## ABSTRACT

Preadolescence and adolescence are stages of development marked by biopsychosocial changes and characteristic conflicts that, left unassisted, can lead to risk and self-destructive behaviors, such as self-injury. The latter must be addressed through its relation to genetic, psychiatric and psychological vulnerability, in addition to family, social and cultural aspects, the effects of media and the Internet. Among psychiatric and psychological issues, depression stands out the most. This justifies the study of the relations between aspects of personality, self-injurious behavior and depression in preadolescents and adolescents in the age group of 11 and 16 years, with and without self-injurious behavior. The following instruments were used: a semi-directed interview, the Child Depression Inventory (CDI) and the Human Figure Drawing (DFH). The results allowed associating the participants' self-injurious behavior with depressive symptoms, negative self-image, feelings of guilt, pain-provoking thoughts, sexual concerns, body issues and difficulties in the connection between control and impulses.

## INTRODUCTION

This article contributes to the field of mental health of preadolescents and adolescents who present self-injurious behavior, also presenting psychological instruments that intend to bring forward a perspective that, based on psychological knowledge, contributes to the knowledge and understanding of what happens to this group. Recent publications suggest that the prevalence of such behavior has increased significantly among adolescents, and is now categorized, at a global level, as a public health problem. Epidemiological data indicate adolescence as the most vulnerable period for the occurrence of self-injurious behavior (Brown & Plener, 2017). Washburn et al (2012) estimate that the prevalence of behavior varies from 7.5 to 8% in preadolescence, and 12 to 23% in adolescence.

Guerreiro and Sampaio (2013) understand self-injurious behavior in adolescence as a manifestation of "pathological adolescence" (p. 214), as understood through the "lack of hope and inability to achieve a meaning to deal with emotions, organize a sense of belonging and maintain a sustained feeling of well-being" (p. 214). The authors interpret self-injurious behaviors as associated with the presence of a feeling of intense discomfort, linked to failures in the individual, family and social fields, where this kind behavior may be seen as a distorted attempt of changing an unsustainable situation.

Self-injurious behavior studied by these authors contemplate behaviors that present body injuries deliberately inflicted by adolescence, linked to the experience of living in a society of a weakened social structure. Data to understand and tackle self-harm – and also suicide – among young people is related to genetic, psychiatric and psychological vulnerability, in addition to family, social and culturally-related aspects, as well as by contagion of today's media and the internet (Hawton, Saunders & O'Connor, 2012).

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The increasing involvement of preadolescents and adolescents in risk behaviors has been observed (Macedo & Sperb, 2013), in addition to self-destructive and hetero-destructive actions, such as suicidal manifestations and self-injurious behaviors, focus of this study (Nock, Joiner, Gordon, Lloyd-Richardson & Prinstein, 2006).

Self-mutilation or self-injurious behaviors have been occurring amidst the conflicts evidenced by adolescence, linked to the experience of living in a society of a weakened social structure. Data to understand and tackle self-harm – and also suicide – among young people is related to genetic, psychiatric and psychological vulnerability, in addition to family, social and culturally-related aspects, as well as by contagion of today's media and the internet (Hawton, Saunders & O'Connor, 2012).

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and, when not treated appropriately, with exponentially greater possibilities of suicide attempt (Guerreiro & Sampaio, 2013).

Many studies try to understand the motivations and risk factors related to this behavior. Among the motivations for self-injury, Kaplan and Sadock (1998) cite: anger, strain relief, shifting the focus of attention from emotional pain to physical pain, and an unconscious desire to die. In relation to risk factors, Silva and Botti (2017) state that they can be divided into: family, social and individual factors.

Another element that may be present in cases of self-injurious behavior is personality disorder, which is a basis from which other interfering disorders arise, i.e., it creates a certain degree of vulnerability to pathologies such as depression and anxiety Millon & Davis, 1996). The studies by Giusti (2013) also associate self-mutilation with comorbidities of Axis I and II of DSM-IV, where depression is most frequent.

