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Association between school disapproval, bullying and illicit drugs in adolescents: a cross-sectional study

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ABSTRACT

Aims: To characterize adolescents with a school failure situation and to investigate their association with the experience of bullying and alcohol/marijuana use. **Method:** This is a cross-sectional, epidemiological study, whose participants were adolescents from a public school in the city of Salvador, Bahia, Brazil. The magnitude of the association between the variables was verified through the prevalence ratio, through the program *Stata*. **Result:** The study identified a significant association between school failure and alcohol consumption. With direct bullying, it presented a borderline relationship. Moreover, with no statistical significance, school disapproval is still associated with relational bullying and marijuana use. **Discussion:** Considering the association between school failure and consumption of alcoholic beverages in adolescence, the study makes it possible to identify a group of adolescents for whom health education actions should be prioritized. **Conclusion:** The consumption of alcohol and the experience of direct bullying by adolescents make them vulnerable to school disapproval.

Descriptors: Underachievement; Adolescent; Ethanol; Pharmaceutical Preparations; Bullying; Health education.

INTRODUCTION

The elevation of the schoolwide failure rate observed in apprenticeship assessment tests, such as the National High School Examination (ENEM), reflects that most students do not reach the minimum level of satisfactory learning for their grade or school year⁽¹⁾. According to data from the Ministry of Education (MEC), the North and Northeast regions of Brazil still have the highest rates of school failure in primary and secondary education when compared to the South, Southeast and Midwest⁽²⁾.

A Brazilian study that investigated the situation of school failure in elementary education adolescents of a public school identified that 23.7% of the students who failed were involved in a bullying situation. The results of this study also indicate that, among the emotions generated in victims and aggressors involved in this type of violence, the following stand out: fear, demotivation, sadness, shame and anger⁽³⁾. These emotions, which constitute elements for the diagnosis of the mental health situation of the people who suffer or practice bullying, can compromise the school performance of adolescents.

Alcohol and/or marijuana consumption has also been observed in adolescents with school problems, as discussed in national and international studies, such as a survey carried out with 26,503 Mexican students and a study with 371 students from the public network in the state of Goiás, Brazil, respectively⁽⁴⁾. Regardless of the factor associated with low school performance, it is known that this situation tends to compromise the professional future of adolescents. The consequences of this situation may even be reflected in the

increase in criminality in the country, as unsuccessful persons in their working lives tend to acquire income through illegal practices, such as theft and/or drug trafficking⁽⁵⁾.

It is worth noting that school performance in adolescents has become an object of concern and research, especially by professionals who are part of the School Health Program (PSE, acronym in Portuguese), such as pedagogues, educators, psychologists and nurses, who began to question the causes and the factors that interfere in the teaching and learning process of students, especially of children and adolescents⁽⁶⁾.

Considering the relevance of the subject and the need to know the profile of adolescents with low academic performance and to investigate factors associated with the failure of specific locus, especially in regions marked by a context of inequalities and social inequities, the following objective was outlined: characterize the adolescents with a school failure situation and to investigate their association with the experience of bullying and alcohol/marijuana use.

METHODS

Research of quantitative nature, linked to the matrix project called "Public university and school: looking for strategies to face the factors that interfere in the teaching/ learning process", financed by the Foundation for Research Support of the State of Bahia (FAPESB).

This is a cross-sectional study conducted in a public elementary school located in a suburb of Salvador, Bahia, Brazil. In this research, the participants are 239 students enrolled in the evening shift who met the following

inclusion criterion: to be adolescent, in the age group between 10 and 19 years of age, as recommended by the Ministry of Health. The result of the sample calculation indicated the need for 210 participants, considering a sample error of 2.35%. However, all students located after two collection attempts who agreed to participate in the study and who composed the quantitative of 239 students were included.

The data collection process occurred in two stages, the first one was carried out in the period between October 2014 and January 2015. The instrument used in this first moment was a standardized form, composed of six blocks of questions that include variables related to aspects: sociodemographic and economic; sexual and reproductive health; use of alcohol and marijuana; bullying and history of intrafamily violence.

