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Adolescents with Substance Use Disorders: profile, self-esteem and mental disorders*

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Objective: to characterize the profile of substance use, indicators of mental disorders, and self-esteem of adolescents diagnosed with Substance Use Disorder (SUD) admitted in a psychiatric hospital (group with SUD - GS), comparing them to a group of undiagnosed adolescents (comparison group - CG). **Methodology:** descriptive, quantitative, and cross-sectional study, in which 82 male adolescents between 12 and 18 years old participated. The substance use profile, indicators of mental disorders, and self-esteem were obtained using the following instruments: Alcohol, Tobacco, and Substance Involvement Screening Test, Self-Report Questionnaire, and the Harter´s Self-Perception Profile for Adolescents. **Results:** adolescents in the GS reported a high level of school dropout, involvement in infractions, and indicators of depressive thoughts and mood significantly higher than the CG. Substance use was higher in the GS, except for alcohol use, which had similar characteristics in both groups. Global self-esteem was low in adolescents in the GS. **Conclusion:** it was possible to characterize the substance use profile of adolescents with SUD and variables associated with this phenomenon. The treatment of SUD in this population should occur in a multidisciplinary and contextualized way, emphasizing the importance of caring for risk factors and comorbidities.

Descriptors: Substance Use Disorder; Adolescents; Mental Disorders; Self-esteem.

Adolescentes com Transtornos por Uso de Substâncias: perfil, autoestima e transtornos mentais

Objetivo: caracterizar o perfil de uso de substâncias, indicadores de transtornos mentais e autoestima de adolescentes com diagnóstico de Transtorno por Uso de Substâncias (TUS) internados em um hospital psiquiátrico (Grupo com TUS – GT), comparando-os a um grupo de adolescentes sem diagnóstico (Grupo de Comparação – GC). **Metodologia:** estudo descritivo, quantitativo e transversal, do qual participaram 82 adolescentes do sexo masculino, entre 12 e 18 anos. O perfil de uso de substâncias, os indicadores de transtornos mentais e autoestima foram avaliados por meio dos instrumentos: *Alcohol, Smoking and Substance Involvement Screening Test, Self-Reporting Questionnaire* e Escala de Autopercepção de Harter para Adolescentes. **Resultados:** o GT mostrou alto nível de evasão escolar, envolvimento em atos infracionais e indicadores de humor e pensamentos depressivos expressivamente superiores ao GC. O uso de substâncias foi significativamente superior no GT, excetuando-se o uso de álcool, que teve características semelhantes nos dois grupos. A autoestima global mostrou-se rebaixada nos adolescentes do GT. **Conclusão:** foi possível caracterizar o perfil de uso de substâncias de adolescentes com TUS e variáveis associadas a esse fenômeno. O tratamento de TUS nessa população deve ocorrer de forma multidisciplinar e contextualizada, ressaltando-se a importância do cuidado com fatores de risco e comorbidades.

Descritores: Transtorno por Uso de Substâncias; Adolescentes; Transtornos Mentais; Autoestima.

Adolescentes con Trastornos Relacionados con Sustancias: perfil, autoestima y trastornos mentales

Objetivo: caracterizar el perfil de consumo de sustancias, indicadores de trastornos mentales y autoestima de adolescentes con Trastornos Relacionados con Sustancias (TRS) ingresados en un hospital psiquiátrico (Grupo con TRS; GT), comparándolos con un grupo de adolescentes no diagnosticados (Grupo de comparación; GC). **Metodología:** estudio descriptivo, cuantitativo y transversal. Participaron 82 adolescentes varones entre 12 y 18 años. El perfil de consumo de sustancias, indicadores de trastornos mentales y autoestima se evaluaron mediante los siguientes instrumentos: *Alcohol, Smoking and Substance Involvement Screening Test, Self-Reporting Questionnaire* y Escala de Autopercepción de Harter para Adolescentes. **Resultados:** el GT mostró alto nivel de deserción escolar, participación en infracciones e indicadores de estado de ánimo y pensamientos depresivos significativamente superiores al GC. El consumo de sustancias fue significativamente mayor en lo GT, a excepción del consumo de alcohol, que tuvo características similares en ambos grupos. Se demostró que la autoestima global es baja en GT. **Conclusión:** fue posible caracterizar el perfil de consumo de sustancias de los adolescentes con TRS y las variables asociadas a este fenómeno. El tratamiento de lo TRS en esta población debe realizarse de forma multidisciplinar y contextualizada, enfatizando la importancia del cuidado de los factores de riesgo y comorbilidades.

