

TOBACCO AND ALCOHOL USE IN ADOLESCENTS AND YOUNG ATHLETES: DIFFERENCES BETWEEN GENDERS

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ABSTRACT: Adolescence is a period when children and young are susceptible to factors that influence the adoption of health-related behaviours. The use of substances, such as tobacco and alcohol is potentially associated with other risk behaviours extremely aggressive for teens and may endanger health and have serious consequences in adulthood. The objective of this work was to identify the prevalence of tobacco and alcohol use and to analyse the relationship between alcohol and tobacco consumption, in adolescents and young athletes. Were studied 2144 individuals of both genders, aged between 12 to 17 years, participants in the Youth Games of Paraná, Brazil, were studied. Sociodemographic indicators and risk behaviours associated with health were collected. The prevalence of experimental tobacco use regarding genders shows significant differences [33.8% ♂ versus

24.9% ♀]. There were important differences regarding binge drinking among the athletes [33.5% ♂ versus 28.6% ♀]. Males have a higher prevalence of alcohol and tobacco use. There are only differences concerning gender, relative to the experimental use of tobacco. The prevalence of tobacco and alcohol consumption is very similar to the values found in the same age, Brazilian non-athletes. In very ten young athletes, three presented experimental tobacco use and eight experimental alcohol consumption.

KEYWORDS: Pubere; smoking; additive behaviour, health behaviour; sport.

USO DE TABACO E ÁLCOOL EM ADOLESCENTES E JOVENS ATLETAS: DIFERENÇAS ENTRE OS GÊNEROS

RESUMO: A adolescência é um período em que crianças e jovens estão suscetíveis a fatores que influenciam a adoção de comportamentos relacionados à saúde. O uso de substâncias, como tabaco e álcool, está potencialmente associado a outros comportamentos de risco extremamente agressivos para os adolescentes, podendo colocar em risco a saúde e trazer consequências graves na idade adulta. O objetivo deste trabalho foi Identificar

a prevalência do uso de tabaco e álcool e analisar a relação entre estes consumos, em adolescentes e jovens atletas. Foram estudados 2.144 indivíduos de ambos os sexos, com idade entre 12 e 17 anos, participantes dos Jogos da Juventude do Paraná, Brasil. Foram recolhidos indicadores sociodemográficos e comportamentos de risco associados à saúde. A prevalência do uso experimental de tabaco em relação ao sexo apresenta diferenças significativas [33,8% ♂ versus 24,9% ♀]. Houve diferenças importantes em relação ao consumo excessivo de álcool entre os atletas [33,5% ♂ versus 28,6% ♀]. O sexo masculino apresenta maior prevalência de uso de álcool e tabaco. Há diferenças apenas quanto ao gênero, em relação ao uso experimental de tabaco. O consumo de tabaco e álcool é muito semelhante aos valores encontrados na mesma idade, brasileiros não atletas. Em cada dez atletas jovens, três apresentaram uso experimental de tabaco e oito, consumo experimental de álcool.

PALAVRAS-CHAVE: Púbere; fumar; comportamento aditivo, comportamento de saúde; esporte

1 | INTRODUCTION

Tobacco and alcohol abuse has always been one of the social impacts with adverse consequences at various levels of individual, social and economic life. Psychological and financial damages caused by smoking, drug and alcohol abusing include economic costs, death, suicide, delinquency and failed marriages (RAEISEI, ARBABISARJOU, MOJAHED, 2015). Adolescence is a critical developmental period in the lifespan during which social and psychological norms are established and significant physical and emotional changes take place (MURRAY, BYRNE, RIEGER, 2011).

To cope with these changes, many adolescents engage in risky behaviours (RICHTER, 2010), eventually leading to established behavioral patterns for some. In addition, other factors like genetic, environmental and intra/interpersonal factors are associated with engaging in risky behaviours. Unhealthy behaviour among adolescents represents an important public health problem with both long and short-term effects.