In order to classify the types of bullying (direct, relational and victimization), the Peer Victimization and Aggression Scale (EVAP, acronym in Portuguese) was used. In this way, the following actions are defined as direct aggressions: provoking, threatening, cursing (psychological order); pushing, kicking, punching (physical order), and retaliating against attacks. Bullying of the relational type is characterized by attitudes that compromise the victim's relationship with a group of equals, manifesting themselves through acts of depreciation, nickname and exclusion. Victimization corresponds to the suffering of being targeted by the aggressions. The evaluation of these types of bullying was based on a score that measures the frequency of aggressive behavior, classifying it as: never, almost never, sometimes, always and almost always. Such score ranges from 1 (never) to 5 (almost always). The result of the sum of these scores was grouped, with the 40 and 60 percentile as the cutoff point, whose values made it possible to categorize the dimensions into three levels of risk for bullying: low (dimension n < = the 40th percentile of dimension n); mean (dimension <math>n > than the 40th percentile and <60th percentile) and high (dimension <math>n > = than the 60th percentile value).

The second stage of this collection occurred in September 2016, when the notebooks were consulted to identify the school performance outcome (if approved or disapproved) referring to the year of the first stage of data collection. Only the students who were included in the sample group of the first stage participated in this second stage.

The data originated from the two collection steps were organized in an array through the Office Excel® program, constituting the study database. Subsequently, a descriptive analysis was carried out with the purpose of characterizing the adolescents with school disapproval.

To identify association between dependent and independent variables, Pearson's Chisquare test was performed. It was used to verify statistical differences between the groups, except for the variable use of marijuana, for which the Fisher's Exact test was used. The predetermined significance level is 0.05. The magnitude of the association between the variables was verified by the prevalence ratio, with their respective confidence intervals (95% CI). Statistical analysis was performed using the Stata Program version 12.

The research was approved by the Research Ethics Committee of the Nursing School of UFBA (opinion no. 384208, August 08, 2013). Still in respect to the ethical questions related to research involving human beings, the principles emanating from resolution 466/2012 were considered: justice, non-maleficence, beneficence, and autonomy.

In view of these principles, a written consent was requested from the adolescents who agreed to participate in the research, by signing the Informed Consent Form. An authorization was also requested from the legal representatives of adolescents through the signing of the Informed Consent Form (TCLE, acronym in Portuguese), in two ways, one for the researcher and another for the participants.

RESULTS

A total of 239 adolescents participated in the study. Of these, 75 (31.38%) were disapproved. Regarding the sexual variables, most of the adolescents reported having had sexual intercourse (n=38; 50.67%) and of this total, 3 (4.0%) were pregnant or had their partners pregnant. Condom use was reported by 52.63% (n=20) of adolescents who reported having had sexual intercourse.

In relation to the experience of injuries among the rejected adolescents, it was evident that the majority live with intrafamily violence (n=42, 56.0%) and with the following types of bullying: direct (n=41, 54.67%); and victimization (n=41; 54.67%) (Table 1).

Table 1 - Characterization of adolescents with low school performance in a public school, 2015, Salvador, Bahia, Brazil (n= 75).

VARIABLES	N	%
SEX		
Male	46	61,33
Female	29	38,67
AGE		
10 to 14 years	49	65,33
15 to 19 years	26	34,67
RACE		
Black	61	81,33
Not Black	14	18,67
RELIGION		
Yes	30	40,00
No	45	60,00
WORK		
Yes	5	6,67
No	70	93,33
SEXUAL RELATIONSHIP		,
Yes	38	50,67
No	37	49,33
CONDOM USE		
Yes	18	47,37
No	20	52,63
INTRA-FAMILY VIOLENCE		,
Yes	42	56,00
No	33	44,00
DIRECT BULLYING		,
Yes	41	54,67
No	34	45,33
RELATIONAL BULLYING		,
Yes	37	49,33
No	38	50,67
VICTIMIZATING BULLYING		,
Yes	41	54,67
No	34	45,33
ALCOHOL CONSUMPTION		-,
Yes	26	34,67
No	49	65,33
MARIJUANA CONSUMPTION		55,55
Yes	3	4,00
No	72	96,00
140		20,00

Source: Information on adolescents from a public school in Salvador, Bahia, Brazil.

