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The mediating role of dissociation in the relationship between trauma and non suicidal self-injury behaviors of adolescents in residential care

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The mediating role of dissociation in the relationship between trauma and non suicidal self-injury behaviors of adolescents in residential care

Most of the adolescents living in residential care had a childhood marked by experiences of abuse and neglect that are already identified as a source of developmental trauma. This kind of trauma is known to have consequences on the ability to self-regulate the emotions, the quality of the relationships with others and on self-perception. Not rarely, dissociation is a coping mechanism that victims of trauma use to deal with adversity and suffering. One possible outcome of developmental trauma and maladaptive trajectories of life is psychopathology. These children sometimes communicate their difficulties and maladaptation through non-suicidal self-injury behaviours (NSSIB). With this study we aimed to analyse: a) the manifestation of traumatic experiences, dissociation and non-suicidal self-injury behaviours (NSSIB) in adolescents living in residential care; b) the mediating role of dissociation on the relation between trauma and NSSIB. Sample comprised 87 adolescents living in residential care, both sexes (64.4% girls), aged between 12 and 18 years old (M=15.71; SD=1.73), to whom it was applied the Childhood Trauma Questionnaire – Short Form, the Adolescent Dissociative Experiences Scale and the Impulse, Self-harm and Suicide Ideation Questionnaire for Adolescents. These adolescents report to have lived few traumatic experiences in their childhood, to rarely dissociate and rarely exhibit NSSIB. In this sample, the experience of traumatic events of child abuse correlate weak to moderately with NSSIB, except in the case of emotional neglect. Physical abuse and emotional neglect do not correlate with dissociation that only correlates, positive and weakly, with sexual and emotional abuse. Dissociation predicts NSSIB but do not mediate the relation between childhood traumatic experiences and NSSIB. The results are discussed considering two possible explanations. In one hand, adolescents in residential care may tend to report their experiences based on a survival self that makes them devalue the traumatic nature of the reasons for their removal and hide their weaknesses and vulnerabilities. On the other hand, the experience of residential care may be fostering their resilience, contributing to more adaptive and resourceful pathways. More research is needed to have a clearer view of the experiences of a traumatic childhood, dissociation and non-suicidal self-injury behaviours of adolescents in residential care.

Key Words: dissociation, traumatic childhood, non-suicidal self-injury, adolescents living in residential care.

O papel mediador da dissociação na relação entre trauma e comportamentos autolesivos não suicidários de adolescentes em acolhimento residencial

A maioria dos adolescentes em acolhimento residencial teve uma infância marcada por experiências de abuso e negligência, já identificadas como fonte de trauma desenvolvimental. Este tipo de trauma é conhecido por ter consequências na autorregulação das emoções, na qualidade das relações com os outros e na auto percepção. A dissociação é um mecanismo que as vítimas de trauma usam para lidar com a adversidade e o sofrimento. Sendo a psicopatologia um resultado possível do trauma desenvolvimental e de trajetórias de vida mal adaptativas, estas crianças podem comunicar as suas dificuldades e a sua inadaptação através de comportamentos auto lesivos não suicidários. Os objetivos principais deste trabalho foram analisar: a) a manifestação de experiências traumáticas, dissociação e comportamentos de auto dano não suicidário em adolescentes que vivem em acolhimento residencial; b) o papel mediador da dissociação na relação entre as experiências de trauma e os comportamentos de auto dano não suicidários nos adolescentes que vivem em acolhimento. Participaram nesta investigação 87 adolescentes, de ambos os sexos (64.4% raparigas), com idades a variar entre os 12 e os 18 anos (M=15.71; DP=1.73). Como instrumentos foram utilizados o Questionário de Trauma de Infância – Versão breve, a Escala de Experiências Dissociativas na Adolescência e o Questionário de Impulso, Auto dano e Ideação Suicida na Adolescência. Os resultados mostraram que os adolescentes reportam ter experienciado pouco trauma na sua infância, mostram poucos sinais de dissociação, assim como praticam pouco o auto dano. A experiência de eventos traumáticos na infância apresenta correlações fracas a moderadas com os comportamentos autolesivos não suicidários, exceotp no caso da negligência emocional. O abuso físico e a negligência emocional não se correlacionam com a dissociação, sendo que esta só se correlaciona positiva e fracamente com o abuso sexual e emocional. A dissociação prediz o auto dano, mas não tem um papel mediador entre o trauma desenvolvimental e os comportamentos de auto dano não suicidários. Os resultados podem ser discutidos de duas formas. Podemos, de um lado, considerar que os adolescentes que vivem institucionalizados respondem a estes questionários baseados num *self* sobrevivente, que faz com que desvalorizem as experiências de natureza traumática que resultaram na retirada do seio familiar, escondendo as suas fraquezas e vulnerabilidades. Oor outro lado, a experiência da institucionalização pode estar a ser promotora da sua resiliência, contribuindo para um caminho mais adaptativo e com mais recursos. É necessária mais investigação para esclarecer como os adolescentes em acolhimento residencial avaliam as suas experiências traumáticas da infância, e como experienciam a dissociação e comportamentos autolesivos não suicidários.