Studies very often relate depression to self-injurious behavior, however, this behavior can be classified as “non-suicidal self-mutilation or cutting”, even though some adolescents may commit suicide. The reason is that aggressions against one’s own body do not constitute “attempts to die”, but “attempts to survive”. Thus, the self-provoked injury can be understood as a commitment, an attempt to restore meaning, in which injuries are presented as a way to avoid death, through the “partial neutralization of destructive instincts” (Kovács, 2008, p.183).

The data presented demonstrates the importance of studying the relations between aspects of personality, self-injurious behavior and depression. It is necessary to understand these relations, because, according to Le Breton (2010), these adolescents, who collide with the world and end up hurting themselves, regain control of a powerful and destructive emotion and look for a containment, eventually finding pain or injury.

Faced with the above-mentioned issues that relate motives and risk factors for self-injurious behavior and that consider issues of self-image (for example, the inability to deal with emotions, lack of sense of belonging, sexual orientation concerns, impulsiveness, low self-esteem, body dissatisfaction, feeling of incompetence and other personality disturbances) and psychopathological issues, such as depression, it becomes important to assess personality characteristics of such adolescents. Research of this kind is important because it seeks to understand the occurrences that have a connection with a pathological emotional development, differentiating the symptomatic forms of expression that constitute the global process of growing up. In-depth studies and understanding of self-injurious behaviors is needed in order to support prevention projects and psychosocial intervention.

Thus, the article aims to present the results found in the study of the relations between self-image, personality aspects and depression of preadolescents and adolescents in the age group between 11 and 16 years, who present self-injurious behavior (clinical group), compared to a control group.

**METHOD**

**Subjects**

The research subjects were divided into two groups: a clinical group, composed of pre-adolescents and adolescents who presented self-injurious behavior, and a control group, with preadolescents and adolescents who did not present this behavior. The ages of the participants ranged from 10 to 16 years and all adolescents attended school at the time of the research, which was carried out in this institution.

The participants of the clinical groups were indicated by the school management for presenting self-injurious behavior and were approached after the authorization of their parents or guardians, through the Free and Informed Consent Form. The same procedure was performed with the members of the control group.

**INSTRUMENTS**

For the data analysis, the following instruments were used: a semi-directed interview (which included the identification data), the Child Depression Inventory (CDI) and the Drawing of the Human Figure (DFH). Each instrument is described below.

- **Interview**

  The interview was chosen as an instrument because it was defined, according to Bleger (1980), as a way to gather with detail and breadth the pre-established data, allowing to arrive at “a synthesis of both the present situation and the history of an individual, of his disease and his health” (Bleger, 1980, p.11-12).

- **Child Depression Inventory (CDI)**

  The CDI was used to evaluate the presence of symptoms of depression among the subjects. This is a self-report inventory prepared by Kovács (1983), originally from the *Beck Depression Inventory* (BDI) for adults, and was adapted for children in Brazil by Barbosa, Dias, Gaião and Lorenzo (1996). The objective of the inventory is to identify the presence and severity of depressive disorder in childhood, as well as affective changes in children and adolescents. It consists of 27 items, each presenting three response options, and the child should choose which of the response options best describes his/her state in recent times. Each answer is scored 0, 1 or 2, depending on the option chosen.

- **Drawing of the Human Figure (DFH)**

  The DFH was chosen in the research because it is an instrument that favors the expression of the needs and conflicts of the Self. It is also considered that the drawing of the human figure is intimately related to the impulses, anxieties, conflicts and characteristic compensations of the subject himself, in such a way that it is possible to say that the drawn person is the person himself/herself; the paper, the environment; and the process of drawing is a relation by which one projects oneself, with all meanings (Machover, 1949).

Goodenough initially proposed this technique, in 1926, for cognitive assessment (Paludo & Costa & Silva, 2010). Other researchers, however, - among them, Machover (1949) and later, Hammer (1981) - observed that the drawings also brought contributions that helped to perform the analysis of the subjects’ personality and thus identified that the elements contained in the DFH told more about the subject than the drawing itself, considering that the drawings could be seen with emotional indicators of the child (Paludo & Costa & Silva, 2010).

