ORIGINAL ARTICLE

## Labeling disorder – the relationship between conduct problems and drug use in adolescents

# Transtorno do rótulo – a relação entre problemas de conduta e uso de drogas em adolescentes

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#### Abstract

Objective: To verify how conduct disorder and conduct problems are associated with gender, age at onset of drug use and categories of drugs used. Method: A test of association was conducted between the presence of comorbidity and gender. Mean age of first use of each drug was compared to mean age of first arrest, of first robbery/theft, and of first drug dealing. Results: In this sample, approximately 59% of adolescents had already robbed and/or stolen, 38.6% had already been arrested, 32.3% had prior history of drug dealing, 24.1% had depression, and 9.6% had conduct disorder. Prevalence of conduct problems was 65.2%. Tobacco, alcohol, marijuana and cocaine were used before the first robbery and/or theft, first drug dealing, and first arrest. Discussion: The fact that drug use onset preceded illegal acts suggests that the latter are the consequence of the consumption of the former, or perhaps, the consequence of "social invisibility" (feeling of not belonging to anything or to anybody) by which these youths undergo. Conclusions: Labeling these youths as conduct-disordered adolescents may cloud a rather different reality, and it may submit them to more social isolation and stigmatization as well.

Descriptors: Diagnosis, dual (Psychiatry); Substance-related disorders; Conduct disorder; Adolescent health; Prevalence

## Resumo

Objetivo: Verificar como o transtorno de conduta e os problemas de conduta se associam ao gênero, a idade de início do uso de drogas e aos tipos de drogas consumidas. Método: Realizou-se teste de associação entre presença de comorbidade e sexo. As médias de idade do primeiro uso de cada droga foram comparadas com as médias de idade da primeira prisão e das práticas do primeiro roubo e do primeiro tráfico. Resultados: Aproximadamente 59% dos adolescentes já haviam praticado algum tipo de roubo, 38,6% já haviam sido presos, 32,3% possuíam história pregressa de tráfico de drogas, 24,1% tinham depressão e 9,6% transtorno de conduta. A prevalência de problemas de conduta foi de 65,2%. Tabaco, álcool, maconha e cocaína foram usados antes do primeiro roubo, do primeiro tráfico e da primeira prisão. Discussão: Os atos ilegais ocorreram posteriormente ao início do uso de drogas, denotando ser conseqüência deste consumo ou, talvez, conseqüência da "invisibilidade social" (sensação de não-pertencimento a nada ou a ninguém) pela qual passam estes jovens. Conclusões: A rotulação destes jovens como portadores de transtorno de conduta pode ofuscar uma realidade bem diferente, além de submetê-los a uma maior marginalização e estigmatização.

Descritores: Diagnóstico duplo (Psiquiatria); Transtornos relacionados ao uso de substâncias; Transtorno da conduta; Saúde do adolescente; Prevalência

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#### Introduction

In the literature reviewed by Armstrong and Costello, 60% of adolescents with drug use, abuse or dependence were found to have some comorbid psychiatric diagnosis. Among this group, Conduct disorder (CD) and oppositional and defiant disorder were found to be the most prevalent psychiatric comorbidities. Major depressive disorder was also associated with drug use, abuse or dependence, although it was less frequent than CD.1

Also, frequency of school-related problems and engagement in illegal activities are higher among drug-using adolescents.<sup>2</sup> It has been described that children that dropout school are more likely to develop emotional problems and partake in risk behavior (namely early sexual involvement, violence and substance abuse), than those who attended school regularly.<sup>3-4</sup>

Whitmore et al. found a 80% CD prevalence among adolescents undergoing a treatment program for psychoactive substance use disorder (SUD) evaluated with the Diagnostic Interview Schedule for Children (DISC-2.1).5 The total sample of this study presented lifetime CD - characterized by the occurrence of three or more CD symptoms – and at least one diagnosis of drug abuse or dependence, excluding tobacco.

