

Personal Differences among Brazilian Adolescents with Distinct Levels of Engagement in Delinquency

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Abstract: Many adolescents manifest delinquent behavior, but only a few are responsible for most of the offenses and the serious crimes. To know the differences in the criminal engagement and in the personal variables related to the more persistent/severe antisocial behavior is important to adjust the Juvenile Justice Systems to the adolescents needs. In the Brazilian Justice System, this is not considered. Although the law indicates the importance of personalizing legal and social responses to each juvenile offender, the treatment is essentially undifferentiated. Therefore, the purpose of this study was to identify and describe personal variables that discriminate subgroups of Brazilian adolescents with different levels of criminal engagement. A total of 193 male adolescents (133 recruited in schools and 60 institutionalized) answered a Self-Report Delinquency Questionnaire, which included scales of psychosocial constructs. Five groups were found by the Ward and K-means clustering methods. The adolescents were compared on variables such as personal traits. Those groups with major criminal engagement had higher levels of impulsivity ($\eta^2 = 0.08$; $p = 0.002$), higher antisocial values ($\eta^2 = 0.08$; $p = 0.003$), and higher prevalence of alcohol ($X^2 = 103.75$; $p < 0.001$) and marijuana use ($X^2 = 257.61$; $p < 0.001$). This finding confirms the specialized literature, denoting how important it is to identify and understand the differences in the criminal engagement of adolescents.

Keywords: Juvenile delinquency, juvenile justice systems, criminal engagement, cluster analysis.

1. INTRODUCTION

Adolescence is a stage of life that concentrates risk behaviors, including those that can violate the laws (Le Blanc 2003; Farrington *et al.* 2006). In fact, studies in different countries have shown that many adolescents manifest delinquent behavior at this stage of life (Enzmann *et al.* 2010). A study performed in Brazil reported that approximately 77% of adolescents have committed some type of offense (Komatsu and Bazon 2015). However, for most of these teenagers, the antisocial behavior doesn't represent a real problem. It is associated with the development of identity and self-regulation, in a context of autonomy gain (Moffitt 2006; Mun, Windle and Schainker 2008). For a number of adolescents, however, this kind of behavior manifests due to significant and cumulative difficulties they experience in their personal and social life. In this case, this delinquent behavior becomes more frequent and diverse and sometimes results in more serious and violent actions (Loeber and Farrington 1998; Le Blanc 2002; Moffitt 2006). Here, such behavior leads to greater criminal engagement and is associated with persistent criminal trajectories.

Research in Developmental Criminology observes offending and problem behaviors over time and defends the importance to evaluate the adolescents

according to the levels of engagement in delinquency (or criminal engagement) and by considering the different behavior patterns and changes across the time. Loeber (1990) argued that different developmental trajectories of delinquent behavior can be identified and the juvenile offenders can be distinguished in terms of these trajectories. Also, the investigation of their peculiarities may assist researchers to detect risk factors and unique processes related to each trajectory. In this context, the independent variables should be those that describe the constructs of engagement in delinquency: precocity, diversity and frequency of criminal behaviors in adolescence (Le Blanc 2002; Piquero and Moffitt 2008).

According to Piquero and Moffitt (2008), the association between the age of the first offense and the continuation of a certain behavior that progresses into delinquency are well documented in studies on the topic. The sooner an individual commits an offense, the higher the probability of committing others and even more violent offenses later (Loeber and Farrington 1998). Furthermore, research data in different contexts show that a delinquent behavior at early age is also positively related to greater frequency and diversity of crimes committed by adolescents (Le Blanc 2002; Moffitt 2006; Komatsu and Bazon 2015).

The descriptors denominated "diversity of acts" and "frequency of acts" refer to the concept of criminal behavior chronicity (Garrido and Morales 2007). Both

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involve persistent, long-lasting offensive behaviors. For diversity of acts, the number of different offenses committed, when it is high, indicates a history of involvement in antisocial behavior. When it is low, it does not necessarily indicate the opposite, since the individual may have committed only one type of criminal act, but repeatedly. Therefore, it is of paramount importance to consider the frequency of those criminal offenses. In a systematic review, Le Blanc (2002) stipulated that diversity and a consequent increase in the frequency of criminal behaviors represent an escalation from less severe to more severe level of engagement in delinquency (criminal engagement).