Machover (1949) and Koppitz (1968) add that during the production of the DFH there is a selection process that involves the identification through projection and introjection, and the individual should draw consciously, but also unconsciously, thus involving their projection in the drawn image. The author writes that the extensive and concentrated experience with Drawings of the Human Figure indicates an intimate connection between the desired figure and the personality of the individual who is drawing it.

(C) **Procedures**

Individual applications of the instruments were made and the data obtained with the CDI was treated in accordance with the cut-off score for the Brazilian population (17 points). The score above 11 points, however, was considered indicative of some degree of depression. The DFH was analyzed according to the
creation of categories that refer to general, formal and content-related aspects of the drawings (Hammer, 1981; Van Kolck, 1968), classified as 1 (presence) and 0 (absence) of the items in the drawing indicated for conducting the research.

Data analysis collected by the two instruments underwent statistical treatment for comparison between the clinical and control groups, and a comparison between the CDI results and the aspects assessed in the DFH was performed, using the Student’s t-test and the Chi-square test.

RESULTS

The clinical and control groups were compared in relation to the sociodemographic data, total score obtained in the CDI and criteria present in the DFH drawings. The tables show the data separated by instrument. Table 1 shows the comparison of sociodemographic data between the two groups, considering the age, gender and education of the subjects.

Table 1. Comparison of socio-demographic data between the groups

<table>
<thead>
<tr>
<th>Variable</th>
<th>Control (n=29)</th>
<th>Clinical (n=29)</th>
<th>t</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age*</td>
<td>13.06 (1.38)</td>
<td>13.10 (1.34)</td>
<td>0.970</td>
<td>0.393</td>
</tr>
<tr>
<td>Gender (male)**</td>
<td>10</td>
<td>19</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td>Education*</td>
<td>7.93 (1.81)</td>
<td>7.42 (1.25)</td>
<td>-1.212</td>
<td>0.231</td>
</tr>
</tbody>
</table>

*Student’s t-test – Results expressed in Mean (DP).

**Chi-square test – Results expressed in N (%).

The table shows that the two groups do not present significant differences in terms of sociodemographic variables (age, gender and education). Thus, the clinical and control groups are considered equivalent groups, which increases the veracity of the results of the instruments presented below.

The results considered statistically significant for the CDI and Drawing of the Human Figure (DFH) are presented in tables 2 and 3, comparing the results in the instruments between the clinical and control groups. Table 2 corresponds to the statistical study of the data presented by the Student’s t-test of the total results obtained by the CDI.

Table 2. Student’s t-test and CDI score for control group and clinical group

<table>
<thead>
<tr>
<th>Variable</th>
<th>Control (n=29)</th>
<th>Clinical (n=29)</th>
<th>t</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDI Score*</td>
<td>5.13 (3.10)</td>
<td>19.96 (11.89)</td>
<td>6.470</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

*Student’s t-test – Results expressed in Average (SD). Sig – p<=0.05

The CDI score showed a statistically significant difference (p < 0.001). Table 2 shows that the clinical group presented a significant increase in points when compared to the control group. These data indicate that preadolescents and adolescents with self-injurious behavior present more significant indicators of depression when compared to the public of the same age group and sex who do not present this behavior. The mean score obtained by the clinical group is higher than the cut-off score in the Brazilian population for clinical depression.

Table 3 lists the items in the Drawing of the Human Figure that presented significant statistical differences between the two groups.

Table 3: Chi-square and frequencies of each item of the Human Figure Design for the control group and the clinical group