On the other hand, one of the main consequences of substance use disorder (SUD) among adolescents is behavioral change, even after short-term consumption. In outpatient followup of adolescents with drug problems, Scivoletto verified that 89% of them had dropped out school, 64% had already robbed and stolen, and 47% had engaged in drug dealing activities. These behavioral changes had started after drug use onset for almost all patients.<sup>2</sup> Interestingly, even for the ones with severe engagement in illegal activities, by the time patients adhered to treatment, these behavioral changes were the first to improve.

The objective of the present study is to verify the relationship between CD as well as conduct problems and SUD. This association is an important issue as CD is the most common disorder in childhood and the main cause of referral to child psychiatry specialized services.<sup>6</sup> The prevalence of conduct disorder in a population-based sample of 7- to 14-year-old Brazilian schoolchildren was reported to be 7%7 and it was commonly associated with drug dependence in adolescents. In addition, CD-diagnosed children are found to develop substance use in early age.

#### Method

This study consists of the retrospective analysis of medical records of all adolescents treated in the Adolescent and Drug Outpatient Clinic of the Psychiatric Service for Childhood and Adolescence (SEPIA) of the Institute of Psychiatry of the Clinics Hospital of the Universidade de São Paulo Medical School (IPq-HC-FMUSP), from July 1993 through July 2003. Adolescents were seen in an outpatient clinic with didactic objectives in a residency training hospital where the professional responsible for the service knew and commented on each patient evaluation. Diagnosis and eventual comorbidities of all patients treated in the Adolescent and Drug Outpatient Clinic were discussed in weekly meetings attended by the team of residents and psychologists, which were supervised by the head of the clinic. Furthermore, the physician responsible for confirming the psychiatric diagnoses identified by residents or supporting staff personally assessed all patients, allowing homogeneity of diagnostic evaluation.

ICD-108 diagnostic criteria for psychoactive substance abuse and dependence and for psychiatric comorbidities were used, since ICD-10 is the classificatory system used for coding medical records in the Brazilian public health system. According to this system, CD main characteristic is a repetitive and persistent pattern of antisocial, aggressive or defiant behavior. Such behavior, to its utmost limits, might reach relevant violations of social expectations appropriate to the age of the individual. For this reason, it is more severe than child pranks or rebellion, common in adolescence. In this study, lifetime conduct problems were defined as the occurrence over lifetime of at least three among the following conduct problems: school expulsion, robbery and/or theft activities, history of arrest and drug dealing. The selection of these three occurrences is justified by the fact that they are objectively verified, their report is independent of interpretation of attitude severity, and they are more common among drug users.

All adolescents assessed, as well as their guardians, agreed to participate in this study by signing a Consent Agreement Form. The present study was also approved by the Ethics Committee of the Clinical Hospital (FMUSP).

Data provided by adolescents on sociodemographic variables, drug consumption pattern, consequences of its use, and prevalence of comorbidities were directly derived from medical records, as well as from the questionnaire adapted for such purpose.

Tests of association between the presence of comorbidity and gender were conducted. The significance level  $(\alpha)$  was considered 0.05 (5%). Mean age of first use of each drug was compared to mean age of first arrest, or of first robbery and/or theft, or of drug dealing, and across the presence of psychiatric comorbidities through analysis of variance (ANOVA). The same test was conducted to verify the existence of associations between lifetime conduct problems and gender, types of substances used, the age of onset of each substance use, and presence of other comorbidities. Two-tailed tests were used in all comparison of means and confidence intervals were calculated with the probability of 95%.

#### Results

## 1. Sample characteristics

The sample consists of 187 adolescents, 76.5% of them were male. The average age for initiating treatment was 15.4 years ( $\pm$  1.4 years) and the majority of them were in the age group ranging between 15 and 17 years (74.9%). More than one-half (51.3%) of the youths had some working activity, be it a regular job or not (Table 1).

Table 1 - Demographic characteristics of adolescents treated in the Adolescent and Drug Outpatient Clinic from July 1993 and July 2003

Variables	No.	%
Gender		
Male	143	76.5
Female	44	23.5
Age Group		
11 year	8	1.1
12-14 years	45	24.0
15-17 years	140	74.9
Total	187	100.0
Marital Status		
Single	179	99.4
Partner	1	0.6
Regular or Irregular Job ("casual earnings")		
Yes	79	51.3
No	75	48.7

More than one-half (53.2%) of them attended the second level of elementary school (between 5th and 8th grades) and only one (0.6%) attended preparatory course (for university examination)/college.