Palavras-chave: dissociação, infância traumática, comportamentos de auto dano não suicidários, adolescentes a viver em acolhimento residencial.

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"Stay positive and happy. Work hard and don't give up hope. Be open to criticism and keep learning. Surround yourself with happy, warm and genuine people." Tena Desae

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Introduction

Research in the field of childhood trauma (e.g, physical, emotional, sexual abuse) and its consequences on the development and mental health of children, adolescents and adults, has shown that traumatic experiences are linked to psychopathology (Greeson et al, 2014) and that dissociation is a frequent and maladaptive consequence of trauma (Cook et al, 2005). In turn, dissociation has been linked to maladaptive behaviors such has non suicidal self-injury behaviors.

In Portugal, childhood maltreatment is one of the main reasons why children and adolescents are removed from their families and placed in residential care. Nowadays, the consequences of child maltreatment as a traumatic experience with traumatic impact in the developmental process of the individual are becoming clearer. Nevertheless, less is known about the additional impact of experiencing residential care. Motivated by the need to better understand the lives of adolescents living institutionalized, the present research was conducted with the aim to study the manifestation of trauma, dissociation and non-suicidal self-injury behaviors and the associations between them, on this particular population.

This dissertation is organized in 6 chapters. In the first one is made a review of the existing Literature about the population studied and the variables that are going to be considered. In chapter two are presented the main objectives of this study and in chapter three the methodology is explained regarding sample, measures and procedures. Results are presented and discussed in two more chapters. Lastly, a sixth and final chapter presents the conclusions.

I – Literature Review

Adolescents in Residential Care and Trauma

Most adolescents living in residential care had a childhood marked by chronic, prolonged, serial or repeated adverse events, most often of neglect and interpersonal violence (Courtois, 2004), like emotional abuse, emotional or physical neglect, sexual abuse, physical abuse, the witnessing of domestic violence or the death of a parent (Cook et al, 2005). These situations have been identified as sources of developmental trauma (Foster, 2013) that can lead to an abnormal development of the adolescent, thus threatening their chance to thrive (Brady & Carraway, 2002). In this specific population of adolescents, the presence of traumatic experiences is highly prevalent; each one of them has gone through at least one traumatic event in their lives (Brady & Carraway, 2002). Since humans can only develop cognitive capacity to create a coherent self-construct in late adolescence (Courtois, 2004), the occurrence of these experiences when self-definition and self-regulation are being formed and consolidated can lead to severe coexisting problems in terms of emotional regulation, impulse control, attention and cognition, interpersonal relationships, and attributions (Foster, 2013).