Descriptores: Trastornos Relacionados con Sustancias; Adolescentes; Trastornos Mentales; Autoestima.

Introduction

Substance Use Disorders (SUD) are described by the presence of a set of cognitive, behavioral, and physiological symptoms that indicate the continuous consumption of Psychoactive Substances (PASs), configuring a pathological pattern that involves low control, social impairment, risky use, tolerance and abstinence[1]. Worldwide, the use of PASs is a social and public health problem with significant damage at individual and social levels[2-3].

This problem is magnified when considering the consumption of PAS in adolescence because it is a developmental trajectory characterized by major physical, psychological, cognitive, and sociocultural changes[4-5]. The consequences resulting from the consumption of PAS at this stage of life may be more deleterious than those observed in adults. This is because, in addition to the demands of psychosocial adaptation, adolescents experience an intense period of brain maturation with a partial development of the structures of the reward circuit and inhibitory control. There is also a loss of part of the dopaminergic receptors, which leads to increased feelings of boredom and, consequently, an increased search for more intense sensations of pleasure[6-8]. These factors contribute to recognizing adolescents as potentially vulnerable to the consumption of PASs and development of SUD, especially those inserted in contexts of high social vulnerability, characterized by difficult access to quality services (health, education, transportation) and living in places of high exposure to PASs[9].

Several studies point to the prevalence of exposure to smoking, alcohol consumption, and substance use in male Brazilian adolescents[10-12], however, the relationship between gender and the development of SUD is unclear. A survey revealed that among children and adolescents assisted in community service for SUD, the majority were male[10]. Another recent nationwide study on school health showed that among Brazilian students aged 13 to 17 years, boys presented a higher consumption of illicit substances such as marijuana and crack when compared to the female population[12].

Other risks and protective factors for the development of SUD in adolescence have been studied considering individual, family, and environmental aspects[9,13]. At the individual level, positive self-esteem is considered one of the protective factors, and psychiatric morbidities are risk factors[14-15].

Self-esteem is a widely studied construct and refers to a representation of oneself that can be evaluated by the degree to which people perceive their achievements as consistent with their goals and aspirations[16]. Self-esteem can be accessed in a unidimensional way, considering overall self-esteem, or in a multidimensional way, evaluating specific aspects of domains of one's competence in different areas (e.g., school competence, social competence, athletic competence, physical appearance, and behavioral conduct). Specific self-esteem is related to behavioral expression, whereas global self-esteem refers to the notion of psychological well-being[17].

The relationship between self-esteem and mental disorders in adolescents has been explored by researchers in Brazil and worldwide, such as a Brazilian study that showed a negative correlation between these variables[18]. Less common, however, is the investigation of the relationship between self-esteem and SUD in adolescents. Moreover, to the best of our knowledge, the results of the most recent studies in this regard are divergent and do not offer a consensus on the protective or risky role of self-esteem for SUD[14-15,18]. A study conducted with Spanish adolescents showed, on the one hand, a negative correlation between the use of PASs and the academic, family, and physical domains of self-esteem, and, on the other hand, revealed a positive correlation between the use of PASs and social self-esteem[14]. Another study with Brazilian adolescents from an elementary school in Minas Gerais found no correlation between self-esteem and the use of PASs[15]. The lack of consensus among these results points to the need to undertake studies that seek to verify this relationship in different populations, especially among adolescents with SUD.