<table>
<thead>
<tr>
<th>Variable</th>
<th>Control (n=29)</th>
<th>Clinical (n=29)</th>
<th>X²</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tracing</td>
<td>Normal</td>
<td>26 (90)</td>
<td>12 (41)</td>
<td>14,958</td>
</tr>
<tr>
<td></td>
<td>Erased (blurred)</td>
<td>3 (10)</td>
<td>12 (41)</td>
<td>12,894</td>
</tr>
<tr>
<td></td>
<td>Repeated</td>
<td>7 (24)</td>
<td>21 (72)</td>
<td>13,533</td>
</tr>
<tr>
<td>Head</td>
<td>Small</td>
<td>0 (0)</td>
<td>5 (17)</td>
<td>5,472</td>
</tr>
<tr>
<td>Hair</td>
<td>Curly</td>
<td>1 (3)</td>
<td>6 (21)</td>
<td>4,062</td>
</tr>
<tr>
<td>Neck</td>
<td>Thin</td>
<td>2 (7)</td>
<td>13 (45)</td>
<td>10,881</td>
</tr>
<tr>
<td>Eyes</td>
<td>Presence of pupils</td>
<td>24 (83)</td>
<td>13 (45)</td>
<td>9,032</td>
</tr>
<tr>
<td>Nose</td>
<td>Small</td>
<td>5 (17)</td>
<td>14 (48)</td>
<td>6,340</td>
</tr>
<tr>
<td>Mouth</td>
<td>Lips present</td>
<td>1 (3)</td>
<td>10 (34)</td>
<td>9,087</td>
</tr>
<tr>
<td>Body</td>
<td>Presence</td>
<td>28 (97)</td>
<td>20 (69)</td>
<td>7,733</td>
</tr>
<tr>
<td>Arms</td>
<td>Presence</td>
<td>29 (100)</td>
<td>19 (66)</td>
<td>12,083</td>
</tr>
<tr>
<td></td>
<td>Crossed</td>
<td>10 (34)</td>
<td>1 (3)</td>
<td>9,087</td>
</tr>
<tr>
<td></td>
<td>Deteriorated (defective)</td>
<td>6 (21)</td>
<td>1 (3)</td>
<td>4,062</td>
</tr>
<tr>
<td>Hands</td>
<td>Presence</td>
<td>20 (69)</td>
<td>12 (41)</td>
<td>4,462</td>
</tr>
<tr>
<td></td>
<td>Closed</td>
<td>9 (31)</td>
<td>0 (0)</td>
<td>10,653</td>
</tr>
<tr>
<td>Legs</td>
<td>Presence</td>
<td>28 (97)</td>
<td>19 (66)</td>
<td>9,087</td>
</tr>
<tr>
<td>Feet</td>
<td>Presence</td>
<td>28 (97)</td>
<td>18 (62)</td>
<td>10,507</td>
</tr>
<tr>
<td>Base Line</td>
<td>Presence</td>
<td>9 (31)</td>
<td>0 (0)</td>
<td>10,653</td>
</tr>
<tr>
<td>Belt</td>
<td>Presence</td>
<td>15 (52)</td>
<td>0 (0)</td>
<td>20,233</td>
</tr>
<tr>
<td>Surroundings</td>
<td>Presence</td>
<td>12 (41)</td>
<td>1 (3)</td>
<td>11,997</td>
</tr>
</tbody>
</table>

*Chi-square test – Results expressed in N(%).

The average age of the participants was 13 years. Considering the literature, this age is at the beginning of adolescence (12 to 18 years). Thus, it is a stage in which the crises of the passage from childhood to adulthood may be more intense, with the adolescent in the most vulnerable stage of his development.

The CDI data proves this statement, because even with the
significant difference between the groups, the control group also presented on the test scores not considered indicative of depression. It can be observed that adolescents in general show some depressive symptoms in this phase, which can be a result of the stress experienced by this audience (loss of parents in childhood, of the body and of child identity) (Aberastury & Knobel, 1981).

It is clear from the CDI results of the clinical group that this stage of development is much more critical. The presence of symptoms related to depression was significantly higher in the group of adolescents with self-injurious behavior, corroborating studies that associate this behavior with psychiatric disorders, with depressed mood and Major Depression Disorder being the most present (Millon & Davis, 1986; Skegg, 2005; Klonsky, 2007; Giusti, 2013).

Regarding the Drawings of the Human Figure, 20 items with significant differences between the groups were identified, 13 of which were predominant in the control group and seven in the clinical group. The predominant items in the first group showed greater control of the ego, greater contact with reality and better perception of reality, both internal and external. The autonomy of adolescents without self-injurious behavior was also more significant in their drawings, as well as the possibility of contact with the environment; however, this contact was presented in the drawings as superficial. These difficulties may be related to the psychological and social changes common to this phase, which direct the individual to a new way of relating to the world, sometimes presenting itself as a strong social expansiveness, sometimes turning into social retraction (Aberastury & Knobel, 1981; Tardivo, 2007).