Persistent trajectories of delinquent behavior have been commonly associated with a set of personal, familial and social variables that act as proximal risk factors (Le Blanc 1997). Assink *et al.* (2015) reported that multiple variables have been the objects of studies, and the enormous number of identified risk factors has forced researchers to group these variables in domains. Le Blanc (1997), for example, grouped these risk factors into six domains to interact dynamically with each other, and therefore, explain the onset of delinquency: individual - personal/psychological aspect, family, school, peer group, daily life, and rules. Similarly, in a systematic study, Loeber, Slot and Stouthamer-Loeber (2008) also grouped the risk factors for delinquency into five domains: individual, family, school, peer group and community (including neighborhood). For these authors, the accumulation of risk factors in various categories prompts some individuals to engage in illegal activities.

Another important approach refers to the risk-need-responsivity (RNR) model proposed by Andrews and Bonta (2010). Based on meta-analyses, these authors have identified eight central risk/need factors for the development and maintenance of criminal behavior: history of antisocial behavior; antisocial personality pattern; antisocial cognition; antisocial peers; problematic circumstances of home; problematic circumstances at school or work; few and in-structured leisure activities; and substance abuse.

In a recent meta-analysis of 55 studies, with a total sample of 13,872 teenagers, conducted between 1955 and 2014, Assink *et al.* (2015) investigated the effect of 14 domains. Three of those, the physical health, background, and neighborhood domains, yielded no effect. Thus, the adolescents with persistent trajectory had similar characteristics to those in the control group,

in three domains. In contrast, the results showed that relatively large effects were found for the criminal history, aggressive behavior, and alcohol/drug abuse domains, whereas relatively small effects were found for the family, neurocognitive, and attitude domains. These findings revealed that a cumulative exposure to these implies a persistent criminal trajectory.

Some personal variables grouped in domains associated with the characteristics of the individual include: *Criminal history* (information obtained via self-report or official data registered in the justice system); *Aggression* (factors relating to aggressive behavior, such as being physically and/or non-physically aggressive and having fought with parents and/or teachers); *Alcohol/drug abuse* (mainly factors relating to alcohol and drug abuse); *Emotional and behavioral problems* (factors relating to internalizing and externalizing problems, such as being depressed, having emotional problems, showing symptoms of Conduct Disorder, having a disruptive behavior, and an ADHD diagnosis); *Stress and tension in adolescence*; *Neurocognition/physiology* (factors relating to neurocognitive functioning, like intelligence, low verbal ability, low nonverbal IQ, reading problems, "sensations seeking personality"); *Attitude* (factors relating to the attitude towards delinquency, anti-social behavior) (Assink *et al.* 2015). In short, personal factors, such as personal dispositions, beliefs and attitudes, and some behaviors, such as early manifestations of antisocial conduct and substance use, are often referred to as significant risk factors for the trajectory of persistent delinquent behavior (Le Blanc 1997; Loeber, Slot and Stouthamer-Loeber 2008; Andrews and Bonta 2010; Assink *et al.* 2015).

In Brazil, it is considered that there is a great problem concerning the juvenile offenders. Despite the generalizations that can be made from the international literature, scientific knowledge on the topic, especially on the existence of different patterns of delinquent behavior, is not widespread in our society and in the juvenile justice system. In this context, the juvenile offenders are perceived by most people as dangerous or potentially dangerous (National Association of Defense Centers for children and adolescents [ANCD] 2007), and in that light are treated indistinctively. A research institute revealed that 87% of the Brazilian population was in favor of reducing the age of criminal responsibility from 18 to 16 years (*Datafolha*, 2015). It was believed that the adolescents had great responsibility for the increasing rates of criminality and that the reduction of the age of criminal

responsibility could stop this increase and produce better conditions to correct those who are detained by the police.