Psychiatric comorbidities, especially depression and anxiety, are widely studied in individuals with SUD[19-21]. There is evidence that highlights the importance of treating these disorders that constitute a risk factor for the development of SUD, especially in adolescents[22]. On the other hand, little is known about the relationship between self-esteem, indicators of mental disorders, and SUD in adolescence, especially considering adolescents hospitalized for detoxification. The study of this population has been previously described as challenging since adolescents with SUD are difficult to be accessed as they present a high level of resistance and high rates of treatment abandonment[23-25]. Therefore, this research is relevant in the production of knowledge in the area of mental health, enabling to expand the knowledge about the profile of adolescents with SUD. This study aimed to characterize the substance use profile, mental disorder indicators, and self-esteem of adolescents diagnosed with Substance Use Disorder (SUD) admitted to a psychiatric hospital (Group with SUD - GS), comparing them to a group of adolescents without diagnosis (Comparison Group - CG).

Methodology

Study design

This is a descriptive study, quantitative in nature and cross-sectional in design. We used the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) writing guide for observational studies.

Participants

A total of 86 adolescents responded to the study, which were divided into two groups: a Group of Adolescents with SUD hospitalized for treatment in a psychiatric hospital of the São Paulo state network (GS), composed of 33 adolescents with a mean time of hospitalization at the time of data collection of 14.0 days (SD=8.4); and a Comparison Group (CG), formed by 53 adolescents regularly enrolled in two schools of the public education network of the city of São Paulo, covering classes of 8th and 9th years of elementary school and 1st and 2nd years of high school. The sampling process for the GS participants was intentional, i.e., participants who were hospitalized for detoxification treatment were sought; for the CG, convenience sampling was used, considering students from public schools to which the researchers had access.

The study included 82 adolescents who met the inclusion criteria: being within the age range of 12 to 18 years, male, and answering the instruments adequately and completely. Four participants were excluded from the CG due to incorrect completion of the instruments, leaving 49 in the CG. All 33 participants of the GS were considered.

Location

All the research procedures related to the GS were carried out within the facilities of a psychiatric hospital in the state of São Paulo. The procedures related to the CG were carried out in two schools, one state and the other municipal, located in the city of São Paulo.

Time period

Data collection took place from November 2018 to May 2019. The instruments were applied in self-report format and were distributed in the same order of application in both groups.

Instruments

The Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST) was used to assess the consumption of PAS. This inventory screens the profile of PAS consumption with satisfactory psychometric properties demonstrated in the validation of the Brazilian version[26]. The instrument is composed of eight questions that, considering the last three months, address the use and problems related to various substances (tobacco, alcohol, marijuana, cocaine/crack, amphetamines or ecstasy, inhalants, hypnotics/sedatives, hallucinogens, and opioids) and the use of injectable substances. In the case of the GS, the use of PAS in the three months prior to hospitalization was considered. The ASSIST score is given per substance and can range from zero to 31 for tobacco and from zero to 39 for other substances. To classify the participants' scores we followed the risk criteria established by the WHO for problems related to the use of PAS, including the development of SUD and psychosocial problems, namely: low risk (alcohol from zero to 10 points, and other PAS from zero to 3 points), medium (alcohol from 11 to 26 points, and other PAS from 4 to 26 points), and high (27 points or more for all substances)[21].

For screening mental disorders, including depression, anxiety, and somatic disorders, we applied the Self-Reporting Questionnaire (SRQ-20), a screening instrument composed of 20 questions, which was validated in Brazil by Mari and Williams[27] and later by Gonçalves, et al.[28]. The answers of the SRQ-20 are dichotomous (yes and no) and a point is computed for each "yes" answer. The possible existence of non-psychotic disorder is the condition attributed to those individuals who present a total score equal to or higher than 7. The 20 questions that make up the instrument were grouped[29] into four subcategories: decrease in vital energy (from zero to 6 points), somatic symptoms (from zero to 6 points), depressive mood (from zero to 4 points) and depressive thoughts (from zero to 4 points).

