

# Differences in the pattern of drug use between male and female adolescents in treatment

## Diferenças no padrão de uso de drogas entre adolescentes do sexo masculino e feminino em tratamento

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**Abstract** **Introduction/Objectives:** The pattern of drug use among adolescents is not well known. Epidemiologic studies have reported no difference in the prevalence of drug use between genders. The present study wanted to assess the difference in drug use between genders in adolescents. The following variables were assessed: gender ratio of those looking for treatment; age they looked for treatment; age of the first drug use; substances used; with whom they first used drugs; pattern of drug use; possibly-related behavior (illegal acts, problems with the police and school delay).

**Methods:** Medical records of adolescents treated between 1993 and 2000 in a public medical center of the city São Paulo were analyzed.

**Results:** One-hundred and five medical records of adolescents aged 10 to 17 were reviewed. There were no differences between genders according to: age they looked for treatment; age of the first drug use; substances used; and illegal acts. There was a higher prevalence of male adolescents regarding to problems with the police and school delay.

**Conclusions:** Data suggest that the behavioral consequences of drug use in female adolescents are less evident than in male adolescents, what could explain the lower frequency in which female adolescents had specialized treatment.

**Keywords** Adolescence. Gender. Street drugs. Behavior.

**Resumo** **Introdução/Objetivo:** O padrão de uso de substâncias psicoativas (SPA) por adolescentes é pouco estudado. Levantamentos epidemiológicos mostram que a prevalência desse uso não difere com o gênero. O presente estudo teve como objetivo investigar possíveis diferenças do uso de SPA entre adolescentes do sexo masculino e feminino, segundo: proporção relacionada à procura por tratamento pelos dois gêneros; idade de procura de tratamento e de início do uso; SPAs utilizadas; companhia do primeiro uso; padrão de uso; comportamentos possivelmente relacionados (atos ilícitos, envolvimento com a polícia e atraso escolar).

**Métodos:** Análise de prontuários dos adolescentes em tratamento de 1993 a 2000 em um centro público da cidade de São Paulo.

**Resultados:** Foram revisados 105 prontuários, compreendendo adolescentes entre 10 e 17 anos. Não foram encontradas diferenças entre os gêneros segundo as variáveis: idade de início do uso e de procura por tratamento; tipo de drogas utilizadas; prática de ato ilícitos. Apresentaram diferenças segundo o sexo, com maior prevalência entre o sexo masculino, atraso escolar e envolvimento com a polícia.

**Conclusões:** Os dados sugerem que as conseqüências comportamentais do uso de drogas no sexo feminino são menos evidentes que no masculino. Isto poderia explicar a menor freqüência com que o sexo feminino é levado para tratamento especializado em relação ao masculino.

**Descritores** Adolescência. Gênero. Drogas ilícitas. Comportamento.

Whitmore et al<sup>1</sup> observed that adolescents of both genders started using drugs regularly at the same age. Males were younger when they first experienced drugs and had higher prevalence of conduct disorder, which was related to a greater severity of substance use disorder (SUD). Females advanced faster from abuse to dependence, and had higher prevalence of mood disorder, related to a greater severity of SUD.

School problems and illegal activities are frequent among adolescent drug users.<sup>2</sup> Adolescents who quit school are more likely to have emotional problems and to be involved in risk behaviors, such as early sexual activity, violence and substance abuse than those who attend school.<sup>3-5</sup>

There is a lack of information in the literature about differences in pattern of drug use between male and female adolescents. The identification of these patterns is essential to develop more appropriate prevention strategies, studies about risk and protective factors as well as interventions. The purpose of this study is to investigate the differences between male and female outpatient adolescents, regarding their pattern of drug use and the possibly related problematic behaviors.

## Methods

### Sample

We reviewed the medical records of all adolescents attended in the Adolescents and Drugs Outpatient Setting of the Childhood and Adolescence Psychiatric Service (SEPIA) of the Psychiatric Institute - Hospital das Clinicas - Medical School - University of São Paulo from 1993 through 2000. Adolescents included were

aged 10 to 17, living in the Great São Paulo. Informed consent was obtained from each patient. Adolescents with diagnosis of mental retardation, schizophrenic syndromes, according to the DSM-III-R<sup>6</sup> (for patients seen before 1994) or the DSM-IV<sup>7</sup> criteria or those who needed hospitalization were excluded from the study.

### Data collection

The following information was obtained from the medical records: ratio of genders being treated; age and partner in the first use; age when they presented for treatment; drugs consumed; school delay; involvement with illegal activities and problems with the police.

### Statistical analysis

The program SPSS for Windows, version 8.0 was used. Comparisons between genders, related to the information mentioned in the previous item, were made by chi-square or the Fisher's exact test, when appropriate, for the nominal variables. Student's t test was used for comparison between means. A 0.05 (5%) significance level was considered. Confidence intervals were calculated with the probability of 95%.

## Results

One-hundred and five patients were evaluated and all met diagnose criteria for chemical dependence, according to the DSM-III-R<sup>6</sup> or DSM-IV<sup>7</sup> criteria. The patients' characteristics are in Table.