The use of substances, such as tobacco and alcohol is potentially associated with other risk behaviours [CAMENGA, KLEIN, ROY, 2006; BARRETO, GIATTI, CASADO, et al., 2010], extremely aggressive for teens (SILVA, RIVERA, CARVALHO, et al., 2006) and may endanger health and have serious consequences in adulthood.

Drug use in Europe now encompasses a wider range of substances than in the past. Among people who use drugs, polydrug consumption is common and individual patterns of use range from experimental to habitual and dependent consumption (EUROPEAN MONITORING CENTRE FOR DRUGS AND DRUG ADDICTION, 2017 and 2019).

Comparing substance use behaviours among European Union and United States school students, the two major school surveys of students (aged around 15 to 16) is helpful, as it allows comparisons to be made between patterns of cannabis and other substance use among European and American students (ESPAD, 2015; MIECH, JOHNSTON, O'MALLEY,

et al., 2019). Encouragingly, in both regions, the most recent data show a decline in use of tobacco and, albeit to a lesser extent, alcohol; though trends in cannabis use appear more stable. However, in respect to levels and patterns of use of these substances, important differences exist between European and American students. In Europe, measures of cannabis use are lower than those found in the United States, and cannabis use is less commonly reported than tobacco use. In contrast, US students' use of cannabis exceed their use of tobacco, which is very low. Levels of alcohol consumption also differ, with more European students reporting alcohol consumption, and more intense patterns of drinking, than their American peers (ESPAD, 2015; MIECH, JOHNSTON, O'MALLEY, et al., 2019).

Early adoption and continued use of legal and illegal drugs, for example, may lead to lifelong dependency and negative health consequences as an adult (DEWIT, ADLAF, OFFORD, 2000). Moreover, individuals who consume alcohol at an early age are more likely to experience employment problems and show criminal or violent behaviour in later life compared with those who do not (ELLICKSON, TUCKER, KLEIN, 2003). In the short-term, risky behaviours such as under-age alcohol consumption have been associated with increased risk for bodily injury from traffic-related accidents (BECK, KASPERSKI, CALDEIRA, 2010).

Several theories help explain the development and nature of health-related risk behaviours in adolescence. The Deterrence Hypothesis, for example, focuses specifically on the association between risk behaviour and sports. It proposes that participation in sports moderates delinquent behaviour (DIEHL, THIEL, ZIPFEL, 2012; EITLE, TURNER, EITLE, 2003), through exposures that promote conforming to rather than deviation from social norms (BEGG, LANGLEY, MOFFITT, et al., 1996). In organized sports, for example, adolescents are provided with structured time schedules, supervision and frequent exposure to normative behaviours associated with health benefits (EITLE, TURNER, EITLE, 2003; BEGG, LANGLEY, MOFFITT, et al., 1996). An expanded social network resulting from newly developed friendships may also promote development of group identities and cultures (ECCLES, BARBER, STONE, 2003) and sharing strategies for coping with daily problems (SYGUSCH, 2005) that also benefit health status. Some have proposed, therefore, that participation in sports may be protective against drug use (LISHA, SUSSMAN, 2010).

Pressures that prompt young athletes to refrain from engaging in risky behaviours exist alongside those that promote unhealthy behaviour, however. The Athletic Delinquent Hypothesis, for example, supports the notion that health-related risk behaviours may result from participation in sports activities (BEGG, LANGLEY, MOFFITT, et al., 1996). Due to a multitude of obligations, athletes are exposed to numerous pressures (HEYMAN, 1986).

According to a literature review on athletic participation in high school and college, higher alcohol consumption was prevalent among athletes. This may have resulted from a sense of competition, stress resulting from frequent testing and performance evaluation, perceived norms based on assumptions that other athletes consume alcohol at high levels,

and frequent exposure to commercials for alcohol products during sports events (LISHA, SUSSMAN, 2010).