The Harter´s Self-Perception Profile for Adolescents (SPPA) was used to observe specific and global self-esteem[30-31]. It is a 45-item inventory that describes two sentences (e.g., "some adolescents generally do the right thing BUT other adolescents do not do the right thing"), against which the participant chooses the one with which they most identify, and then attributes on a 4-point Likert scale how much they identify with the sentence. Besides global self-esteem, eight domains of specific self-esteem compose the scale, they are school competence, social acceptance, athletics, physical appearance, work, dating, behavior, and friendship. Each domain corresponds to a grouping of five items, and the score for each of them corresponds to the arithmetic mean of 5 points, i.e., 1 is the minimum score and 4 is the maximum.

Some questions regarding age, level of education, who they live with, use of PAS by close family members, first PAS experienced in life, age at first use, involvement in offenses, and number of hospitalizations were included for characterization of the participants. These questions were based on specialized literature that highlights risk and protective factors for the development of SUD[14].

Data analysis

The data were analyzed using IBM SPSS version 25.0 software. Comparison between groups was done using Fisher's test or the chi-square test. The comparison between the means of the two groups was performed using the Mann-Whitney test and its respective effect size (r), the latter only in the case of significant differences. The interpretation of the effect size was performed as follows: weak (from 0.15 to 0.24); moderate (from 0.25 to 0.34), and strong (equal to or greater than 0.35)[32]. A significance level of 0.05 was adopted.

Ethical aspects

The study was carried out after analysis and approval by the Research Ethics Committee of the Pontifical Catholic University of São Paulo - PUC/SP (CAAE 01373118.0.0000.5482). The data collection procedure only occurred after authorization by the adolescents' guardians through the Free and Informed Consent Term, as well as the participants' acceptance through the Free and Informed Consent Term.

Results

The groups in this study were characterized by adolescents with a mean age of 16.3 years (SD=1.1) in the GS and 16.0 years (SD=1.2) in the CG, with no significant difference in age between groups (p=0.198). As shown in Table 1, there was a significant difference (p=0.004) between the mean time of schooling: GS with a mean of 8.0 years (SD=2.2) and CG with 9.4 years (SD=1.1). Most of the GS participants (54.5%) reported school dropout due mainly to the harmful use of PASs.

The groups were not homogeneous regarding the distribution by legal guardian: most of the GS lived with their mother only, while most of the CG lived with their mother and father or only their mother. In addition, a significant number of GS participants (27.3%) reported that they lived with other family members due to disagreements with their parents resulting from the consumption of PASs.

There was no significant difference between the groups regarding the occurrence of PAS use by one or more close relatives (p=0.117). In the GS, most participants reported marijuana as the first drug tried in life, with the age of the first experimentation between 12 and 15 years. Most of the GS participants declared that they had already committed an infraction (75.8%) and 51.5% had been previously hospitalized for detoxification.

Table 1 - Sociodemographic and drug use characterization of adolescents with and without Substance Use Disorder. São Paulo, SP, Brazil, 2019

Profile	GS*	CG†	p
Are you enrolled in school?			
No	18 (54.5%)	0 (0.0%)	<0.001‡
Yes	15 (45.5%)	49 (100.0%)	
Who do you live with?			
Father and Mother	4 (12.1%)	20 (40.8%)	0.001§
Mother only	19 (57.6%)	17 (34.7%)	
Father only	1 (3.0%)	8 (16.3%)	
Others	9 (27.3%)	4 (8.2%)	
Does anyone close to the family use drugs?			
No	12 (36.4%)	27 (55.1%)	0.117‡
Yes	21 (63.6%)	22 (44.9%)	
First drug experimented‖			
Marijuana	27 (81.7%)	-	-
Alcohol	2 (6.1%)	-	
Cocaine/Crack	2 (6.1%)	-	
Other	2 (6.1%)	-	
Age of first use‖			
Up to 11 years old	8 (24.2%)	-	-
12 to 15 years old	25 (75.8%)	-	
Have you ever committed an infraction?‖			
No	8 (24.2%)	-	-
Yes	25 (75.8%)	-	
Number of internments‖			
1	16 (48.5%)	-	-
2	9 (27.3%)	-	
3 or more	8 (24.2%)	-	