The developmental trauma that comes from maltreatment situations has different behavioral expressions, some easier to identify by the residential care's technicians, like high risk behaviors, drug abuse, promiscuous behavior, externalizing behavior or mental health diagnoses (Greeson et al, 2014), others less visible, like not being able to collaborate with others, or not being able to express stress through words. Since it is very difficult for these adolescents to safely express emotions, these can be expressed pathologically through dissociation (Cook et al, 2005).

Placement in residential care is a protection measure with an educative and instrumental value (Del Valle, Bravo, Hernández, &

González, 2012) that dictates the removal of the child from her family due to the inappropriate physical and emotional conditions she was living in. Unfortunately, the transition from the family home to the residential care system is often perceived by children and adolescents as a negative or even traumatic experience (Nobre-Lima, 2009). These children/adolescents will spend an important phase of big developmental changes in a completely unknown environment, with people they do not know, nor trust, and with whom they were forced to live. This new reality forces them to deal with people living same situation as theirs (Costa, 2013) and this can be challenging.

It is a known fact that the transition from the family home to the residential care system seriously affects the children/adolescents due to situations, such as the separation from the family and/or the adaptation to a completely new reality. This non-normative change impacts on the adolescent's development at different levels: cognitive, affective and behavioral (Brady & Caraway, 2002).

These adolescents go through experiences that reduce self-concept and self-esteem which leads to lack of confidence, fearful nature, behavioral problems (self-mutilation or self-injury), immaturity, suspicious nature , inadequate communication and lack of sleep (Anthony & Raj, 2016). They also self-mutilate more than the ones who peacefully live with their families (Tizard & Hodges, 1978; Anthony & Raj, 2016). In fact, the greater the number of situations of maltreatment, the longer the exposure, and the more types of maltreatment such as sexual abuse, physical abuse, witnessing domestic violence, loss of a primary caregiver or being neglect by a caregiver experienced by a child, the higher the child's risk of committing deliberate self-harm. In contrast, children who had experienced more types of trauma tended to report less anger than those who had experienced fewer types. In the past, anger could have resulted in more violence from the abuser, so it is possible that the ones that experienced more types of interpersonal traumas learn to

minimize the expression of anger, in order to avoid future abuse (Brady & Carraway, 2002).

Besides this, they also show poor academic performance, with high index of school failure (Zima et al, 2000), many retentions, low scores and low levels of cognitive stimulation (Siqueira, 2010). Furthermore, they tend to engage in high risk behaviors like substance abuse, abnormal responses to pain, engaging in NSSI, or show more prevalence in oppositional disorder (Milne & Collin-Vézina, 2015)

Childhood trauma can exist in different forms, depending on how the child perceives the events of her life. Different types of abuse in different infants can lead to the same outcome in terms of sequels. Take that into consideration, sexual abuse, physical abuse, neglect, suffering and witnessing domestic violence can lead to a big variety of psychiatric sequels, like dissociation (Silberg, 2013), as well as physical and emotional consequences in the development, increasing the risk of non-suicidal self-injury behaviors (Swannell et al., 2012).

It has been pointed out that childhood trauma is closely related to dissociative behavior (Irwin, 1999), because while infants are experiencing the abuses, they dissociate in order to cope with the suffering (Blizard, 2008). It is common for this behavior to appear during childhood and adolescence (Castilho, Pinto Gouveia, & Bento, 2010), when personality is being developed and self-regulation, emotional regulation and social behavior are being learned, which makes them more susceptible to developing alterations in consciousness (Hébert, Langevin, & Oussaïd, 2017).

Dissociation

Dissociation is a mental process that leads to disruptions and alterations of conscience (e.g., difficulties with concentration), memory (e.g., amnesia), perception (e.g., trance-like states), identity (e.g., having a vivid imaginary playmate), emotion (e.g., extreme emotional shifts), behavior and sense of self, that can potentially disrupt every area of mental functioning (American Psychiatrist Association, 2013). The symptoms induced by dissociation involve experiences that can go from less serious situations, such as the feeling of being absorbed by an activity, to the more serious pathological situations, like feeling absent for a short period of time, feeling detached from one's own body, physically or emotionally, or not remembering a meaningful event (Struik, 2014).