This way, under popular pressure for greater demand for repression of juvenile offenders, the number of adolescents under custody and detained in Brazil rose to 443% between 1996 and 2013 (Forum of Brazilian Public Security 2015) In 2012, the rate of arrested adolescents, between the ages of 12 and 17 years, was 65.1% per 100,000 inhabitants. In 2013, this rate rose to 73.4%. In the state of São Paulo, that alone has more adolescents institutionalized due to delinquent activities than all countries in South America (Fundação CASA 2011), the rates, although they have grown less rapidly when compared to those observed in other Brazilian States, are very high: in 2012, the rate of arrested adolescents was 157.5% per 100,000 inhabitants and rose to 166.5% in 2013 (Forum of Brazilian Public Security 2015).

Although the Brazilian Law, the Statute of the Child and Adolescent in Brazil (1990), has established different approaches to treating juvenile delinquents, based on the analysis of circumstances and the needs of a minor, in practice, the sanctions of the Juvenile Justice System tend to be out of hand and highly repressive and most often deprive the juveniles of their freedom, as mentioned. The judicial-decision making is strongly attained to the analysis of offenses that brought the juvenile to justice, considering the legal criteria with respect to greater or lesser levels of severity.

Thus, for the Juvenile Justice System, an unduly logic similar to that of the Criminal Justice System prevails i.e. the severity of the penalty should be proportionate to the gravity of the offense committed, without taking into account the characteristics and specific needs of a minor (Maruschi and Bazon 2014).

To differentiate the types of intervention designed to meet the varying needs of juvenile offenders is essential to transform juvenile justice into a more balanced and restorative justice system. In one hand, some legal infractions and rule breaking are normative during adolescence. However, it should be observed that a minority of young people engage in delinquent acts, although most have never been arrested (Farrington *et al.* 2006; Bazon, Komatsu, Panosso and Estevão 2011). On the other hand, to be able to identify young people who exhibit a more problematic and persistent pattern of offensive behavior is also essential.

Such condition will be the foundation for the planning and implementation of an appropriate follow-up, and may therefore consider the needs and the difficulties that sustain such behavior over time (Loeber and Farrington 1998). Furthermore, this differentiation may not only contribute to the dynamism of the system and public policies in the judicial area, but may also offer relevant data for a better public debate based on juvenile delinquency and ways of prevention and control of crime.

In this perspective, the present study aimed to identify and describe the personal/individual variables to distinguish groups of adolescents with regards to the level of engagement in delinquency (criminal engagement), which was based on precocity (age of the first offense - onset), diversity (number of different offenses committed so far), and frequency (the total number of offenses committed in the past 12 months) to determine the main factors toward the escalation into the level of engagement in delinquency of adolescents in Brazil.

2. METHODS

2.1. Participants

A total of 193 male adolescents, mean age of 15.2 years; SD = 1.4, from a medium-sized town in the state of São Paulo, Brazil, participated in this study. Of these, 133 were students, recruited from three public schools in the city, and 60 were juvenile offenders on probation that were recruited from judicial enforcement programs. The social class of the participants and their respective monthly incomes average, according the propositions of Brazilian Association of Research Companies (ABEP, 2014), were: A2 (7%; \$6631), B1 (14%; \$2.937; B2 (28%; \$1.540); C1 (39%; \$858); C2 (11%; \$515); DE (1%; \$243). No significant differences were found between scholars and judicialized adolescents proportions in the classes [$X^2(6) = 0.42$].

2.2. Instruments

For the collection of self-report delinquency data, we used a questionnaire with structure similar to that given in the framework of the Second International Self-Reported Delinquency Study, in 2006, in 30 countries. In addition to the introduction with questions focused on the sociodemographic information of the respondent, the instrument contained 77 questions pertaining to personal and social variables. Other 14 questions referred to criminal behavior that may have

been committed by the adolescents, totaling 91 questions.