*GS = Group with Substance Use Disorder (n=33); †CG = Comparison Group (n=49); ‡Fisher's exact test; §Chi-square test; ‖Questions asked exclusively to GS

Table 2 describes, according to the ASSIST, the substances that the participants reported having used throughout their lives, and shows that for the substances presented, the proportion of users was significantly different between the groups, with the exception of the categories of alcohol and injection substance use.

Table 2 - Comparison of psychoactive substance use among adolescents with and without Substance Use Disorder. São Paulo, SP, Brazil, 2019

Substance according to the Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST)	GS*	CG†	p‡
None	0 (0.0%)	13 (26.5%)	< 0.001
Tobacco products	32 (97.0%)	17 (34.7%)	< 0.001
Alcohol	29 (87.9%)	36 (73.5%)	0.166
Marijuana	33 (100.0%)	12 (24.5%)	< 0.001
Cocaine, crack	30 (90.9%)	0 (0.0%)	< 0.001
Amphetamines	14 (42.4%)	3 (6.1%)	< 0.001
Inhalants	22 (66.7%)	3 (6.1%)	< 0.001
Hypnotics, sedatives	4 (12.1%)	0 (0.0%)	0.023
Hallucinogens	12 (36.4%)	1 (2.0%)	< 0.001
Injectable substances	2 (6.1%)	0 (0.0%)	0.081

*GS = Group with Substance Use Disorder (n=33); †CG = Comparison Group (n=49); ‡Fisher's exact test

Table 3 shows the mean scores of each group in the ASSIST, SRQ-20, and SPPA instruments. The maximum ASSIST scores were compared, even when these scores corresponded to different substances, with the exception of tobacco, which is not responsible for hospitalization for SUD. The groups showed significantly different maximum ASSIST scores, with a difference of more than 400% between their means. The mean SRQ-20 scores of the GS were significantly higher than those obtained in the CG (p<0.001; r=0.70). The depressive mood and depressive thoughts were the sub-items of the SRQ-20 with the greatest difference between groups (r=0.61 and r=0.57, respectively). Regarding self-esteem, the groups presented significantly different averages in the following domains: social, physical appearance, dating, and behavior. Of these, the GS had lower scores only in the behavior domain. Global self-esteem also showed distinct averages, with the GS scoring lower than the CG.

Table 3 - Mean scores of substance use, mental disorders and self-esteem of adolescents with and without Substance Use Disorders. São Paulo, SP, Brazil, 2019

Instrument	M (SD)*		p†	Effect Size (r)
	GS‡	CG§		
ASSIST‖	28.5 (9,4)	6.9 (8.6)	<0.001	0.75
SRQ-20¶				
Total	8.8 (3.6)	2.8 (2.5)	<0.001	0.70
Decrease vital energy	2.9 (1.8)	1.1 (1.1)	<0.001	0.50
Somatic symptoms	1.9 (1.3)	0.5 (0.8)	<0.001	0.55
Depressive mood	2.4 (1.1)	0.7 (1.1)	<0.001	0.61
Depressive thoughts	1.7 (1.1)	0.5 (0.9)	<0.001	0.57
Self-esteem (SPPA)**				
School	2.55 (0.70)	2.69 (0.54)	0.162	-
Social	3.21 (0.57)	2.93 (0.54)	0.029	0.24
Athletics	2.88 (0,67)	2.94 (0.75)	0.750	-
Physical appearance	3.22 (0,69)	2.78 (0.61)	0.007	0.30
Work	3.21 (0.67)	3.15 (0.47)	0.446	-
Dating	3.16 (0.56)	2.63 (0.65)	0.001	0.37
Behavior	2.33 (0.76)	2.74 (0.59)	0.004	0.31
Friendship	2.44 (0.52)	2.37 (0.47)	0.644	-
Global	2.72 (0.72)	3.03 (0.58)	0.031	0.24