Various studies have been conducted on the effects of sport on smoking, alcohol and drug abuse, but these studies have not reported consistent results (DE GRACE, KNIGHT, RODGERS, 2017). A number of studies have pointed to the preventive role of sport against smoking, drug and alcohol abuse (AARON, DEARWATER, ANDERSON, 1995; THORLINDSSON, BERNBURG, 2005; DONATO, ASSANELLI, MARCONI, 1994; WINNAIL, VALOIS, MCKEOWN, et al., 1995; SZABO, GRIFFITHS, AARHUS HØGLID, 2018). They have suggested that sport contributes to prevention through mechanisms such as reducing stress and anxiety, increasing self-esteem, decision-making power, resistance to other people's insistence, improving the image of the individual and knowing more about the destructive effects of drugs. In contrast to this group, some other groups introduced a number of other sports activities as a risk factor for smoking, drugs and alcohol abuse, and found that competitive culture and pressure to succeed could provide basis for such high-risk behaviors (DE GRACE, KNIGHT, RODGERS, 2017; MELNICK, MILLER, SABO, 2001; PERETTI-WATEL, GUAGLIARDO, VERGER, et al., 2003; RAINEY, MCKEOWN, SARGENT, et al., 1996; MOORE, CHUDLEY, 2005; WATTEN, 1995; WECHSLER, DAVENPORT, DOWDALL, et al., 1997). The growing interest in the use of tobacco and alcohol raises great concern regarding the possible negative consequences for sports, which, according to several authors (PERETTI-WATEL, BECK, LEGLEYE, 2002) is suspected of increasing the risks for future use of other drugs. The present study aims: (i) to identify the prevalence of tobacco and alcohol use¹ and (ii) to analyse the relationship between alcohol and tobacco consumption; in adolescents and young Brazilian athletes, of both genders.

2 | METHODS

For the elaboration of the study we used a database built from a descriptive cross-sectional survey, involving information related to selected sociodemographic characteristics and health risk behaviours in young athletes. The intervention protocols used were approved by the Research Ethics Committee of the Londrina State University (Process No. 073/07) and followed the norms of Resolution 196/96 of the National Health Council on research involving human beings.

The sample for the study included young athletes from the State of Paraná, of both genders, aged 12 to 17 years old, participants of the Paraná Youth Games. According to information presented by the Sports Secretariat of the State of Paraná, about 8492 young athletes participated in the competition, in six team sports (2620 athletes) and ten individual sports (5872 athletes), representing 104 cities of the Paraná state.

¹ Considering profile of regular consumption, use or consumption, at least one day or more days, in the last thirty days.

Table 1. General sociodemographic and economic characteristics of the participants. Data are given as absolute (n) and relative (%) value.

Variables	Girls (n = 929)	Boys (n = 1215)	Both genders (n = 2144)	
Age	≤ 13 Years	42 (4,5%)	10 (0,8%)	52 (2,4%)
	14 – 15 Years	767 (82,6%)	1106 (91,0%)	1873 (49,3%)
	≥ 16 Years	120 (12,9%)	99 (8,1%)	219 (10,12%)
Economic class	High	214 (23,0%)	261 (21,5%)	475 (22,2%)
	Medium high	475 (51,1%)	625 (51,4%)	1100 (51,3%)
	Low medium	224 (24,1%)	295 (24,3%)	519 (24,2%)
	Low	16 (1,7%)	34 (2,8%)	50 (2,3%)
Ethnicity	White	680 (73,2%)	821 (67,6%)	1501 (70,0%)
	Black	214 (23,0%)	347 (28,6%)	561 (26,2%)
	Nippon	35 (3,8%)	47 (3,9%)	82 (3,8%)
City population density	> 600 thousand inhabitants	78 (8,4%)	112 (9,2%)	190 (8,9%)
	200 – 600 thousand inhabitants	402 (43,3%)	490 (40,3%)	892 (41,6%)
	50 – 200 thousand inhabitants	298 (32,1%)	368 (30,3%)	666 (31,1%)
	<50 mil thousand inhabitants	151 (16,3%)	245 (20,2%)	396 (18,5)

For sample selection, a non-probabilistic casual method was used. To this end, prior to the start of the competitions, all athletes participating in the Paraná Youth Games, through their coaches and managers, were invited to participate in the study and informed about its nature and objectives.