The questions related to personal and social variables, according to the literature, are risk factors for persistent criminal conduct and include seven domains: 1) criminal history; 2) the use of psychoactive substance; 3) personal dispositions, beliefs and attitudes; 4) family; 5) peer group and daily living; 6) school; and 7) community and neighborhood. For the data analysis, only the following personal variables were considered in the present study: 1) criminal history; 2) use of psychoactive substances; and 3) personal dispositions, beliefs and attitudes.

Information on *Criminal history* was provided by a self-report of the number of times the adolescent had to appear before a judge due to any offense, and by the number of times that he had been in trouble with the police, which was considered a discrete variable ($\alpha = .61$).

The *use of psychoactive substances* was measured by the answer given to the following question, "Have you ever drunk beer, wine or other alcoholic beverages?" If "yes", the question was: "How often do you drink?". The respondent had to choose among *three alternatives*: "at least once a week", "at least once a month" and "seldom or never". The same type of question was made for the use of marijuana and the use of other illicit drugs¹.

Personal dispositions, beliefs and attitudes include the constructs of impulsiveness, antisocial values and violent attitudes.

Impulsivity represents a difficulty of self-control and is measured by responses in a four-point Likert-type scale ("never/rarely", "seldom", "often" and "always") to five items (e.g. "*I do things without thinking*" and "*Sometimes I break the rules because I act without thinking*") ($\alpha = .69$). *Antisocial values* refer to acceptance of disruptive acts characterized by covert and overt hostility and intentional aggression toward others. This construct is measured by responses in a four-point Likert-type scale ("Not seriously", "less seriously", "seriously" and "very seriously") to the eight questions that made up phrases that represent antisocial conducts or actions ($\alpha = .87$). For example, "*To intentionally damage something that does not*

belong to you", "*To get money or something else that does not belong to you, at home or at school*". And *Violent attitude* refers to an acceptance of violence involving physical behavior. It is measured by responses to four questions in which the respondent must indicate "Agree" or "Disagree" with the statement. Some examples are as follows: "*A person has to use force to be respected*" and "*It's okay to hit someone if he insulted my family*." ($\alpha = .52$).

For *delinquent behaviors*, the instrument focuses on fourteen items (offenses) which are punishable by law in Brazil: damage, fight, personal injury, hit someone with an object, abuse against animals, possession of stolen property, shoplifting, stealing and robbing from someone, items stolen from car, bike theft, vehicle theft, illegal gun possession, and drug trafficking. The offenses covered by the questionnaire were described in behavioral not in legal terms. For example, to investigate a crime of shoplifting, the question asked was: "Have you ever got something and didn't pay for it in a store (shops, supermarket, etc)?"

For each behavior, the respondents were asked if they had "ever" done something (regardless of whether they were caught by the police); this information, which referred to a group of respondents, provided the number of individuals who have committed a crime once in their lives (measuring the prevalence). Upon the affirmative response of the respondents, they had to answer the following questions: "Have you committed a similar offense in the last 12 months?" and "How often have you committed a similar offense?" The information obtained from the groups of respondents made it possible to determine the prevalence of adolescents by category of behavior and frequency of each act and for each teenager during that past year.

2.3. Data Collection

Data were collected only from those participants who were willing to take part in the study and whose parents/responsible provided their free and informed consent. Therefore, the present study was conducted according to the ethical standards governing research with human participants.

Data collection in schools was carried out in small groups with 10 adolescents each in a classroom. The participants read and responded the questionnaire individually. Doubts were solved by the researchers upon request. Data collection with the adolescent offenders was obtained from each one in a reserved

¹In the case of the *use of psychoactive substances*, the alpha was not calculated because there is no more than one measure of the same variable.

room of the institution. With them, the questionnaire was applied individually according to the organization of the judicial enforcement program – the probation – because that doesn't allow groups of adolescents gathered at the same time. In this particular case, the individual application of the questionnaire created the ideal conditions for data collection, with a structured interview format, since the clear majority of adolescents in conflict with the law are behind in their school levels. This situation reflects their poor reading and/or interpretation skills. Therefore, data were collected in diverse ways to ensure the standardization of the procedure, considering the need to level the quality of the answers offered by the respondents in this group.