*M (SD) = Mean and Standard Deviation; †Mann-Whitney test; ‡GS = Group with Substance Use Disorder (n=33); §CG = Comparison Group (n=49); ‖ASSIST = Alcohol, Smoking, and Substance Involvement Screening Test; ¶SRQ-20 = Self-Reporting Questionnaire; **SPPA = Self-Perception Profile for Adolescents

The categorization of the ASSIST and SRQ-20 responses regarding the risk for problems related to the use of PASs and the possibility of non-psychotic disorder, respectively, is described in Table 4. Regarding the risk classifications determined by the ASSIST, there was a significant difference between the groups (p<0.001): most of the GS (60.6%) had high risk, while most of the CG (67.3%) had low risk. The average risk was 39.4% of the GS and 32.7% of the CG. As for the SRQ-20 response categorization, the GS had a higher proportion of possibility index of non-psychotic disorder (66.7%) compared to the CG (8.2%).

Table 4 - Distribution of adolescents with and without Substance Use Disorders, according to the risk of psychoactive substance use and mental/mental disorders. São Paulo, SP, Brazil, 2019

Instrument	GS* (n=33)	CG† (n=49)	p
ASSIST‡			
Low risk	0 (0.0%)	33 (67.3%)	<0.001§
Medium Risk	13 (39.4%)	16 (32.7%)	
High risk	20 (60.6%)	0 (0.0%)	
SRQ-20‖			
Minimal symptoms	11 (33.3%)	45 (91.8%)	<0.001¶
Possible non-psychotic disorder	22 (66.7%)	4 (8.2%)	

*GS = Group with Substance Use Disorder; †CG = Comparison Group; ‡ASSIST = Alcohol, Smoking, and Substance Involvement Screening Test; §Chi-square test; ‖SRQ-20 = Self-Reporting Questionnaire; ¶Fisher's exact test

Discussion

The profile of adolescents hospitalized for SUD who participated in this study is in accordance with what the literature points out as risk factors for the use of SPAs, and consequent development of SUD in adolescents, school dropout[33], and the lack of support from the family structure[9,13,34]. The high frequency of involvement in criminal acts reported by the GS participants corroborates a previous study that showed a close relationship between criminal acts and SUD[35]. This result highlights the complexity that involves adolescents with SUD inserted in contexts of social vulnerability since the dependence on PAS often inserts them in a conflict with the law that potentiates risk situations. As described in other studies[36-37], relapse was identified in this research as a recurrent phenomenon in the treatment process of severe SUD cases: more than half of the GS participants had two or more hospitalizations.

The profile of substance use, accessed in this research by the ASSIST inventory, proved to be more pronounced in the GS. In the case of alcohol, the GS showed similar characteristics to the CG, corroborating epidemiological data on the use of PAS in adolescence in Brazil and worldwide[2,12]. Although alcohol is the most commonly consumed substance in the world and is frequently associated with the first experience with PAS, most adolescents in the GS (81.8%) reported marijuana as the first PAS they used in their lives. This finding diverges from the report on the epidemiology of PAS in Brazil, which points to alcohol as the substance of first use in most cases[38]. However, it corroborates a study carried out with a representative population of young people between 12 and 21 years old in the United States[39]. No other studies with populations in similar contexts were found to corroborate the results of the current study. However, the uniqueness of adolescents in situations of vulnerability and who develop severe SUD should be taken into consideration, when compared to users who do not develop pathologies.

When analyzing the ASSIST scores, there were cases of GS participants who had scores characterized as medium risk. However, it should be noted that the instrument used does not consider different cutoff points for adults or adolescents. Thus, the medium risk classification found in this study may not adequately reflect the risk of PAS use for these adolescents, since adolescence is a period in which the use of PAS is more critical than in adulthood[6,9]. This finding reinforces the importance of having a PAS screening instrument specifically for adolescents, like the study conducted by the Australian government in collaboration with the WHO[40] that adapted the instrument and the classification of its responses for the adolescent population considering different age groups.