## 2. Drug use characteristics

Alcohol was the main substance used over lifetime, followed by marijuana and tobacco. Nonetheless, consumption of tobacco was higher than that of alcohol when considering consumption in the last year or in the last month. Regarding illicit drugs, marijuana is the mostly used drug among youths in this population, considering all consumption patterns, followed by cocaine (Table 2). Curiosity was the main reported reason for the first use over lifetime (84.0%), which occurred in most of the cases with peers (81.2%).

A descriptive model for consumption progress was elaborated taking into consideration the age of onset for each substance used. Alcohol was observed to be the first substance used over lifetime (11.9  $\pm$  2.6 years), followed by tobacco (12.4  $\pm$  1.9 years), marijuana and inhalants (13.3  $\pm$  1.6 years and 13.3  $\pm$  1.9 years, respectively), crack (14.1  $\pm$  1.9 years), cocaine (14.2  $\pm$  1.4 years), and finally hallucinogens (14.7  $\pm$  1.5 years).

## 3. School-related consequences of drug use

Regarding school frequency, 40.1% of the adolescents had guit studying approximately at the age of 14.4 years ( $\pm$  1.7 years), on average, and 22.6% were reported to have non-attendance problems at school due to drug use.

Some degree of delay in school performance was found in 68.9% of the patients, and 24.3% of the adolescents had already repeated one grade three or more times. The most common reasons reported for repeating grades were excessive absences (21.0%), suspensions (18.2%), and lack of motivation (15.4%). Furthermore, 31.0% of the adolescents were expelled at least in one occasion during lifetime.

## 4. Legal consequences of drug use

Slightly more than one-half (59%) of the youths were observed to have robbed or stolen once in their lifetime. Moreover, 38.6% of the adolescents had already been arrested or detained and 32.3% of them had prior history of drug dealing. Mean age of first robbery/ theft was at age 13.8 years ( $\pm$  1.9 years) and engagement in drug dealing activity occurred approximately at age 14.5 years (± 1.3 years), on average. Mean age of first arrest/detention was at age 14.7 years ( $\pm$  1.5 years), on average. Taking into consideration that the average age of onset of illicit drug use in this population was 13.1 years, one might observe that illegal activities occurred after drug use, at least chronologically.

Table 2 - Drug use pattern of adolescents treated in the Adolescent and Drug Outpatient Clinic (IPq-HC-FMUSP) from July 1993 through July 2003

Drugs	Lifetime		Last year		Last month	
	No.	%	No.	%	No.	%
Alcohol	145	95.4	88	79.2	66	60.0
Tobacco	101	82.8	82	90.1	77	82.0
Marijuana	163	90.6	125	83.9	95	62.0
Cocaine	110	65.1	72	54.9	37	28.0
Crack	85	51.2	56	47.9	33	28.0
Inhalants	83	52.0	29	31.5	13	13.3
Benzodiazepines	8	5.5		*	*	*
Hallucinogens	19	12.8	*	*	*	*
Intravenous Drug	5	3.2		*	*	*

<sup>\*</sup> Data were unavailable in medical records

## 5. Sample description related to SUD diagnosis and existing comorbidity

Regarding diagnoses of SUD, 39.0% of the subjects were diagnosed with polysubstance use disorder, and 61% with single substance use disorder (38.1% with cannabinoids use disorder, 17.6% with cocaine and derivate use disorder, 3.7% with inhalant and volatile solvent use disorder, and 1.6% with alcohol use disorder).

Diagnosis of polysubstance use disorder requires identification of two or more drugs and in the present study 27 adolescents (37.0%) accounted for abuse of two substances (mainly marijuana and cocaine), 33 (45.2%) of three substances (the majority with the use of tobacco, marijuana and cocaine), and 13 (17.8%) of four substances (tobacco, marijuana, cocaine and solvent were the most prevalent). It is interesting that, although alcohol is the most consumed drug over lifetime, there were neither many cases of alcohol use disorder nor alcohol was present among the cases of polysubstance use disorders.