2.4. Data Analysis

First, the Hopkins statistic was calculated to test the spatial randomness of the data to assess the cluster tendency (Lawson and Jurs 1990). The value of H statistic was 0.25, indicating that the dataset was significantly a clusterable data. Then, the relevant number of clusters was determined by two indexes: *Friedman*, an index based on a nonhierarchical clustering method (Friedman and Rubin, 1967); and *SDbw*, an index based on the criteria of compactness and separation between clusters (Halkidi and Vazirgiannis, 2001). Both procedures propose five as the best number of clusters.

Afterwards, a cluster analysis was performed by combining the Ward and K-means clustering methods. The results obtained by the Ward's method were used as input for K-mean clustering algorithms to adjust a non-hierarchical relocation in pre-established groups (MacQueen, 1967). The clusters were categorized following some predetermined selection criteria that was the level of engagement in delinquency. The parameters used to measure for this criterion were as follows: age of first offense (the lower the age, the

greater the engagement); the diversity of crimes in life (the greater the number of different offenses, the greater the criminal engagement; and the total number of offenses in the past year (the greater the total frequency of offenses, the greater the criminal engagement).

Next, the groups were described in relation to the measure of central tendency of the three variables that comprised the level of engagement and to the frequency in the categorical variables of use of alcohol, marijuana, or other drugs. Subsequently, the means obtained from each personal variable were standardized for comparison purposes and an analysis of variance (ANOVA) was used to compare the clusters. For all the analyses, the significant level was set at 0.05.

3. RESULTS

After the statistical analysis was performed to cluster the participants, five clusters were formed. The results revealed and ascending order (group 1 to group 5) for the intensity of engagement in delinquency (criminal engagement). Table 1 shows an overview of the five groups in relation to the three variables with regards to the level of engagement in delinquency. In cluster 1, the participants revealed that they have not committed any offense. Among the adolescents who revealed having committed some offenses, those gathered in cluster 2 showed the lowest level of engagement while those in group 5 showed the highest level of engagement in delinquency.

Table 2 shows the characterization of groups according to age and sample origin.

Table 3 displays the percentages of adolescents per group who have made use of psychoactive substances. Data refer to the total frequency of substance use for each variable: Never, monthly, and weekly.

Table 1: Means and Standard Deviations for Age of First Offense, Diversity of Offenses and Total Number of Offenses in the Last 12 Months

Group	Age of first offense	Diversity of offenses	Total number of offenses
	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
1	-	-	-
2	12.5 (1.3)	1.4 (0.7)	0.3 (0.5)
3	11.0 (1.6)	2.1 (0.9)	1.7 (2.0)
4	10.1 (1.7)	4.2 (1.9)	5.0 (3.8)
5	9.1 (1.6)	9.3 (2.7)	22.8 (14.3)

Note: Group 1 was composed solely by adolescents who revealed not having committed any crime.

Table 2: Characterization of Clusters According to Age and Sample Origin

Groups	N	Regular Students		Judicialized adolescents		Age
		n	%	n	%	M (SD)
1	31	31	100.0%	0	0.0%	14.7 (1.3)
2	52	40	76.9%	12	23.1%	14.9 (1.4)
3	37	29	78.4%	8	21.6%	14.7 (1.5)
4	37	23	62.2%	14	37.8%	15.7 (1.3)
5	36	10	27.8%	26	72.2%	15.8 (1.1)

Table 3: Percentage of Adolescents Per Cluster in Relation to the Frequency of Psychoactive Substance Use