Association with statistical significance was identified between school failure and adolescent alcohol consumption (PR=1.95 and 95% CI: 1.06 – 3.58). It was also identified a borderline association between school failure and bullying of the direct type (PR=1.70

and 95% CI: 0.98 - 2.95). Other variables, although not significant, were also associated with student disapproval, such as relational bullying (RP=1.40 and 95% CI: 0.81 - 2.44) and marijuana use (PR=6.79 and 95% CI: 0.69 - 66.40) (Table 2).

DISCUSSION

The study indicates a higher prevalence of males to school failure, a finding similar to the one identified in a study conducted in the Metropolitan Region of Campinas, São Paulo, Brazil, in which boys were more disapproved than girls⁽⁷⁾. It is believed that this reality can be associated with the social constructions of gender that justify the fact that men are more stimulated to the conquest of the labor market at the expense of investment in studies. The findings of this study also indicate that the majority of the rejected adolescents belong to the lowest age group, corresponding to ages between 10 and 14 years. However, this finding may be related to specific characteristics of this population, since the literature has indicated a higher rate of disapproval among the older students⁽⁸⁾. This disagreement points to the need for future studies in order to investigate the age group with the highest school failure rate among adolescents, as well as the factors predisposing to this context.

Another aspect observed in this research was a high prevalence of racial issues (81.33%) with school performance of adolescents, a reality also measured in a study carried out in nine municipalities in the region of Belo Horizonte, Minas Gerais, Brazil, with high school adolescents from the state public network, in which people who declared themselves to be black and brown had a greater chance of disapproval⁽⁸⁾. The high proportion (81.33%) of black adolescents disapproved reflects the social, ethnic, cultural and economic inequities that still persist in the Brazilian territory. Black people face less opportunities for social advancement than white people because they suffer from racism and prejudice in distinct selective processes and they are, in fact, individuals considered oppressed, subordinated and marginalized⁽⁸⁾.

Table 2 - Association between low school performance and the variables bullying and alcohol and marijuana consumption in adolescents of a public school, 2015, Salvador, Bahia, Brazil (n= 239).

FACTOR	Total N	Approved (%)	Disapproved (%)	Prevalence Ratio (RP)	CI (95%)
Direct bullying					
Yes	109 (45,61)	68 (62,39)	41 (37,61)	1,70	0,98 - 2,95
Relational bullying					
Yes	104 (43,51)	67 (64,42)	37 (35,58)	1,40	0,81 - 2,44
Victimization bullying					
Yes	132 (55,23)	91 (68,94)	41 (31,06)	0,96	0,55 - 1,67
Alcohol consumption					
Yes	61 (25,52)	35 (57,38)	26 (42,62)	1,95	1,06 - 3,58
Marijuana					
Yes	04 (1,67)	1 (25,0)	3 (75,0)	6,79	0,69 - 66,40

Source: Information on adolescents from a public school in Salvador, Bahia, Brazil.

The study also pointed out a higher proportion of failing adolescents among those who did not mention their religion. This data may indicate that having a religion contributes to the maintenance of conservative behaviors, which favor good school performance, such as attendance, accomplishment of school tasks, commitment to school work, among others. This is because religion represents a means of disciplining human behavior⁽⁹⁾.

With regard to work, it is known that countless teenagers do it to help parents with family support. In this study, it was verified that, among the failing adolescents in the school, 10% worked. This finding suggests that the work may impair the academic performance of adolescents, even because it generates physical and mental fatigue, especially in the case of occupation with high stress index. This is what indicates a study carried out in ten Brazilian cities in which, among the young people who do not work, most have never been disapproved in life⁽¹⁰⁾. In Mexico, a study carried out with 3,005 public school adolescents indicates that the fact that young people work and study causes damage to their mental health, something that compromises their performance in school(11).

Besides the sociodemographic aspects, the study shows a high prevalence of school failure when the health variables were analyzed. The majority of the rejected adolescents reported having already had the first sexual intercourse. This practice, when carried out early and in an unplanned manner, may compromise the adolescents' school performance, as identified in a survey of 535 primary and secondary school students, representing six

public schools in a municipality in southern Brazil⁽¹²⁾. This situation exposes adolescents to the risk of sexually transmitted infections and unwanted pregnancies, mainly because almost 50% of the students who fail do not use condoms.