Dissociation can also be linked with two different experiences (Choi et al., 2017), namely, depersonalization: the experience of unreality, detachment, or having the feel that one is disconnected from their own thoughts, feelings, sensations, body, or actions, like perceptual alterations, distorted sense of time, unreal or absent self, emotional and/or physical numbing (American Psychiatrist Association, 2013), and derealization: the experience of unreality, or detachment with the respective environment, feeling that a person or objects are unreal, dreamlike, foggy, lifeless, or visually distorted (American Psychiatrist Association, 2013).

The symptoms described in the paragraph above are the result of a psychological need of distance between the child and the situation of abuse that she is experiencing (Silberg, 2013), like prolonged trauma exposure of different kinds: sexual abuse, physical abuse and neglect, witnessing domestic violence (Bogat, DeJonghe, Levendosky, Davidson, & Eye, 2006), or a short traumatic event with a big impact: the death of a relative, witnessing war or natural disasters (Gušić, Cardeña, Bengtsson, & Søndergaard, 2016), kidnap or/and torture (Carll, 2007), and extended, traumatic, early-life medical procedures

(Diseth, 2006).Children can also become dissociative when their parents are dissociative themselves or make highly contradictory communications (Blizard, 2008).

A strong predictor of dissociative experiences is insecure attachment, which is characterized by preoccupation with relationships and discomfort with closeness, and that is common in situations of children maltreatment (Gušić, Cardeña, Bengtsson, & Søndergaard, 2016). Also, adolescents with a disorganized type of attachment tend to present a high score on the dissociation scale (West, Adam, Spreng, & Rose, 2001), due to their high need for approval, which moderates and enhances the relation between trauma and dissociative experiences.

Child maltreatment, not only to the extent of having to be taken away of their families' home, but also because of what they lived during their childhood, to be taken away disturbs the normal development of cognitive and affective processing, integration of thinking and feeling, and the capacity to understand and express emotional states, which can lead to dissociation (Fernandes & Monteiro, 2016). However, Pekala at al. (1999) showed that fantasy proneness, a personality trait, is a better predictor of dissociative behavior than childhood trauma. It refers to a deep and long-lasting involvement in daydreaming, imagination, fantasizing, and storytelling, which is not necessarily pathological, such as? the existence of a clear link between dissociative experiences and self-reported trauma in a population without pathological symptoms (Merckelbach & Jelicic, 2004).

Dissociation is seen by victims of a traumatic childhood as an escape from the stressful situations they experience. It can go from being inattentive, showing sudden swift of emotions or behavior, to feelings of depersonalization, the feeling that they are looking over their bodies, or even to derealization, which is the feeling that what is happening cannot be real (Plokar & Bisaillon, 2016). Some literature

says that it is more likely for girls to be diagnosed with dissociation disorder (Zona, 2014; Gušić, Cardeña, Bengtsson, & Søndergaard, 2016); however, there are others that state that there is no difference between genders (Farrington et al. 2001).

Dissociation had already been considered as a mediator between psychopathology and risk-taking behavior in children who suffered sexual abuse (Kisiel & Lyons, 2001). This assessment seems to be an important aspect of clinical care among traumatized children (Kisiel, Small & John, 2009), because they are more vulnerable as a consequence of chronic maltreatment, showing atypical behavioral strategies, having disorganized attachment (Blizard, 2008), developing many possible "trance states" and inability to shape an organized personality, which can result in dissociative behaviors (Pekala et al., 1999).

People that present dissociative behavior are more likely to engage in self-destructive behaviors than the ones that do not dissociate, and start doing it in a much earlier stage of development. Different types of dissociative behaviors can lead to different types of risky behaviors: they not only engage in non-suicidal self-injury, but they are also more likely to take drugs, have unprotected sex, engage in every kind of life threatening behavior (Saxe, Chawla, & Der Kolk, 2002).