Frequency of substance use	Groups					X ²	df	p
	1	2	3	4	5			
Alcohol						103.8	8	< 0.001
Never	96.8%	78.9%	89.2%	48.7%	50.0%			
Monthly	3.2%	15.4%	8.1%	40.5%	33.3%			
Weekly	0%	5.8%	2.7%	10.8%	16.7%			
Marijuana						257.6	8	< 0.001
Never	100%	98.1%	89.2%	89.2%	30.6%			
Monthly	0%	0%	0%	10.8%	8.3%			
Weekly	0%	1.9%	10.8%	0%	61.1%			
Other drugs						57.2	8	< 0.001
Never	100%	100%	100%	100%	86.1%			
Monthly	0%	0%	0%	0%	11.1%			
Weekly	0%	0%	0%	0%	2.8%			

Note: Never (use psychoactive substances): refers to the fact the adolescent did not make use of the substance, even if he had experienced any earlier. Monthly (use): refers to the fact the adolescent made use of the substance at least once a month. Weekly (use): refers to the fact the adolescents made use of the substance at least once a week.

Table 4 shows the results obtained from the analysis of variance for the standard means within each group in relation to other personal variables investigated.

4. DISCUSSION

The participants of this study were grouped into five different clusters following the selection criteria

considering the levels of engagement in delinquency. The variables used to measure these levels included the age of first offense, the diversity of offenses and the total frequency of offenses committed in the previous year. The behavioral characteristics of individuals grouped in clusters (Table 1) showed that the engagement in delinquency of adolescents ranged from *lack of criminal activity* (Group 1) to *quite early* (starting around the age of 9 years), *diversified* (about

Table 4: Results of the Analysis of Variance for Comparison of Standard Means in Relation to Personal Variables

	Clusters										F	η ²	p
	1	2	3	4	5								
Criminal history													
Problems with Law or Police	-6	a	-1.2	ab	-3	ab	-1	b	1.16	c	24.1	0.34	.001
Personal dispositions, beliefs and attitudes													
Impulsivity	-.31	a	-.1	a	-.2	a	0	a	.58	b	4.35	0.08	.002
Antisocial values	-.57	a	-.1	ab	.26	b	.01	b	.28	b	4.19	0.08	.003
Violent attitude	-.02		.21		.13		-.38		-.02		2.07		.087

Note: In the lines, the means with equal letters did not differ among themselves by Tukey post hoc test. and: a<b<c. Degrees of freedom = 4.

9 different types of offenses) and *quite often* (with an average of 22 offenses committed last year) (Group 5). In a study performed in Chile, Bañares *et al.* (2010) found a similar result in which the authors identified four groups of juvenile delinquents with distinct levels of engagement in delinquency. The presence of five groups revealed the heterogeneity of the level of engagement in delinquency among the adolescents evaluated, whether from the population sample or from the sample of institutionalized adolescents. Except for Group 1, all other groups were comprised together institutionalized and non-institutionalized adolescents.

This result means that there are adolescents punished by Justice that exhibit levels of engagement in delinquency equivalent to those from the general adolescent population. At the same time, it also reveals that there are adolescents from the general population (not (yet) been caught by the police or pursued by the juvenile justice) that have levels of engagement in delinquency similar to those that have caught by the police or pursued by the juvenile justice. For the age, the groups were equivalent except for one year age difference, on average, between group 1 and group 5. It should be observed that the teenagers from all the five groups were entering the second stage of adolescence, in which adolescent-specific patterns of behavior begin to show clear (Le Blanc 2010).

For *criminal history*, which represents the frequency of problems the adolescents had with the police or had to appear before a judge, it should be noted that group 4 differed significantly when compared to group 1. Group 5 obtained higher scores in this construct compared to other groups. This finding revealed that the participants of this group were submitted to more legal constraints compared to others. Surely, those adolescents who exhibit some type of delinquent behavior are more prone to be arrested and pursued by law. However, those formal constraints may contribute to promote engagement in delinquency through different processes that derive from them. One of these processes has been described in the literature as the *labeling effect*. A great deal of legal restrictions may hamper the development of an individual and, therefore, induce him/her to engage in new delinquent activities.