Considering the predominant items in the clinical group, these are related to the insecurity felt by these adolescents, as well as anxiety, a weak connection between impulses and feelings, on the one hand, and thought and control, on the other; childlikeness and denial of painful thoughts, and feeling of guilt. Data on sexuality were also identified in the drawings: oral eroticism and sexual concerns (Hammer, 1981; Van Kolck, 1968; Tardivo, 2007).

The items present in the drawings, which differentiated the two groups, corroborate the data found by research in the area. Psychiatric and psychological vulnerabilities related to adolescents with self-injurious behavior were found in CDI depression symptoms, anxiety, poor impulse control, and denial of painful thoughts.

This denial can also be understood through the study of Guerreiro and Sampaio (2013), who wrote about the lack of hope and inability of these young people to achieve a meaning through which to face emotions. Another data present in the DFH that corroborates the data from other investigations (Tardivo, 2007; Giusti, 2013; Silva & Botti, 2017) is a greater difficulty in interacting with the environment. The results showed that adolescents without self-injurious behavior have a healthier contact with the environment and reality than the clinical group, which may be related to failures at the individual, family and social levels, as presented by Guerreiro and Sampaio (2013) when describing the feelings of intense discomfort among adolescents with self-injurious behavior. Along with this discomfort, the feeling of guilt was observed in adolescents who self-injure themselves, as also described in the DSM-5 (American Psychiatric Association, 2014).

Some studies, such as Kaplan and Sadock (1998), and in the DSM-5 (American Psychiatric Association, 2014), discuss the feelings that precede self-mutilation (or that occur during it), such as anger, strain relief, and switching of the focus of attention from emotional to physical pain. These feelings demonstrate the difficulty in controlling the impulses, the feeling and the concreteness of the act. Traces of impulsiveness, tendency to problematic and risk behaviors were also found in the work of Giannetta et al. (2012).

A last piece of data identified as significant among the characteristics of the group drawings was related to the sexuality issues of these young people. The characteristics related to sexual concerns and oral eroticism were much more present in the clinical group, with aspects related to sexual orientation being one of the elements considered by Silva and Botti (2017) when explaining the individual aspects that are considered risk factors for self-injurious behavior.

Given the data found in the DFH, considering that the drawn person is the person herself and that the sheet of paper is the environment (Van Kolck, 1988), and being the act of drawing a way to project oneself and all its meanings, the following considerations can be pointed out: The adolescents in the clinical group present in the drawings an image that shows with little contact with reality, difficulty in controlling their impulses and contact with suffering, denying it through the cuts, while seeking to regain control of emotion in a destructive way, according to the findings of Le Breton (2010). Still according to the author, these young people seem to seek the limit of their body by means of impulses that are not controlled and, in this way, re-establish a boundary between the internal and the external through pain and scarring.

Giusti (2013) also takes into account the relation between body and image in adolescents who self-injure and have depressive symptoms. In the present study, the difficulty in the control of impulses was also observed – the author refers to the cuts as an attempt to control the body, which may be related to an attempt to contain the uncontrollable body changes of puberty and be related also to the sexual concerns found in the results.

FINAL CONSIDERATIONS
The goals of comparing the psychological characteristics of pre-adolescents and adolescents with and without self-injurious behaviors were met. The data presented allowed associating the participants’ self-injurious behavior with depressive symptoms, together with a negative self-image, of individuals with feelings of guilt, difficulties in dealing with thoughts that provoke pain, in addition to body issues and difficulties in connecting control and impulses. Although the control group also presented depression indices, indicating the complexity of this phase of development – adolescence – they were more significant in the clinical group.

Despite the limitations of this study – a small sample restricted to students from a single geographical region and limited use of instruments (CDI and DFH), with the possibility of expanding the investigation with the use of other tests – the characteristics of the personality of adolescents who present self-injurious behaviors were gathered. In this way, the results can contribute to the formulation of prevention programs, as well as intervention with the entire community, but to expand the scope of these results, further research is required.

REFERENCES