After acceptance and confirmation by the free and informed consent form, 2144 young athletes (929 girls and 1215 boys), agreed to participate in the study, which represents approximately 25% of the participants in the competition. The characteristics of the selected sample and the number of athletes selected in the study are presented in tables 1 and 2.

Table 2. General distribution of participants by sport. Data are given as absolute (n) and relative (%) value.

Sports modalities	Girls (n = 929)	Boys (n = 1215)	Both genders (n = 2144)
Basketball	122 (13,1%)	126 (10,4%)	248 (11,6%)
Volleyball	173 (18,6%)	133 (10,9%)	306 (14,3%)
Handball	122 (13,1%)	138 (11,4%)	260 (12,1%)
Futsal	152 (16,3%)	133 (10,9%)	280 (13,1%)
Football	-	250 (20,6%)	250 (11,4%)
Athletics	88 (9,5%)	110 (9,1%)	198 (9,2%)
Bicycle	14 (1,5%)	38 (3,1%)	52 (2,4%)
Beach Volleyball	23 (2,5%)	16 (1,3%)	39 (1,8%)
Rhythmic Gymnastics	42 (4,5%)	-	42 (2,0%)
Tennis	6 (0,6%)	7 (0,6%)	13 (0,6%)
Swimming	43 (4,6%)	74 (6,1%)	117 (5,5%)
Judo	41 (4,4%)	60 (4,9%)	101 (4,7%)
Karate	30 (3,2%)	44 (3,6%)	74 (3,5%)
Taekwondo	18 (1,9%)	18 (1,5%)	36 (1,7%)
Table Tennis	8 (0,9%)	21 (1,7%)	29 (1,4%)
Chess	48 (5,2%)	46 (3,8%)	94 (4,4%)

Data collection was performed using a measuring instrument consisting of two sections: sociodemographic indicators and health risk behaviour in young athletes. In the section related to sociodemographic indicators, information on gender, age and family economic class was collected. To classify the family economic level, were used the guidelines proposed by the Brazilian Market Research Association (2015).

Information on health risk behaviours was obtained from the Youth Risk Behaviour Survey Questionnaire (YRBS), translated and cross-culturally adapted for the Brazilian

population (GUEDES, LOPES, 2010). The YRBS covers eleven dimensions related to risk behaviours for health: (1) personal safety; (2) behaviours related to violence; (3) sadness and suicide intent; (4) tobacco use; (5) consumption of alcoholic beverages; (6) use of cannabis and other drugs; (7) sexual behaviour; (8) body weight; (9) food; (10) physical activity; and (11) health related topics. However, for the present study we considered only information associated with tobacco use and alcohol consumption.

The two-section of the questionnaire were applied - with no time limit for its completion, at a single time, individually for each young athlete - by the researcher at the venue and time of the competitions. Prior to fill the assessment instrument, the researcher provided all the necessary information and recommendations, so that young athletes haven't had no doubts and filled the questionnaire according to the defined application protocol. Any questions expressed by the respondents were promptly answered by the researcher.

The data distribution was verified by the Kolmogorov-Smirnov test with Lilliefors correction. Central tendency parameters (absolute frequency, relative frequency and amplitude), were used to describe and characterize the data set. Chi-Square test was used to identify the differences between the strata under investigation, the information was analysed using contingency tables. All analyses were performed using Statistical Package for Social Science (SPSS, version 21.0 Inc., Chicago, IL, USA). For all of the analyses, we adopted a significance level of 5% ($p \leq 0.05$) as corresponding to statistical significance.

3 | RESULTS

The results presented in Table 3 show that 29.4% of young athletes have already experimental tobacco use with significantly higher prevalence among boys (33.8% ♂ versus 24.9% ♀; $p < 0.001$). Regular tobacco use (one cigarette/day in the last 30 days), was identified in 9.1% of young athletes. The boys had a significantly higher tobacco use prevalence compared to the girls (7.2% ♀ versus 10.9% ♂; $p < 0.003$). Regarding the age at which tobacco use begins, there is a growing trend of use with age, with the number of boys who started smoking at the age of ≥ 15 years, almost double that of girls (8.6 % ♀ versus 13.6% ♂).