Studies based on longitudinal surveys of student samples (Bernburg, Krohn and Rivera 2006) have shown once being labeled or defined by others as a criminal offender may trigger processes that tend to reinforce or stabilize involvement in crime and

deviance. Therefore, individuals who have started their delinquent activities differ in terms of subsequent engagement in delinquency, when some of them suffer judicial intervention and others do not. Bernburg, Krohn and Rivera (2006) reported that the labeled person is thus increasingly likely to become involved in social groups that consist of social deviants and unconventional others. Therefore, the judicial intervention triggers a series of effects that make the individual more susceptible to get involved in deviant networks in order to be with those who share their deviant self-concept and attitudes, and perhaps commit more criminal acts. It is of paramount importance that the judicial decision is well founded in case of detention, considering the negative impact it might have on the individual's life.

For the *use of psychoactive substance*, Table 3 focuses on the association between the frequency of use and pattern of engagement in delinquency. It is worth mentioning that only Groups 4 and 5 showed frequent use of alcohol (at least once a week) referred to by more than 10% of adolescents. The prevalence of marijuana use was higher in Group 5: 61% of adolescents reported using this substance at least once a week. Such a finding is consistent with other studies that suggest a close relationship between delinquency and the use of marijuana (Liebregts, Van der Pol, Van Laar, de Graaf, Van den Brink and Korf 2015). Group 5 was the only group that referred to the use of other types of illicit substances; although it was a very small percentage (11.1% reported monthly use and 2.78% weekly use of other drugs in addition to alcohol and/or marijuana). The relationship between drugs and crime is complex, with different possibilities of connection between distinct types of behaviors. However, at the most intense levels of drug use, drugs and crime are directly and highly correlated and serious drug use can amplify and perpetuate preexisting criminal activity (Brochu 2005).

For *personal dispositions, beliefs and attitudes*, three constructs, representing aspects of psychological functioning of the individual that may contribute to a higher probability of offensive conduct, were investigated: *impulsivity*, *antisocial values*, and *violent attitude*. The latter have not distinguished any of the groups. This result was not expected. Since this variable represents a predisposition to consider the use of violence in social interaction as natural, it would be more prevalent in individuals with greater engagement in delinquency. Such undifferentiation may be explained by the fact that the instrument used was not

properly calibrated to perform this measure in our cultural context, considering that in studies carried out in other contexts the results obtained were different (Andrews and Bonta 2010). The reliability of the scale was not strong. However, it is important to mention that there is a difference between practicing an offense and practicing violence, since not every offense/criminal act implies interpersonal violence. It should be considered that most young people evaluated have been involved in offenses (criminal activities), however, a considerable part of these young people have not exercised physical violence. In other words, the fact that young people have committed legal transgressions does not imply acceptance of physical violence.

For *antisocial values*, which refers to an attitude in favor to antisocial conducts, and comprises a certain degree of dishonesty, it was found that Groups 3, 4 and 5 had different values compared to Group 1, but not to Group 2. In other words, this construct distinguished the adolescents with higher level of engagement in delinquency, showing greater diversity and greater number of offenses compared to those without any engagement. However, the most interesting aspect of this finding was that Group 1, whose participants revealed not exhibiting delinquent behavior, coherently declared not having antisocial values. This result suggests that, at certain point, the socialization of a substantial proportion of adolescents is exposed to these antisocial values. Some adolescents may internalize such values in some way, since they seem to be part of distinct levels of engagement in delinquency. Thus, it seems more relevant the fact that those adolescents do not have antisocial values as protective factors for any level of engagement in delinquency, than having antisocial values as predicting factors for the level of engagement in delinquency.

Comparable results were found among British adolescents in a study of Tarry and Emler (2007), in which the adherence to social rules and willingness to obey authority-directed commands were associated with lower levels of antisocial behaviors. In this perspective, in future studies it should be wise to give attention not only to research on the degree of adherence of young people to certain antisocial values, but their adherence to pro-social values, in order to better understand the cognitive mechanisms associated with more serious levels of engagement in delinquency. Bandura (2002) emphasized that an individual can act even against their moral values, using several cognitive mechanisms to violate his own

beliefs. However, those who do not internalize the conventional social standards are more prone to act in such a way as to violate them.