The most common comorbid psychiatric diagnoses were depressive disorder (24.1%) and CD (9.6%), followed by attention deficit hyperactivity disorder (ADHD) (4.0%), and finally psychotic disorders (2.7%).

There was no association between types of drug used and diagnosis of psychiatric comorbidities.

No difference was observed among mean age of first episodes of robbery/theft (p = 0.169), arrest (p = 0.403) and drug dealing (p = 0.532), as well as between mean age of use for each drug and the different diagnoses of comorbidity. In other words, no specific comorbidity was associated with the occurrence of illegal activities or early substance use.

## 6. Occurrence analysis of lifetime conduct problems in terms of gender, age of onset of drug use, and type of consumed drugs

#### 1) Conduct problems and gender

Prevalence of lifetime conduct problems in the studied population was 65.2% (confidence interval was 58.4%-72.0% and confidence coefficient was 95%), and it was more frequent among males (82.9%) (p = 0.005).

2) Conduct problems, age of onset of drug use, and types of consumed drugs

Mean ages at onset of drug use among adolescents with conduct problems and types of drugs used did not differ from the overall youth sample. The first substance used was alcohol (mean age at onset = 11.7 years), tobacco was next (12.4 years), followed by marijuana (13.2 years), inhalants (13.5 years), crack and cocaine (14.2 years), and finally hallucinogens (14.5 years).

Regarding the age of onset of drug use and that of illegal activities it was observed that: tobacco, alcohol, marijuana and cocaine first use was generally earlier than the first robbery and/or theft. Conversely, crack and hallucinogen first use happened later than the first occurrence of illegal activities. As per inhalant, the number of youths who used it first, having robbed/stolen later, and the number of those who first robbed/stole, having consumed it later, were approximately the same. In the sample, benzodiazepine data were inconclusive because only one subject presented information on age of first use and first robbery/theft.

Tobacco, alcohol, marijuana, cocaine, and inhalants were generally used before the first arrest. Conversely, the latter preceded hallucinogenic use. The number of adolescents who first used crack, having been arrested later, and the number of those for whom the opposite happened was approximately the same. Once again, benzodiazepine did not account for any differences.

Comparative tests among mean age of first drug use and mean age of first robbery/theft, of first drug dealing, and of first arrest for those who used drug (paired t-test) confirmed the results previously described. Normal distribution was attributed to ages for these comparative tests (Table 3).

## Discussion

## 1. Drug use characteristics

who robbed/stole first (30.0%).

Alcohol was the most used substance over lifetime in this sample, as is well established in national<sup>9-11</sup> and international<sup>12-15</sup> epidemiological studies.

Curiously, tobacco, which is the second most used drug over lifetime, in non-clinical population studies, is the third most used in the present study. The same occurred with inhalant, which is the third most used illicit drug according to epidemiological studies and the first mostly used among Brazilian students in public elementary schools and high schools according to the study conducted by Galduroz et al.<sup>11</sup>

A possible explanation for these findings is the characteristic of this clinical population whose illicit drug consumption – such as marijuana and cocaine – is the reason for referral to specialized treatment programs. Drugs such as marijuana, cocaine, and crack are deemed to be the greatest fear of Brazilian lay society, mainly when used by adolescents. Media portraits them as the great enemies among all available drugs on the market. Moreover, marijuana use has been more accepted and the trivialization of its use by media speculation results from the popular imaginary belief that it would be less harmful than tobacco because it is "natural". This major acceptance results in higher consumption frequency and, therefore, higher occurrence of problems that demand specific treatment.

On the other hand, other drugs, much used by youths, are not perceived as harmful by society possibly because the consequences of their use take more time to manifest or because they are related to other factors, such as: family culture of self-medication, lack of caution of health professionals in prescribing them, and their easy availability in Brazil. Inhalants and psychotropic drugs, namely minor tranquilizers and amphetamines, are included in this group. Because of that, very few consequences related to these drugs and events were reported by the media, reflecting the little attention given by parents and guardians when referring their youths to specialized treatment centers.

