THE ADOLESCENT CANNABIS USERS AND THE NON-USERS PERCEPTION OF BEHAVIORAL PROBLEMS

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The purpose of this study was to compare the perceptions that the adolescents receiving counseling at a school-clinic, with and without the use of cannabis, have on their behavioral problems, using the Youth Self Report (YSR) tool. The sample consisted of 50 adolescents: 25 were cannabis users and 25 were non-users. The findings suggest an association between cannabis use and the perception of the adolescents in relation to the externalizing behavior problems, rule breaking, and the total of problems. The adolescents who use the drug perceive themselves in more clinical stages than the non-users.

Descriptors: Conducta del Adolescente; Cannabis.

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A PERCEPÇÃO DE ADOLESCENTES USUÁRIOS E NÃO USUÁRIOS DE MACONHA SOBRE PROBLEMAS DE COMPORTAMENTO

A proposta deste trabalho foi comparar a percepção que os adolescentes, em acompanhamento psicológico em uma clínica-escola, com e sem uso de maconha, têm sobre seus problemas de comportamento, utilizando o instrumento Youth Self Report. A amostra foi composta por 50 adolescentes: 25 usuários de maconha e 25 não usuários. Os achados sugerem associação entre uso de maconha e a percepção dos adolescentes em relação aos problemas de comportamento externalizantes, quebrar regras e total de problemas. Os adolescentes usuários se percebem em faixas mais clínicas do que os adolescentes não usuários.

Descritores: Comportamento do Adolescente; Cannabis.

LA PERCEPCIÓN DE ADOLESCENTES USUARIOS Y NO USUARIOS DE MARIHUANA SOBRE PROBLEMAS DE COMPORTAMIENTO

La propuesta de este trabajo fue comparar la percepción que los adolescentes en acompañamiento psicológico en una clínica-escuela, con y sin uso de marihuana, tienen sobre sus problemas de comportamiento, utilizando el instrumento Youth Self Report (YSR). La muestra fue compuesta por 50 adolescentes: 25 usuarios de marihuana y 25 no usuarios. Los hallazgos sugieren una asociación entre uso de marihuana y la percepción de los adolescentes con relación a los problemas de comportamiento externo, quebrar reglas y total de problemas. Los adolescentes usuarios se perciben en bandas más clínicas del que los adolescentes no usuarios.

Descriptores: Adolescent Behavior; Cannabis.

Introduction

The use of psychoactive substances is a significant health problem among adolescents[1]. The first contact with drugs usually occurs at this stage of development, when the physical and mental changes can lead to psychological and social vulnerabilities, and in turn to the use of drugs[2]. In addition to the development stage, the male gender[3], lower socioeconomic status[4], drug use in the family[5], behavioral problems[6], conduct problems[7], are the variables related to the use of drugs in the adolescence.

Clinical and epidemiological studies have used psychopathological dimensions, such as behavioral problems, as a foundation to identify the presence of disorders[8]. These problems are considered socially inadequate, representing behavioral deficits or surpluses that affect the child's interaction with peers and adults[9], and they can be classified into two broad categories: internalizing and externalizing behaviors[7]. The former are characterized by physical and/or verbal aggressiveness, psychomotor agitation, delinquency, antisocial and risk behaviors such as, the use of psychoactive substances[10]. Now, internalizing problems refer to private and maladaptive behavioral patterns[10], being more frequently identified in disorders such as depression, social isolation, anxiety, and social phobias[11].

The specialized literature indicates that externalizing behaviors have a strong association with substance abuse in the adolescence[12]. Cannabis users have poorly controlled aggressive drive and are lacking in the ability to deal with the feelings and reactions when facing adverse situations[13]. It is also noteworthy that the lower the social competence of adolescents, the greater are the chances that they will present externalizing behavioral problems, and will engage in risky behaviors such as drug use. In other words, the early childhood experiences will affect the behaviors throughout the development stage and may result in the emergence of behavioral problems during the

middle childhood and adolescence[11]. Moreover, children who accumulate a variety of behavioral problems may face future negative outcomes, such as dropping out of school, teen pregnancy, delinquency, and drug use[14].