For *impulsivity*, significant differences between the clusters were also identified. This construct was a strong trait among the adolescents in Group 5. Impulsivity, although it may be thought of as a facet of personality, and therefore biologically based, also refers to a developmental pathway in which self-control is not processed appropriately while interacting with the environment through socio-emotional learning. Thus, adolescents with higher level of engagement in delinquency would have less self-control. This trait makes the psychosocial adaptation of the individual more difficult, and when combined with other social variables, can regulate the conduct towards the delinquent/criminal behaviors and contribute to their stability in time (Le Blanc 1997).

The relationship found between impulsivity and engagement in delinquency is consistent with the results obtained in other studies, both in population and institutionalized samples (Higgins *et al.* 2013). In these investigations, the construct of impulsivity, considering a component of an individual's temperament, proved to be a significant predictor of antisocial behaviors.

Finally, an important consideration can be made regarding to the fact that the clusters differed significantly in their level of engagement in delinquency and in some dimension in comparison, although there has not been a complete differentiation between all groups on these dimensions. For example, Group 5 presented higher score on Impulsivity scale, differentiating itself from all other four groups, that not differed from each other (1 = 2 = 3 = 4). In this sense, it can be hypothesized that, although there are significant differences between the mean scores of the groups in the variables that refer to the levels of engagement in delinquency, within the groups individuals vary substantially in the personal characteristics, which refers to the idea that individuals commit offenses because different motivations or needs; and that engagement in delinquency can be explained by different developmental trajectories.

To overcome this analytical difficulty, the method of Latent Class Analysis may be a suitable alternative in the future studies. Thus, groups can be formed according to different latent variables, including too important variables that were not analyzed in the present study, but the criminological literature point as

important explanatory variables, such as family bonding, parental supervision, school attachment, academic achievement, peer groups, and so on. Then, these groups can be compared in relation to their levels of engagement in delinquency or analyzed regarding their delinquent trajectories.

5. FINAL CONSIDERATIONS

In summary, the results of this study showed distinct levels of engagement in delinquency among adolescents from both the population and institutionalized samples. These distinct levels are also differentially associated with personal characteristics. In relation to problems with police and justice, the data showed what was already known, i.e., adolescents with high level of engagement reported frequent problems with these law enforcement agencies. Regarding the consumption of alcohol, marijuana and other illicit drugs, the majority of adolescents reported not making use of any of these substances, except for those clustered in Group 5, most of which referred to use marijuana weekly. Group 5 scored higher in impulsivity. On the other hand, for the antisocial values, Group 1 differed from the others, as they did not exhibit such antisocial values. Finally, the construct of violent attitude, contrary to expectations, showed no significant differences among those groups despite their differences in level of engagement in delinquency.

A limit of the present study is the instrument used. Although suitable to collect information and meet the objectives of the research, it is a self-report instrument that was not validated for the Brazilian population. This is a good reason to question the validity of the constructs measured, even if most of the results obtained were consistent with those found in literature, and therefore, suggesting a strong external validity. It would be interesting to validate the questionnaire for the population under study. Another limitation is the sample size. This restricts the possibility of generalizations of the results for the population, especially when only certain social segments were evaluated, in contrast to the immense sociodemographic diversity that characterizes the Brazilian population.

Despite these limitations and the special attention given to prevent the generalization of results, the findings offer important insights for further research in the area and light up the debate and the reflection on the procedures of evaluation and monitoring of adolescents in the Brazilian juvenile justice system. The results showed that those institutionalized

adolescents had distinct levels of criminal engagement and exhibited different personal characteristics, which are indicative of problems and difficulties. This should be certainly considered in the decision-making process regarding the judicial measure applied to the juvenile offenders.

Differentiations based on this type of evaluation have not been made yet and can be confirmed by the fact that the institutionalized adolescents who participated in the present study were indiscriminately submitted to the same legal measure (the probation), although their level of criminal involvement, personal traits, and difficulties were significantly different.

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