The sequence of drug use progression in the present sample is consistent with the international literature, which establishes that adolescents initiate drug use with licit substances (alcohol and tobacco) and later on use marijuana and other illicit substances.<sup>3</sup>

Table 3 - Hypothesis testing for equality of first use mean age (in years), in terms of first robbery/theft means, first drug dealing means, and first arrest means (in years), of the adolescents treated in the Adolescent and Drug Outpatient Clinic (IPq-HC-FMUSP) from July 1993 through July 2003

Drug	N	Mean age of first robbery/theft	Mean age of first use	Difference between means	P-value
Tobacco	52	13.6	12.5	1.1	0.000
Alcohol	59	13.8	11.8	2.0	0.000
Marijuana	76	13.8	13.0	0.8	0.000
Cocaine	62	14.3	14.2	0.1	0.507
Crack	50	13.9	14.2	-0.3	0.118
Benzodiazepines	1	-	-	-	-
Inhalants	40	13.8	13.7	0.1	0.734
Hallucinogens	12	14.0	14.9	-0.9	0.085
	N	Mean age of first drug dealing	Mean age of first use	Difference between means	P-value
Tobacco	38	12.6	12.2	0.4	0.648
Alcohol	39	13.0	11.2	1.8	0.052
Marijuana	43	12.8	13.2	-0.4	0.592
Cocaine	38	13.3	13.8	-0.5	0.418
Crack	28	14.0	14.5	-0.5	0.348
Benzodiazepines	3	14.0	14.0	0.0	1.000
Inhalants	26	12.3	13.8	-1.5	0.153
Hallucinogens	8	12.6	15.1	-2.5	0.212
First drug	48	13.0	13.2	-0.2	0.726
	N	Mean age of first arrest	Mean age of first use	Differences between means	P-value
Tobacco	28	14.4	12.5	1.9	0.000
Alcohol	30	14.5	11.6	2.9	0.000
Marijuana	44	14.6	13.3	1.4	0.000
Cocaine	33	14.8	14.1	0.7	0.000
Crack	31	14.6	14.4	0.2	0.401
Benzodiazepines	-	-	-		-
Inhalants	21	14.3	13.4	0.8	0.025
Hallucinogens	5	15.0	15.4	-0.4	0.178

(-) unavailable data

In this study, curiosity was the main reported reason for the first drug use, which occurred in the majority of the cases with peers. These findings are consistent with emotional and cognitive development characteristics of the stage by which these youths undergo: need of experimenting new sensations and perceiving peers as protective when out of home and away from the family.

The adolescents diagnosed with polysubstance use disorder abused from two or four types of drugs, which are often marijuana, cocaine, tobacco and inhalants.

Of note, the adolescents referred to specialized treatment centers present specific-substance abuse or dependence with eventual use of other drugs or polysubstance abuse and dependence. This finding is supported by studies in national and international clinical populations, 2,16-17 demonstrating that polysubstance use is apparently a characteristic of drug-using adolescents in general, not restricted to those who seek specialized treatment. Adolescents who seek treatment for drug use or abuse usually present polysubstance use and this does not differ from this clinical population, as observed by Scivoletto.<sup>2</sup>

#### 2. School-related consequences of drug use

Less than one-fourth (22.6%) of the adolescents who presented unattendance at school had this behavior due to drug use. Galduroz et al. found that frequencies of absences in the 30 days prior to the survey were higher among the students who reported use of illicit psychoactive drug at least once in their lifetime than for those who had never used drugs.<sup>11</sup>

Tavares, Beria, and Lima found a positive association between lifetime drug use, frequency of absences in the last month, and number of grade repetitions over lifetime.<sup>18</sup>

In the present study, 31% of the adolescents seen in the outpatient clinic had been expelled from school at least once, 40% had quit studying and 79.9% presented some degree of delay in school performance, 2.2 years, on average. Among Brazilian students of the public school system in the southeastern region only 37.9% of the students present some degree of delay. 11 One might observe that lack of interest in studying is one of the consequences of psychoactive drug consumption, taking into consideration that the regular use of licit or illicit drugs occurs at age 13 years, on average, and that 40.1% of youths quit studying approximately at age 14.4 years.