Therefore, it becomes necessary to identify the behavior problems presented by the adolescents being treated at the clinic-school belonging to the psychology school at a university in Porto Alegre, Rio Grande do Sul. Since this is a clinical sample, with and without psychoactive substance use, it became essential to compare the perceptions of the adolescents for a better targeting of the assistance to be offered; thus, considering the specificities of these two groups of young people. Hence, this study aims to compare the perceptions that the adolescents receiving counseling in a school-clinic, with and without the use of cannabis, have on their behavioral problems, using the Youth Self Report (YSR) tool.

Methodology

This study comprised 50 teenagers being counseled at the Psychology Assistance Service and Research (SAPP), during the year 2009 divided into two groups according to clinical referral and demand. Group 1 held 25 adolescents with psychological problems and cannabis users referred by the Justice System (Municipal Program for Implementing Social-Educational Measures (PEMSE), Foundation of the Social-Educational Assistance (FASE), and the Public Ministry (MP)), relating to the: "Adolescent Drug Users" program, whose focus was the substance use cessation. Group 2 contained 25 adolescents with psychological problems without the use of psychoactive substances, referred by the community.

The adolescent cannabis users were fulfilling social-educational mandates for infractions committed under the influence of cannabis. Therefore, these young people were already identified as users. Furthermore, all the teenagers belonged to low income communities in Porto Alegre. The participants received information regarding the research and those who agreed, signed the Term of Free and Informed Consent form along with their legal guardians as required by the Ministry of Health. The Research Ethics Committee, under number 500813/2007-8, approved the project.

Research Tool

The research employed the *Youth Self Report (YSR)* screening tool[15], self-administered to adolescents ages11

to 18, to assess behavioral problems. The initial data refer to age, gender, and education levels; while the emotional and behavioral problems data are obtained through 112 items divided into eight dimensions (retraction, somatic complaints, anxiety/depression, delinquency, aggressiveness, social, attention, and thought problems) divided into two broad categories: internalizing and externalizing behaviors. The first refers to private and maladaptive behavior patterns, being more frequently identified in disorders such as depression, social isolation, anxiety, and social phobias. Whereas the externalizing behaviors are characterized by physical and/or verbal aggressiveness, psychomotor agitation, delinquency, antisocial and risk behaviors, i.e., the use of psychoactive substances[12]. The sum of all these items yields the behavioral profile, defined as the Total Behavior Problems Scores. A classification through the cutoffs in T scores, is produced from the total score analysis, in which the youth is placed in the non-clinical, clinical, and borderline categories[15].

Data Analysis

This is a cross-sectional research of comparison between groups, matched by gender, age, and educational level. The evaluation of the YSR protocols was performed by the software accompanying the screening tool (WMD version 7.2), followed by the data compilation in the SPSS 17.0 Statistical Package for the relevant statistical treatments. The data were treated using descriptive and inferential statistics. The comparisons between groups employed the U Mann-Whitney test.

Results

The sample consisted of 25 adolescent cannabis users (Group 1) and 25 adolescents who did not use illegal drugs (Group 2). In Group 1, 88% (n = 22) of the adolescents were male, and 12% (n = 3) were female, the average age was about 15.64 (SD = 1.41), and the average schooling in years was about 7.32 (SD = 2.03). In Group 2, 92% (n = 23) of the adolescents were male, and 8% (n = 2) were female, the average age was about 14.9 (SD = 1.44), and the average schooling in years was about 8.7 (SD = 1.24). There was a significant difference (p <0.01) with regard to the years of schooling between the two groups; thus, indicating that the cannabis users have less schooling than the non-users.

Table 1 presents the results obtained in the YSR answered by the cannabis users.