Table 3. Prevalence of tobacco use among young athletes by gender. Data are given as absolute (n) and relative (%) value.

	Girls (n = 929)	Boys (n = 1215)	Both Genders (n = 2144)	χ^2	P
Experimental use ^a	24,9	33,8	29,4	19,657	0,001
Regular use ^b	7,2	10,9	9,1	8,789	0,003
Regular use frequency ^c				10,846	0,004
Did not smoke	92,8	89,1	90,9		
1-5 days	5,5	7,1	6,3		
≥ 6 days	1,7	3,8	2,8		
Regular use quantity ^d				10,852	0,001
≤ 1 cigarette/day	62,1	55,3	58,7		
2-5 cigarette/day	25,8	32,6	29,2		
6-10 cigarette/day	9,1	8,3	8,7		
≥ 11 cigarette/day	3,0	3,8	3,4		
Age of use ^e				22,364	0,001
Never smoked	79,7	70,8	75,2		
≤ 10 years	2,3	3,9	3,1		
11-12 years	3,1	3,3	3,2		
13-14 years	6,4	8,4	7,4		
≥ 15 years	8,6	13,6	11,1		

^a Smoked at least once or twice in their lifetime.

^b In the last 30 days smoked at least one cigarette/day.

^c In the last 30 days, number of days smoked at least one cigarette.

^d In the last 30 days, how many cigarettes have smoked/day.

^e Age who smoked a whole cigarette for the first time.

Regarding alcohol consumption, in the table 4 is demonstrated that 75% of young athletes have tried at least once in their lifetime (experimental consumption), and 50.6% regularly drink alcohol. In both cases, no gender differences were found. As for binge drinking, we observed significant differences between adolescents and young athletes [33.5% ♂ versus 28.6% ♀ (p = 0.001)].

Table 4. Prevalence of alcohol use among young athletes by gender. Data are given as absolute (n) and relative (%) value.

	Girls (n = 929)	Boys (n = 1215)	Both genders (n = 2144)	χ^2	P
Experimental use ^a	74,7	75,2	75,0	0,077	ns
Regular use ^b	48,9	51,9	50,6	2,587	ns
Binge drinking ^c	28,6	33,5	31,4	6,294	0,001
Regular use frequency ^d				1,873	ns
Do not use regularly	51,1	48,1	49,4		
1-5 days	36,6	36,7	36,6		
≥ 6 days	12,3	15,2	14,0		
Binge drinking frequency ^e				5,786	0,016
Do not drink heavy	71,4	66,5	68,6		
1-5 days	24,6	27,1	26,0		
≥ 6 days	4,0	6,4	5,4		
Use beginning age ^f				15,614	0,003
Never drunk	25,3	24,8	25,0		
≤ 10 years	9,9	11,8	10,9		
11-12 years	12,9	14,6	13,8		
13-14 years	25,7	26,7	26,2		
≥ 15 years	26,2	22,1	24,1		

not significant - ns

^a Drunk at least once in lifetime.

^b In the last 30 days drunk at least once.

^c In the last 30 days, drank 5 or more doses on the same occasion - Binge drinking.

^d Over the past 30 days, number of days that have drunk at least once.

^e In the last 30 days, number of days that have drunk 5 or more drinks - Binge drinking.

^f Age of first drunk.

The results concerning the frequency of regular alcohol consumption indicated

that 36.6% of young athletes consumed at least once between 1 and 5 days and 14% demonstrated this behaviour in ≥ 6 days. In both cases no significant differences were found between genders.