Non suicidal self-injury behaviors

Adolescents exposed to traumatic experiences of child maltreatment have a pattern of potentially destructive dissociative behavior and have an elevated risk of deliberate self-harm (DSH) (Hu et al, 2017), using more methods of self-injury, and start harming themselves at an earlier age than the ones that do not dissociate (Saxe, Chawla, & Der Kolk, 2002). Those individuals release some stress and cope with it through the infliction of pain to themselves in the form of non-suicidal self-injury behavior.

Although humans have an innate drive for self-preservation, some people behave in ways that are inconsistent with this organizing principle. When this happens, some inadequate behavior may occur as is the case of self-injurious behaviors that may or may not be accompanied by the intention to die (Nock, 2010). The non-suicidal self-injury behaviors tend to occur, most commonly, during adolescence and epidemiological research shows lifetime prevalence rates of 13%-45% in adolescents (Nock, 2010), usually ceasing in young adulthood (Brown & Plener, 2017).

It is known that this type of behavior varies throughout the different stages of adolescence (Barrocas, Hankin, Young, & Abela, 2012). Although the younger adolescents (12-13), engage in this type of behavior (Barrocas, Hankin, Young, & Abela, 2012), it is in the middle adolescence, (14-16) that they reach a peak (Brown & Plener, 2017), continuing that dangerous behavior in later adolescence, (16-18) by engaging in more serious NSSI behaviors (Kaess et al., 2012).

According to Barrocas, Hankin, Young and Abela (2012), girls in their middle adolescence engage three times more in NSSI althoug many studies (Muehlenkamp & Gutierrez, 2007; Barrocas, Hankin, Young & Abela, 2012; Brown & Plener, 2017) state that girls engage in every moment of their development, more often, in NSSI behaviors and suicide attempts than boys. While boys try to control depression, hopelessness and family functioning (Martin, Bergen, Richardson, Roeger, & Allison, 2004) by hitting themselves (Barrocas, Hankin, Young, & Abela, 2012), girls engage in NSSI behaviors because they cannot deal with their emotions, either positive or negative (Plener, et al, 2016) and they do it by cutting or carving themselves (Barrocas, Hankin, Young & Abela, 2012).

The most commonly used methods of self-injury are self-cutting with a sharp implement such as a knife or razor, self-scratching or scraping, self-burning, or self-hitting (Nock, 2010). Self-injurious behavior may also refer to the stereotypic, habitual behaviors

sometimes engaged in without control, by people with pervasive developmental disorders or to the severe types of self-mutilation carried out by people experiencing psychotic symptoms, typically command hallucinations (Jacobson & Gould, 2007).

There are many studies (Suyemoto, 1998; Barrocas, Hankin, Young & Abela, 2012; Brown & Plener, 2017; Meszaros, Horvath & Balazs, 2017) that state that, the individuals that commit this act do it because they cannot support the intensity of extreme tension, anxiety, anger or fear, and in order to cope, they injure themselves to feel relief, tranquility or satisfaction. Thus, non-suicidal self-injury behaviors turn out to be a morbid way of self-help for people with or without mental illness (Muehlenkamp, 2005).

NSSI behaviors can be related with some forms of psychopathology like depression, anxiety, and externalizing behaviors (Meszaros, Horvath & Balazs, 2017). Moreover, early stressors, like childhood abuse (Klonsky & Moyer, 2008), witnessing domestic violence (Bogat, DeJonghe, Levendosky, Davidson & Eye, 2006), the death of a parent (or important person/ relative), parental abandonment (Nock, 2010), or distal risk factors (e.g., genetic risk factors, early stressors) increase the likelihood of vulnerability factors like high emotion reactivity, poor social skills (Barrocas, Hankin, Young & Abela, 2012), and the odds of maladaptive coping skills, including self-injury (Nock, 2010).

The literature indicates that investigating trauma symptoms, such as denial, anger, sadness, emotional outbursts (Bogat, DeJonghe, Levendosky, Davidson & Eye, 2006), could be particularly helpful in the conceptualization of functions and associated processes related to self-injury.