Table 1 - Mean values, Standard Deviation and Classification of behavioral problems of adolescent cannabis users (Group 1)

Behavioral Problems	N	Mean	SD	Classification
Internalizing problems (IP)	25	64.16	7.06	Bordering
Anxiety and Depression (IP)	25	63.32	6.59	Non-Clinical
Isolation and Depression (PI)	25	66.20	9.36	Bordering
Somatic Problems (PI)	25	57.40	6.40	Non-Clinical
Social Problems	25	59.68	7.60	Non-Clinical
Thought Problems	25	59.64	7.73	Non-Clinical

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Table 1 - (continuation)

Behavioral Problems	N	Mean	SD	Classification
Attention Problems	25	61.68	8.85	Non-Clinical
Externalizing Problems (EP)	25	65.32	8.31	Clinical
Rule Breaking (EP)	25	66.88	7.00	Bordering
Aggressiveness (PE)	25	62.60	9.38	Non-Clinical
Activities/Social Competence	25	37.68	10.00	Bordering
Problems Total	25	64.72	6.88	Bordering

Table 2 presents the descriptive data from the results obtained in the YSR of the adolescent cannabis non-users.

Table 1 shows that the adolescent cannabis users saw themselves at borderline stages for Isolation and Depression, Breaking Rules, Internalizing Problems and Activities/Social Competence, and characterized at clinical stages of the Externalizing Problems. The Group 2, according to Table 2, saw themselves as borderline in Internalizing Problems, Externalizing, and Activities/Social Competence.

Table 2 - Mean values, Standard Deviation and Classification of behavioral problems of adolescent cannabis non-users (Group 2)

Behavioral Problems	N	Mean values	SD	Classification
Internalizing problems (IP)	25	60.48	9.31	Bordering
Anxiety and Depression (IP)	25	62.68	8.49	Non-Clinical
Isolation and Depression (PI)	25	62.04	8.77	Non-Clinical
Somatic Problems (PI)	25	55.84	7.84	Non-Clinical
Externalizing Problems (EP)	25	60.40	8.86	Bordering
Rule Breaking (EP)	25	58.08	6.93	Non-Clinical
Aggressiveness (PE)	25	62.32	9.07	Non-Clinical
Social Problems	25	58.08	7.08	Non-Clinical
Thought Problems	25	57.24	9.17	Non-Clinical
Attention Problems	25	61.12	7.97	Non-Clinical
Activities/Social Competence	25	39.80	8.54	Bordering
Problems Total	25	60.84	8.07	Bordering

Table 3 shows the scores from the scales related to the DSM-IV code in both users and non-users. Based on their perceptions, neither group scored clinical stages on the DSM-IV scales.

Table 3 – Mean Values, Standard Deviations and Classification of the variables from the YSR scale related to the DSM-IV in both groups (Group 1 and 2)

Variables related to DSM code	N	Mean values	SD	Classification
Group 2				
DSM Affective Problems	25	60.48	7.97	Non-Clinical
DSM Anxiety Problems	25	60.72	6.66	Non-Clinical
DSM Somatic Problems	25	53.64	6.81	Non-Clinical
DSM ADHD	25	59.24	6.13	Non-Clinical
DSM Oppositional Defiant	25	60.16	9.04	Non-Clinical
DSM Conduct	25	59.08	7.96	Non-Clinical
Group 1				
DSM Affective Problems	25	61.84	8.81	Non-Clinical
DSM Anxiety Problems	25	59.68	7.11	Non-Clinical
DSM Somatic Problems	25	56.96	7.71	Non-Clinical
DSM ADHD	25	59.28	7.77	Non-Clinical
DSM Oppositional Defiant	25	60.32	8.36	Non-Clinical
DSM Conduct	25	64.08	9.69	Non-Clinical

The Mann Whitey test demonstrated significant differences between the groups in relation to the Rule Breaking, Externalizing Problems, and the Total of Problems. Compared to the DSM-IV scales, there were

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significant differences in the Conduct Problems. The results show that, in these variables, the cannabis users perceived themselves in more clinical stages than the group of adolescents who did not use illegal drugs. These data are presented in Tables 4 and 5, respectively.