## 3. Legal consequences of drug use

The majority of the adolescents in this study reported engagement in robberies and/or thefts, drug dealing and occurrence of arrests. Considering that the average age of onset of illicit drug use in the population was 13.1 years, illegal activities occurred after drug use at least chronologically, suggesting it could be a consequence of drug use in this population.

Scivoletto<sup>2</sup> considers that there is no consensus in international studies<sup>19-20</sup> whether engagement in illegal activities is the cause or consequence of drug use. Nonetheless, robberies and/or thefts and dropping out school occurred after onset of drug use. Scivoletto<sup>2</sup> observed that there is a positive association between regular use of snorted cocaine and crack, frequency and amount of drug used and engagement in drug dealing.2

## 4. Comorbidity between drug dependence and psychiatric disorders

Comorbidity between drug dependence and psychiatric disorders is well established in the American population by various studies on adults.21-26 Studies on general adolescent population are less in number but confirm the comorbidity patterns observed in adults.25,27

CD was the most common comorbidity found in adolescents with SUD and its prevalence varied between 44%<sup>28</sup> and 80%,<sup>5</sup> whereas in the general population it is estimated to be 10.3%,<sup>29</sup> according to international studies.<sup>1,5,21,30</sup>

In this sample, the most frequent comorbidities were depressive disorders, CD, ADHD and psychotic disorders, from the most frequent to the less frequent. As expected, prevalence of psychiatric comorbidities is higher because this is a clinical population. Therefore, it was necessary to evaluate diagnostic methods and question whether a clinical interview would be sufficient for diagnosing psychiatric comorbidity in drug-using adolescents.

Giusti, using K-SADS-PL in this same population, observed that diagnosis of SUD was similar in the group submitted to K-SADS-PL and in the one submitted to clinical interview only.<sup>17</sup> Although there were higher comorbidities in general, with higher prevalence for ADHD in the sample submitted to K-SADS-PL, there were no differences regarding the prevalence of depressive disorders, CD, and suicidal attempts.<sup>21</sup> The absence of difference may be explained by the fact that treatment is provided in a resident teaching outpatient clinic of a medical school hospital where diagnoses of all patients seen in the Adolescent and Drug Outpatient Clinic are discussed in weekly meetings attended by the team of residents and psychologists, which were supervised by the chief of the clinic. Moreover, all patients were assessed by residents or the staff, and by the person who was responsible for the clinic as well, in order to confirm identified psychiatric diagnoses, so that the clinical interview was conducted thoroughly, acquiring the same diagnostic sensitivity of the used tool.

Finally, it is relevant to consider that such prevalences are underestimated because the Psychiatric Service for Childhood and Adolescence of IPq-HC-FMUSP has other specific multidisciplinary study and assistance groups for other psychiatric disorders. Therefore, patients who occasionally present less evident drug consumption, but with important symptoms of other psychiatric comorbidities such as ADHD, depressive disorder, anxiety disorders, eating disorders, and psychotic disorders may be followed up in specific outpatient clinics for treating these disorders, resulting in a decrease in the adolescent sample with psychiatric comorbidities of the Adolescent and Drug Outpatient Clinic.

CD in this population was the second most prevalent disorder. However, when comprehensive diagnostic criteria for lifetime conduct problems were applied, the prevalence of this condition increased to 65.2%.

Lewis points out that it is fundamental to proceed to a thorough and comprehensive neuropsychiatric assessment before simply considering the youth as carrier of one conduct disorder because symptoms of this disorder may be present in other psychiatric disorders and be associated with a rather reserved prognosis.7

This caution proves to be more relevant when treating adolescents with psychoactive substance use disorders

because lying, cutting classes and transgressing rules and values - which may be observed during normal child and adolescent development - are attitudes more common among drug users, including engagement in illegal activities and school-related problems.