The symptom indicators of mental disorders, accessed by the SRQ-20 instrument, showed a significant difference (greater than 300%) in the GS compared to the CG, with emphasis on depressed mood and depressive thoughts. This finding evidenced a relationship between this variable and severe SUD among the adolescents in the GS, which may be associated with detoxification treatment and confinement in a mental health institution, with the adolescents being far from their affective circles. The results point to the relevance of treating symptoms related to mental disorders that coexist in adolescents with severe SUD, reinforcing results from other studies[22,24]. Symptoms such as depressed mood and depressive thoughts, which were highlighted in this study, should be taken into account in the treatment of this population by proposing therapeutic interventions capable of addressing them.

The research showed that the domains of self-esteem behaved differently, with no single direction in the population studied. The GS showed high self-esteem compared to the CG in the social, physical appearance, and dating domains. These results suggest that adolescents with SUD show greater assurance in relation to self-image in addition to self-confidence in their own resources to establish and maintain social relationships, expressed specifically by the social domain. This finding corroborates other studies[14,41] that highlight the social domain of self-esteem as a risk factor for higher PAS use and SUD.

On the contrary, in relation to the CG, the GS showed lower self-esteem in the behavioral domain. This finding can be explained based on the literature that emphasizes problems in the cognitive functions of attention and planning, as well as impairment in the

reward system in individuals with SUD[25], thus the low self-esteem in the behavioral domain may be related to the feeling of lack of control regarding the use of PASs and risk behaviors related to it, since there is a tendency in these individuals to make decisions that seek immediate rewards[6,25,42]. Finally, global self-esteem was lowered in the GS compared to the CG. According to other studies, global self-esteem can work as a protective factor for adolescents[14-15], thus, the low global self-esteem reported by participants with SUD suggests the impairment of this protective factor. This study did not evidence a causal relationship between self-esteem and severe SUD, a relationship that, as the literature review showed, still requires consensus in the scientific community[14-15].

As with all studies, this research presented some limitations. First, there was not a broader characterization of the socioeconomic and demographic condition of the population studied, which could guide, for example, the use of data for the development of public policies. Secondly, the non-random selection and the limited number of participants prevent the generalization of the results found. It is recommended that future studies encompass a larger clinical population in which the specificities of the SUD condition are ensured, in addition to exploring correlations between self-esteem, psychological comorbidities, and SUD in adolescents.

Conclusion

The results allowed us to characterize the profile of substance use, indicators of mental disorders, notably mood and depressive thoughts, and self-esteem of adolescents diagnosed with substance use disorder (SUD) admitted for treatment in a psychiatric hospital compared to a group of adolescents without the diagnosis. The adolescents with SUD showed high school dropout rates due to the use of PASs, lack of family support, and involvement in criminal acts. As for the substance use profile, although the hospitalized adolescents showed high consumption of the substances investigated by the ASSIST, there was no significant difference regarding alcohol consumption when compared to the CG. Unlike other studies that highlight alcohol as the first drug of use by individuals who develop SUD, marijuana was reported as the first substance of use by the adolescents of the GS who participated in this research. This finding calls attention to sociocultural aspects surrounding the use of PASs in this population. The symptoms of depressed mood and depressive thoughts stood out among adolescents with a SUD condition. Regarding self-esteem, although some specific domains showed higher scores in the GS, overall self-esteem and the behavioral domain were significantly lower in this group when compared to the CG.

This study contributes to the understanding of SUD in adolescents and the factors associated with this phenomenon. It can be stated that the treatment of severe SUD in adolescents should occur in a multidisciplinary and contextualized manner, highlighting the importance of family involvement, whenever possible. After discharge from inpatient detoxification treatment, adolescents should be monitored by social workers and referred to psychotherapy and psychiatric services that allow continued care for comorbidities such as depression and anxiety, in addition to checking self-esteem as an indicator of psychological well-being and as a protective factor.

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