Table 4 - Comparison of the variables for behavioral problem between Group 1 and Group 2

Behavioral Problems	Groups	Mean Rank	P
Anxiety and Depression (IP)	Group 1	28.88 22.12	0.559
	Group 2	22.12 26.70 24.30	0.116
Isolation and Depression (PI)	Group 1	26.70 28.72 22.28	0.116
	Group 2	24.30	
Somatic Problems (PI)	Group 1	28.72	0.105
	Group 2	22.28	
Social Problems	Group 1	27.04 23.96	0.450
	Group 2	23.96	
Thought Problems	Group 1	28.98	0.089
	Group 2	22.02	
Attention Problems	Group 1	25.74	0.907
	Group 2	25.26	
Rule Breaking (EP)	Group 1	33.12	0.000
	Group 2	17.88	
Aggressiveness (PE)	Group 1	25.84	0.869
	Group 2	25.16	
Internalizing problems (IP)	Group 1	28.46	0.150
	Group 2	22.54	
Externalizing Problems (EP)	Group 1	29.58	0.048
	Group 2	21.42	
Activities/Social Competence	Group 1	22.74	0.180
	Group 2	28.26	
Problems Total	Group 1	29.58	0.047
	Group 2	21.42	

U Mann-Whitney test P value less than 0.05

Table 5 - Comparison between Group 1 and Group 2 in the variables of the DSM-IV

Behavioral Problems	Groups	Mean Rank	P
DSM Affective Problems	Group 1	26.32	0.689
	Group 2	24.68	
DSM Anxiety Problems	Group 1	24.36	0.577
	Group 2	26.64	
DSM Somatic Problems	Group 1	29.16	0.059
	Group 2	21.84	
DSM ADHD	Group 1	25.04	0.822
	Group 2	25.96	
	Group 1	26.08	0.777
	Group 2	24.92	
	Group 1	29.58	0.047
	Group 2	21.42	

U Mann-Whitney test P < 0.05

Discussion

The data show that both the adolescent cannabis users and the non-users were predominantly males and came from low income families, which indicates a similarity between the adolescents in attendance at this school-clinic; thus, corroborating data from the literature, indicating the male adolescents as one of the most characteristic profiles

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receiving psychological treatments in school-clinics[16]. Regarding educational levels, the adolescent cannabis users, in this sample, showed significantly lower levels of schooling.

The combination of lower education, lower income, and the male characteristics is often found in studies of adolescent drug users[17]. Therefore, the literature indicates that cannabis users have more school problems, and the age at the onset of alcohol use and the amount of cannabis consumed are identified as predictive factors for academic failure[18-20]. There is also a strong association between lower income at age 25, greater financial dependence, reduced satisfaction in relationships and life in general, with the consumption of this substance, and the greater the amount consumed, the greater the losses in these areas[18].

In the present study, the adolescent cannabis users showed significant deficits in externalizing problems, demonstrating a borderline profile regarding the rule breaking behavior. Similar data are found in the literature[21], pointing to the presence of high levels of externalizing behaviors (75.4%), and problems with substance abuse (95.7%) in young offenders from both urban and rural areas. In a study of 1,145 adolescents ages from 11 to 15, in the city of Pelotas, Rio Grande do Sul, demonstrated that the consumption of alcohol, drug use and bullying victimization had the highest association with a scale of conduct disorder[22].

Cases of depressed mood and feelings of isolation were also found among the adolescent cannabis users in this study. They were classified as borderline for these behavior problems; thus, confirming the statistical significance ($p < 0.05$) between conduct problems, substance use, and depressed mood[23]. Even with the presence of conduct problems denoting strong predictors of substance abuse, there is also an association between the mood and these behaviors.