Considering binge drinking, the prevalence observed were 26% and 5.4% for frequencies of 1-5 days and ≥ 6 days, respectively. In both cases, boys had significantly higher prevalence rates than girls ($\chi^2 = 5,786$; $p = 0.016$). Observing the age of beginning alcohol consumption, were also significant differences found. The boys reported starting more early than girls ($\chi^2 = 15.614$; $p = .003$), especially at ages ≤ 12 years. Most boys started drinking at 13-14 years (26.7%), while most girls started drinking at age ≥ 15 years.

4 | DISCUSSION

Excessive tobacco use and alcohol consumption constitute world problems, growing in recent years decades, causing millions of deaths annually, including young people, especially between 15 and 35 years old. Tobacco kills more than 8 million people each year. More than 7 million of those deaths are the result of direct tobacco use while around 1.2 million are the result of non-smokers being exposed to second-hand smoke. Around 80% of the world's 1.1 billion smokers live in low-and middle-income countries. Alcohol consumption is a causal factor in more than 200 disease and injury conditions. Drinking alcohol is associated with a risk of developing health problems such as mental and behavioural disorders, including alcohol dependence, major noncommunicable diseases such as liver cirrhosis, some cancers and cardiovascular diseases, as well as injuries resulting from violence and road clashes and collisions (WORLD HEALTH ORGANIZATION, 2018).

The purpose of the present study was to verify the prevalence of tobacco use and alcohol consumption in young athletes who participated in the main sports competition in this age group of the state of Paraná, Brazil. The central question to be answered is: do adolescents and young athletes from Paraná present lower prevalence of tobacco use and alcohol consumption compared to the non-athlete young population?

Every year the Paraná Youth Games are promoted, involving the 399 municipalities of the state. The games are held in two stages. The first stage is played separately in eight regions of the state, bringing teams together according to the geographical location of the municipalities, called the regional phase. The winning teams in the regional phase disputes meet at a single moment in the host city to compete in the second phase, called the final phase.

According to Brazilian epidemiological data (IBGE, 2016), 18.4% of 9th grade students tried cigarettes, the highest frequency being observed in the South Region (24.9%) and the lowest in the Northeast Region (14.2%). In the present study, the prevalence of experimental tobacco use among young athletes was 29.4%, with a significantly higher proportion among boys (33.8%) compared to girls (24.9%). Previous studies indicate

that, among youth people with experimental tobacco use, around two thirds of them may assume a regular use behavior, and most smokers acquire smoking and nicotine addiction in adolescence, with experimental use as one of the strongest predictors of addiction to tobacco in adulthood (IMAI, COELHO, BASTOS, 2014). Comparing our results with data for a Brazilian population older than 15 years, regarding tobacco experimental use, a higher prevalence was found in young athletes (INCA, 2015). However, concerning regular use, the prevalence found in the Brazilian population, in general, was higher than that found among young athletes considered in the present study.

A study on the consumption of psychotropic drugs among students of primary and secondary education of the Brazilian public school system suggest that 24.9% of students made use of tobacco in life, the same study also points out that of every three young people who try cigarettes, one of them is a future smoker (CARLINI, NOTO, SANCHEZ, 2010). Our study indicates that 9.1% of young athletes reported regular tobacco use, pointing out significant differences between girls (7.2%) and boys (10.9%). Important factor regarding tobacco use is the age at which tobacco use begins. Studies show the importance of identifying the age at which young people had the first contact with tobacco, due to promote the earliest possible strategies to combat smoking and prevention of harmful effects on health. Regarding the regularity and amount of tobacco use we also found significant values among boys.

In the present study it was found that 75.2% of the young athletes had not tried tobacco. However, among the 24.8% of young athletes who had tried tobacco, 11.1% had 15 or more years old, which coincides with the data found by the national commission for the implementation of the framework convention on tobacco control [40], which suggests to be at 15 years old the age at which young Brazilians start smoking. On the topic of the age at which tobacco use begins, it seems that there is a growing trend with age, and the number of boys who started smoking at the age of ≥ 15 years is almost double in comparison to the girls.