This context is worrying, as both infections and unwanted pregnancy interfere in the biopsychosocial well-being of adolescents, implying difficulties in concentration in the classroom and, therefore, learning. In addition, it compromises attendance in classes and in exams, leading to low school performance and, as a result, to school failure. Moreover, an unwanted pregnancy contributes to school dropout and makes it difficult to return to school, according to a study carried out in Curitiba⁽¹³⁾.

The study also shows that adolescents with a history of intrafamily violence had a higher percentage of failure. International research presents an association between intrafamily violence and school failure⁽¹⁴⁾. Emotional wounds, marked by violence in the family nucleus itself, interfere with the quality of life of the teenager, causing psychic suffering and difficulty concentrating on school activities, which can increase the chances of failure⁽¹⁵⁾. It is emphasized that school failure is associated with social and health aspects in adolescents, such as sexual initiation and experiencing psychological violence.

The study points to an association between the disapproval of school adolescents and involvement in bullying situations, a finding also found in a survey of 1,145 adolescents living in Pelotas, Rio de Janeiro, Brazil⁽¹⁶⁾. In a study conducted in Georgia, United States of America, it was identified that a significant

proportion of failing students were involved in $bullying^{(17)}$.

This scenario deserves attention, since the adolescent who practices or suffers bullying can trigger physical, psychic and behavioral alterations, such as gastrointestinal disorders, insomnia, depression, sadness, low self-esteem, demotivation, and social isolation of teachers and colleagues. It is worth mentioning that the victims present higher percentages of these problems⁽³⁾. Corroborating these repercussions, a study conducted in ten Canadian provinces further adds that any type of aggression against adolescents may even increase the rate of suicide attempts in this age group⁽¹⁸⁾.

These situations may compromise the school performance of adolescents, since they may lack the interest in going to school, as well as difficulty concentrating and learning, intensifying the risk of school failure. A study carried out in Rio de Janeiro corroborates the relationship between bullying and lack of motivation, as well as other behaviors associated with this phenomenon, such as having sex, carrying a gun, using alcohol, cigarettes and/or other illicit drugs, among others(16). Regarding school disapproval in adolescents who use alcohol and marijuana, it is observed that this reality was also identified in national and international research(19,12,4). It should be noted that the study carried out in Rio Grande do Sul showed that the use of illicit drugs increased by 2.8 times the probability of student failure(12).

Psychoactive substances cause changes in attention, sensory perception, memory and language, as well as changes in the course, form and content of thoughts and judgment of reality. This is because the modulating effect of drugs on human behavior can lead to cognitive impairment⁽²⁰⁾, which can increase the chances of achieving low school performance and, therefore, cause reprobation. Moreover, it is known that the use of psychoactive substances can contribute to precipitate conflicts in human relations (20), and may lead to the breaking of family ties, which leaves adolescents even more vulnerable to poor school performance, especially due to experiencing affective and emotional problems.

Although it is not possible to verify cause and effect relationships between the analyzed variables, this study points to a context of Brazilian adolescents marked by elements that make them even more vulnerable to school failure. Therefore, the data reinforce the importance of investing in strategies that contemplate the social and health aspects of this population, especially in relation to adolescents in situations of bullying and use of alcohol and other drugs.

CONCLUSION

The study showed a positive association between school failure and consumption of alcoholic beverages. There was also a relationship of the borderline type between the experience of direct bullying and disapproval in school adolescents. Considering that both phenomena cause cognitive impairments, the study makes it possible to identify a group of adolescents most susceptible to low school performance, for whom health education actions should be prioritized, especially in the sense of sensitizing the child and adolescent public to the harmful effects of drugs and bullying.

Therefore, the importance of the role of the nurse as facilitator of the debate and of reflections about the situations that make the adolescent more vulnerable to school failure is emphasized. It is worth mentioning that the insertion of nursing in the school spaces constitutes a strategy of paramount importance to strengthen the articulation between the health and education sectors, for purposes in the biopsychosocial well-being of schoolchildren.

A limitation of the study refers to the non-investigation of the family history of these adolescents regarding the use of alcohol by parents, an association that would indicate (or not) the relevance of preventive actions in children/adolescents before the first contact with this drug. Such a limitation indicates a knowledge gap to be explored in order to indicate whether children of parents who use drugs are (or are not) more vulnerable to the consumption of these substances.

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