There was no difference between genders regarding the age of onset and the first illegal drug consumed or the main drug consumed the year before the treatment. For both genders, the most common onset of drug use was with peers and the onset

**Table – Standard of drug consumption among adolescent patients being treated (n=105).**

Drugs	Life-time consumption*		First drug consumed		Last year's main consumed drug	
	Female (%)	Male (%)	Female(%)	Male (%)	Female (%)	Male (%)
Alcohol	15(100.0)	90(100.0)	0	1(1.1)	1(6.7)	1(1.1)
Canabis	13(86.7)	78(86.7)	10(66.7)	58(65.2)	6(40.0)	28(31.5)
Snorted cocaine	11(73.3)	58(64.4)	1(6.7)	12(13.5)	3(20.0)	27(30.3)
Crack	10(66.7)	48(53.3)	2(13.3)	7(7.9)	5(33.3)	28(31.5)
Inhalants	8(53.3)	39(43.3)	2(12.4)	11(12.4)	0	2(2.2)
Halucinogenic drugs	2(13.2)	11(12.2)	0	0	0	0
Benzodiazepines	2(13.2)**	2(2.2)	0	0	0	0
Total			15	89***	15	89***
	Female	Male	Total	P		
Age started the treatment	15.20±1.5	15.44±1.3	15.40±1.3	0.50		
Age started the use of ilegal drugs	12.13±1.7	12.34±2.2	13.29±1.5	0.80		
Reason of the first use****	Female (%)	Male (%)	Total (%)			
Curiosity	9(81.8)	54(78.3)	63(78.8)			
To agree with colleagues	1(9.1)	4(5.8)	5(6.2)			
Other	1(9.1)	11(15.9)	12(15)			
Total	11	69	80			
	Female	Male	Total	P		
School delay*****	8(66.7%)	75(90.4%)	83(87.4%)	0.04		
Age that stopped studying	13.5±0.71	14.26±1.88		0.56		
Illegal acts*****	10(66.7%)	65(78.3%)	75(76.5%)	0.32		
Age of the first illegal act	13.9±1.7	14.0±2.6		0.72		
Police problems	2(15.4%)	45(55.6%)	47(50%)	0.01		
Age of the first problem	*****	14.7±1.5				

\*Percentages exceed 100%, as patients used more than one kind of drug.

\*\*Female adolescents tended to use more benzodiazepines than male adolescents (p=0.09)

\*\*\*Data unavailable for 1 adolescent.

\*\*\*\*Unavailable data for some patients. The calculation was performed based on the total available data.

\*\*\*\*\*Data based on 12 female and on 83 male adolescents (remaining data unavailable)

\*\*\*\*\*Data based on 15 female and on 83 male adolescents (remaining data unavailable)

\*\*\*\*\*unavailable data.

\*\*\*\*\*Data based on 13 female and on 81 male adolescents (remaining data unavailable)

with boyfriend was more prevalent among females. Curiosity was the main reason for the first use (Table).

Male adolescents showed significant higher school delay. Although both genders had the same involvement with illegal activities (76.5% in average), females showed significant less problems with the police (Table).

## Discussion

The rate between genders of adolescents who presented for treatment during the period was similar to that found by Dupret et al,<sup>8</sup> in their sample 70.3% of adolescents who presented for treatment due to drug dependence were male. Among the adult population, there is also predominance of men in the specialized treatment.<sup>9,10</sup> These data make us question why females do not come to the specialized centers, since epidemiological surveys show that the prevalence of drug use in the adolescence is similar for both genders.<sup>11</sup>

The use of multiple drugs is common among adolescents.<sup>2,12</sup> It data was also observed in the present study, and there were no difference between drugs consumed by both genders. However, females tended to use more benzodiazepines than male adolescents, which is similar to the data reported among adult population.<sup>13,14</sup>

There is no consensus among authors whether the school problems and involvement with illegal activities are cause or consequences of the involvement with drugs. For Kaminer,<sup>12</sup> school withdrawal would be one of the factors that leads adolescents to start using drugs and being involved in illegal activities, whereas according to Walter et al<sup>15</sup> poor school perfor-

mance is related to the use of psychoactive substances in the year before the survey. Among the studied population, school delay, school withdrawal, involvement with illegal activities and problems with the police started after the first use of psychoactive drugs, suggesting that they are consequences of the use of drugs for both genders. Nonetheless the study design only allowed us to establish a correlation of association but not of cause-effect. The fact that females present lower school delay, fewer problems with the police despite being equally involved in illegal activities seems to be related to the female behavior that is perhaps less aggressive. Blood & Cornwall<sup>16</sup> observed a lower arrest percentage among females than male drug users.

## Conclusions

The sample assessed was adolescents living in a Brazilian city and in only one treatment center, which limits the generalization of results. The number of female adolescents was not enough to make a trustworthy comparison between genders. Despite these limitations, we observed relevant data, such as the smaller demand for treatment from female adolescents that had not been reported before in the literature. The data found suggest that the behavioral consequences of drug use among female adolescents are less evident than males, which could explain the lower rate of females forwarded to specialized treatment, and may be related to a cultural pattern of the female system.

Multicentric studies with populations of different regions could complement the obtained results. Facing the multidimensional aspect of the phenomenon more studies are needed to understand these gender-related peculiarities and to adjust the interventions.

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