Concerning to the prevalence of alcohol experimental use, this study found that approximately three quarters of respondents have consumed alcohol at some point in their lives. Contrary to the data found regarding tobacco use, in the case of alcohol, no significant differences were found between genders; more than half of the young athletes (50.6%) reported regularly consuming alcohol without significant difference between boys and girls.. The alcohol regular use prevalence in the last month was slightly lower than the observed in other studies conducted in countries such as Argentina and Uruguay, with prevalences of 56.8% and 59.6% respectively (WORLD HEALTH ORGANIZATION, 2015).

Relative to heavy and episodic consumption (binge drinking), there was a prevalence of 31.4%, with a significantly higher proportion among boys. Male adolescents used alcohol more excessively in the last month compared to girls. This finding may be related to several factors, including a cultural issue: it is more acceptable socially than men make use of

this substance. Nevertheless, it is possible that a change is taking place in this direction. Adolescence is a stage that gives great importance to belonging groups, making the individual more vulnerable to the pairs influence in the acquisition of risk behaviours [43]. However, it is the values and attitudes adopted by parents that guide their children's conduct, providing protection or risk to youth, including alcohol consumption (JINEZ, SOUZA, PILLON, 2009).

Observing the pattern of tobacco and alcohol use among the young athletes, we can detect that for every ten young athletes, three had experimental use of tobacco and eight had experimental consumption of alcohol. The data suggest that alcohol consumption is about five times higher than tobacco use, in every two young athletes, one consumes alcohol regularly. The proportion of experimentation is increasing with age; however, there is a tendency for young athletes to try alcohol earlier than tobacco.

Adolescence is a phase in which the belonging groups are very important, making the individual more vulnerable to the influence of others in the acquisition of risk behaviours (ANDRADE, YOKOTA, SÁ, 2012). However, it is the values and attitudes adopted by parents and educators that guide the conduct of young people, offering them protection or risk, including the use and consumption of tobacco or alcohol (JINEZ, SOUZA, PILLON, 2009).

The age range for initial uses and experimentation on tobacco and alcohol was between 13 and 15 years. Among the sixteen sports studied, the experimental use of tobacco and alcohol was observed in all. Cycling (43.5%) had the highest prevalence of tobacco use, and handball (84.2%) showed the highest prevalence of alcohol consumption.

In order to improve the accuracy and effectiveness of programs for the prevention of tobacco and alcohol use and drug abuse through sport, is necessary paying attention to gender and age differences and type of sports activity. Preventive programs should be designed both separated and specialized, in terms of time and content, for males and females, and consider their psychological and social differences. The limitations of this study are the fact that the studied group was constituted exclusively of participants in the Youth Games of Paraná, Brazil. Adolescents and young athletes enrolled in other events were not considered and did not participate in the survey. Another limitation is the circumstance that the prevalence of substances normally be underestimated when investigating behaviours not accepted socially, although the questionnaire autofill can reduce the impact of this bias. Additional studies taking into account the limitations found in this investigation are necessary.

5 | CONCLUSIONS

Adolescence is the most vulnerable age group to experimentation and abuse of substances that altering the states of consciousness. The reasons for the increased use of these substances are diverse and complex. Some factors may be related to this phase of life, to stress, physical and mental fatigue, pressures of best performance in the sports

field, social life and self-affirmation. Today, tobacco and alcohol is widely available and aggressively promoted throughout society. Males have a higher prevalence of alcohol and tobacco use. The prevalence of tobacco and alcohol experiencing, is very similar to the values found in young Brazilians, of the same age, non-athletes. Ten out of every three had experimental use of tobacco and eight, experimental use of alcohol.

The results suggest the need for better public policies, greater involvement of family, school and sporting club, in the implementation of programs aimed at preventing the use of tobacco, alcohol and other drugs, especially among young people in the middle stage of adolescence. Innovative and comprehensive approaches to prevention, among youth general population and young athletes, focused on information and control of the tobacco and alcohol use, are fundamental to reducing experimentation, as well as the problems associated to tobacco and alcohol use by adolescents and youth.

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