## 5. Relationship between SUD and conduct problems/ disorders

The relationship between SUD and conduct problems is complex because the latter often coexist with other disorders and behaviors, namely aggressiveness, which may be not exclusive but part of different syndromes.<sup>29</sup> Conduct problems might be particularly related to SUD in many ways: 1) these behaviors may precede drug abuse, possibly predisposing vulnerable youths to initiate their use; 2) conduct problems could be the direct result of intoxication and also be followed by various mediating mechanisms, such as association with antisocial groups; and 3) antisocial behaviors such as robbery/ theft and aggression may be means of obtaining money in order to purchase alcohol and other drugs. Moreover, conduct problems could represent the normally expected course of CD in this population.

American authors often report high rates of comorbidity between CD and substance-related disorders among adolescents because for diagnostic purposes only the occurrence of at least three symptoms of lifetime conduct problems is necessary. 5,31 On the contrary, for the European school, and the Brazilian school as well, CD diagnosis takes also into consideration the socioeconomic and cultural setting where behavior changes or problems take place. Caution is highly recommended since drug intoxication and even withdrawal might cause behavioral changes and disinhibition that may favor antisocial attitudes.

Drug abuse and dependence in their evolutional processes may also lead to behaviors that may be characterized as conduct problems (lying about consumption, cutting classes in order to use drugs with peers, partaking in groups that engage in illegal activities) and this may intensify minor transgressions and lies, resulting in more severe antisocial acts to support consumption, such as robbery/theft and drug dealing.

This may be observed in this study by means of average age of onset of drug use and types of drugs used among adolescents with conduct problems that did not differ, compared to the overall sample. Conduct problem was likely to be a consequence of drug use, a fact that was supposed by verifying that drug use, namely alcohol, tobacco, marijuana, and cocaine preceded the occurrence of robbery/theft, drug dealing and history of arrest.

Even in the cases of severe engagement in illegal activities, when patients adhered to specialized outpatient clinic treatment, the antisocial behaviors improved.2 In other words, in the clinical practice eventual CD diagnosis does not necessarily require a specific approach. In these cases this diagnosis could cause prejudice and less investment by the team responsible for treatment. Therefore, this diagnosis would lead to much more negative consequences than new therapeutic possibilities.

Finally, all studies on drugs highly recommend observation and reassessment of psychiatric comorbid symptoms during the withdrawal period for an accurate diagnosis. The authors of this article suggest that the same might be taken into consideration for CD diagnosis in comorbidity with psychoactive substance use disorders, provided that conduct problems

commonly observed might directly result from dependence, intoxication state and even drug withdrawal.

## 6. Methodological limitations

The methodology utilized in this study does not allow the establishment of the causal relationship between CD and SUD. For this purpose, comparative studies methodologically controlled would be necessary in order to verify this differentiation. By adopting the methodology applied, this study was specifically circumscribed to the description of what was observed in the sample because it constitutes a naturalistic study.

## Conclusions

In this clinical study, frequency of diagnosis of psychiatric comorbidities among drug-dependent adolescents was lower than that verified in other studies. In addition, the majority of patients engaged in illegal activities, such as robberies/thefts, drug dealing and other illicit acts that, in most cases, escalated to arrest and detention.

It is important to emphasize that these illegal acts occurred after drug use onset, indicating that they were consequence of consumption, or perhaps, consequence of "social invisibility" (feeling of not belonging to anything or anybody) by which these youths undergo. The adolescent who is not able to stand out in activities such as sports, study, and social relations may seek identification in drugs. The initial feeling of "invisibility" is tackled: these adolescents belong henceforth to the "drug world", acquiring a social function whether it is positive or not.

In these cases, labeling youths as simply conduct-disordered patients may cloud a rather different reality, and may submit them to more social isolation and stigmatization as well.

During the assessment process of diagnosing CD in psychoactive substance-using youths, it is relevant to take into consideration the socioeconomic-cultural setting where conduct problems take place and also monitor the evolution of these symptoms after a period of drug withdrawal and psychotherapy follow-up, since in many cases these symptoms are the consequence of involvement with drugs and they often present improvement along the therapeutic process, without any specific intervention.

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