Since this is a clinical sample, seen at a school-clinic, the two groups showed demand for psychological treatment. Among non-users, there was a greater perception of borderline internalizing and externalizing problems, leading to the belief that many of these adolescents seek assistance because of the negative impact that these problems have in their daily lives. When compared to adolescent users, there was a significant difference in relation to the externalizing and rule breaking behaviors. In other words, these types of behavior problems are more common among the adolescent cannabis users.

This data infers that the use of cannabis is associated with an increase in the severity of the behavioral problems. A study[24] verified the relationship between drug use and the presence of aggression, inattention, and hyperactivity in children and adolescents divided into four groups: Healthy (low aggression and low inattention/hyperactivity), Inattentive/Hyperactive (high inattention/hyperactivity and low aggressiveness), Aggressive (high aggressiveness and low inattention/hyperactivity behaviors), and Comorbidity (high aggressiveness and high inattention/hyperactivity). In a comparison between the two groups, regarding the use of alcohol and other drugs, and the Healthy group it was

determined that the Aggressive group faces higher odds of using alcohol and other drugs ($p = 0.04$) than the others.

In this sample, the majority of the externalizing behavior problems was associated with higher frequency of drug use; thus, confirming the findings in the literature[25]. While confirming the short (1year) and the long term use (4 to 5.5years) relationship between internalizing and externalizing problems in adolescent alcohol (72%) and cannabis users (86%); a study categorized adolescents in three groups: internalizing (n = 65), externalizing who were undergoing treatment for drug use (n = 76), and control (n = 94). Regarding the frequency of use during the studied times, the study verified a better situation among the adolescents belonging to the internalizing group, when compared with the externalizing ($p < 0.01$). The same was found in regard to the disorders caused by the substance use during 4- ($p < 0.05$) and 5.5 years ($p < 0.01$)[26].

As for the social competence, the adolescent both the users and the non-users perceived themselves as borderline, confirming the association between internalizing and externalizing behaviors with low levels of social competence, which can be seen as a protective factor because of its relation to the ability to adapt[26]. Accordingly, prevention programs, conducted with children and adolescents, for the development of social competence are essential so that behavioral problems, such as low acceptance, rejection, isolation, emotional instability, poor academic performance, juvenile delinquency and various psychopathologies can be minimized during adolescence and adulthood.

These programs should be implemented at the school, which constitutes one of the most significant influences on children's behavior and contributes in many different ways to the formation of the individuals through the development of behaviors, skills, and values; thus, favoring the presence of adaptive or maladaptive behaviors, including the drug use.

Some authors[27-28] mention that the formation of children and adolescents should be linked to the parents and educators working together, using skills such as stating clear expectations for behavior, the monitoring and supervision of children, to strengthen consistency with activities that encourage socialization, creating opportunities for family involvement, and promoting the development of academic and social skills. The use of these skills in the family and educational contexts reduces behavioral problems in children and give them strength to deal with adverse conditions. Furthermore, there are four elements of social bonding, which are inversely correlated with drug use, strong bond with parents, school commitment, regular involvement with church activities or other social groups, belief in the general expectations, norms, and values of society[28].

Therefore, the development of programs, as well as the availability of information regarding these prevention factors, has become essential for children and young people to have access to developing resources to help them deal with adverse conditions.

Final Considerations

The results emphasize the importance of developing researches dealing with adolescents, especially those with social-demographic characteristics, behavioral problems, and psychiatric diagnoses, which increase their vulnerability to the use of illegal drugs. While the cannabis use is associated with school, economic, and interpersonal losses, the present study due to its cross-sectional format for comparison between groups, was not able to establish a cause and effect relation.

The development of surveys to assess behavioral problems in clinical samples is essential for the creation of programs targeted to specific types of prevention and care, even in the public health sphere. Accordingly, as a result of the assessment of the perceptions of the adolescents regarding their problems, the subsequent therapeutic management becomes more specific and effective, providing opportunities for increased adherence to the treatment, and consequently, for a better prognosis; especially when it comes to two groups with different behavioral profiles.

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