OF INDEPENDENCE BETWEEN THE VARIABLES ALCOHOL CONSUMPTION AND PHYSICAL CONDITION WAS FOUND A VALUE OF 63.611 AND A VALUE OF 0,000* (< 0.005) WHICH MEANS THAT YOU MUST REJECT THE NULL HYPOTHESIS THAT ESTABLISHES INDEPENDENCE OF VARIABLES. THEREFORE, WE CAN ASSUME THAT THE STUDY VARIABLES ARE RELATED.

TABLE 3: ALCOHOL CONSUMPTION IN AMATEUR ATHLETES

Tiers	Frequency	Percentage
louder	20	30,3
medium	20	30,3
lowly	26	39,4
Total	66	100%

Table 3 shows that 26 of the 66 athletes attending the Cultural Association consume alcohol, which represents 39.4% that places it at a high level. Also 46 consume alcohol representing 69.7%, a representative sample and harmful to health and development as an amateur athlete.

Table 4: Alcohol Consumption by Dimension of Risk Consumption, Symptoms of Dependence and Harmful Alcohol Consumption

Dimension Consumption of risk	never	Once or less times a month	2 to 4 times a month	2 to 3 more times a week	4 or more times a week	
	How often do you drink alcoholic beverages?	7,6	39,4	36,4	15,2	1,4
	1 o 2	3 o 4	5 o 6	7,8, o 9	10 or more	
How many drinks of alcoholic beverages do you normally consume on a normal day?	48,5	18,2	21,2	7,6	4,5	
	never	Once or less times a month	Monthly	Semiannally	A diary or diary cases	
How often do you drink 6 or more alcoholic beverages in a single day?	25,8	24,2	31,8	15,2	3	
Dimension de dependencia	Sintomas	never	Once or less times a month	Monthly	Semiannally	A diary or diary cases
How often in the past year have you been unable to stop drinking once you had started?	24,2	50	9,1	9,1	7,6	
How often in the last year could you not do what was expected because you had drunk?	30,9	34,8	19,7	11,6	3	
How often in the past year have you needed to fast to recover from heavy drinking the day before?	51,5	16,7	18,2	13,6	0	
Dimension Harmful Consumption of Alcohol	never	Once or less times a month	Monthly	Semiannally	A diary or diary cases	
How often in the past year have you felt remorse or guilt after drinking?	36,4	30,2	27,6	5,8	0	
How often in the past year have you been unable to remember what happened the night before because you had been drinking?	43,9	24,2	21,2	7,7	3	
	No	Yes but not in the course of the last year	If the last year			
Did you or someone else get hurt because you drank?	37,6	36,4	6	0	0	
Has a family member, friend, doctor, or health care professional ever expressed concern about your consumption of alcoholic beverages or suggested that you stop drinking?	37,9	27,3	34,8	0	0	

Table 4 shows that in the consumption at risk dimension, the highest percentage is found in the consumption of alcohol once or less times a month, and the frequency with which they drink 6 or more alcoholic beverages in a single day. For the dimension, Symptoms of dependence, the highest percentage is observed in people who have drunk one or less times a month. For the dimension, harmful consumption of alcohol, a high percentage indicates that a family member, friend, doctor or health professional has shown concern about their consumption of alcoholic beverages.

Table 5: Healthy physical condition according to age and distance dimension in amateur athletes

	N	Minimum	Maximum	Average	Typical dev.
age	66	20 años	29 años	25 años	2,357
Distance	66	1200 m	3000 m	2144 m	522,453

Table 5 shows that amateur athletes attending the Cultural Association are between the ages of 20 and 29, their distance covered was a minimum of 1200 meters, a maximum of 3000 meters, with an average of 2144 meters and a standard deviation of 522,453 meters

4 FINDINGS

The aim of the study was to determine the relationship

between alcohol consumption and the healthy physical condition of athletes who attend the Sports Cultural Association. The results indicate that there is a relationship between physical condition and alcohol consumption in athletes who attend the San Miguel Arcángel Cultural Association. These results coincide with those of Villace, Fernandez and Da Costa who also found that adolescents consume alcohol and was 79.17%, prevalence at 72.91%, prevalence at 57.08%, episodic excessive consumption and regular consumption of risk present values of 25.55% and 24.19% respectively. However, in contrast to the above, our study refers to young athletes (average age 25) [28]. It was evidenced that alcohol consumption occurs increasingly at earlier ages and seems to be accepted by the family, which potentiates harm and addictive behavior. Faced with this situation, the nursing professional is committed to providing preventive care for alcohol consumption through the generation of interventions that collaborate in the prevention and reduction of alcohol consumption [29]. Alcohol consumption, according to the results, demonstrates that this behavior is related to an affectation in the physical condition of people, even more, considering that the study was conducted in people who practice a sport at the level of amateur competition, which should be a protective and preventive factor for alcohol consumption. Being the sportsman from the interior of the country, it is possible that the sociocultural conditions can influence in some way in the habits that they assume, without considering their sport practice. In addition, these results are compatible with the figures of alcohol consumption in the world, which have increased in people who practice sports [30]. The data obtained allow us to infer the importance of health education to generate healthy lifestyles. Likewise, a high percentage of alcohol consumption is observed by dimensions. The consumption of alcohol in the sportsmen and women of the Cultural Association was mainly high (40%). And at the level of Risk Consumption, 21.2% stated that they consumed 5 or 6 alcoholic beverages on a day of normal consumption, for Symptoms of Dependency, 18.2% monthly stated that they needed to drink on an empty stomach in order to recover after drinking a lot the day before and for harmful consumption, 21.2% monthly had been injured because they had drunk. This finding is similar to those who found that alcohol consumption is associated with a number of factors external to sport, including the practice of other health risk behaviors [17]. These data help us to understand that high rates of alcohol consumption lead to violent behaviors and conflicts in the home. The results found indicate that the athletes evaluated are in the range of 20 to 29 years of age and the distance covered was a minimum of 1200 meters and a maximum of 3000 meters, with an average of 2144.7 meters and a standard deviation of 522,453 meters. For a young adult athlete, the average distance established according to the Cooper Test must be between 2200 and 2399 meters, which indicates that the people evaluated show a level of physical response below the established standard, which reflects their poor physical preparation, even more so considering them amateur athletes who are in current competition [27]. The benefit of physical activity to the athlete helps to maintain healthy behaviors for their social integration, such as in the development of work, as well as in their self-realization of objectives and goals. This allows the integration of sport and health, seeking well-being in maintaining the ideal weight, healthy eating, and mental health, among others [29]. It also

strengthens the heart, improves lung function, decreases the risk factors of chronic disease and allows us to sustain a quality of life in the future.

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