It is known that there is a relation between self-injury and traumatic experiences, partially explained by the increased risk of the molested children developing psychiatric problems, however there are mixed evidences related with childhood sexual abuse, as it only

explains 5% of the cases (Klonsky & Moyer, 2008). Presenting dissociation, which appears to be a psychiatric problem particularly related to self-injury (Paul, Schroeter, Dahme, & Nutzinger, 2002), is also associated with increased frequency of self-injury in females (McReynolds & Wasserman, 2011), especially in situations of hopelessness (Fox et al, 2015).

Adolescents who practice non suicidal self-injury behaviors can have, as possible outcomes, future suicidal behaviors (Brown & Planer, 2017), and higher indexes of dissociation, when compared with adolescents that do not have that type of behavior (Castilho, Pinto Gouveia & Bento, 2010).

Kaess and cols. (2013) discovered that diverse bad childhood experiences, like parental antipathy, neglect (even higher if it is maternal), physical (more significant if it is paternal) or sexual abuse, can be associated with non-suicidal self-injury behavior (NSSI), and that these experiences are highly inter-correlated. For instance, motherly denial seems to be a predictor of the development of non-suicidal self-injury behavior (Friedman, Glasser, Laufer, Laufer, & Wohl, 1972), besides the fact that it is known that a neglectful family environment can lead to a NSSI behavior (Serafini et al., 2017). These maltreated children do not use NSSI behaviors only to repress bad feelings. They also do it to feel better or to get attention, or even to cope with feelings of happiness? (Brown & Plener, 2017).

II – Objectives

Considering that most of the adolescents living in residential care lived prior experiences of trauma (Zelechoski, Sharma, Beserra, Miguel, DeMarco et Spinazzola, 2013) and report maladaptive behaviors (Jozefiak, Kayed, Rimehaug, Wormdal, Brubakk et Wichstrøm, 2015) such as dissociation (Silberg, 2013), and that this can mediate child maltreatment-NSSI relationship, as in case of sexual abuse (Swannell et al., 2012), it has been considered relevant to explore the links between these variables, not only for sexual abuse but also for the relation between other types of trauma, such as physical abuse, emotional abuse or neglect and NSSI Behaviors in this less understood population.

The defined objectives for this study are to:

a) analyze the expression of trauma, dissociation and NSSIB in adolescents living in residential care and the variability of these expressions according to some demographic variables

b) analyze the associations between trauma, dissociation and non-suicidal self-injury behaviors in these same adolescents;

c) analyze the mediating role of dissociation in the relation between childhood trauma and non-suicidal self-injury in these adolescents that live in residential care.

Considering the previous objectives, the following hypotheses were formulated:

H1) Adolescents in residential care highly report to have lived traumatic experiences;

H1.1) Girls report to have experienced more traumatic experiences than boys

H1.2) Younger adolescents report more trauma than the older ones

H2) Adolescents in residential care experience high levels of dissociation;

H2.1) Girls report have experienced higher levels of dissociation than boys;

H2.2) Older adolescents repost higher levels of dissociation than the younger ones;

H3) Adolescents in residential care highly exhibit NSSI Behaviors;

H3.1) Girls report to have experienced more NSSIB than boys;

H3.2) Older adolescents report to have experienced more NSSIB than the younger ones;

H4) there are moderate to strong relations between trauma, dissociation and NSSI, in adolescents living in residential care.

H5) for these adolescents, trauma and dissociation are predictors of NSSI behaviors; and

H6) for these adolescents, dissociation mediates the relation between trauma and NSSI behaviors.

III - Method

Sample

A convenience sample was collected and a total of 87 adolescents (64.4% females) living in residential care were included in our study. The mean age (SD) was 15.71 (1.73), with 78.2% over 14 years old. The vast majority of our adolescents are Portuguese. Concerning education, half of our sample is attending 3rd cycle, with 60.9% being in the regular school program. Table 1 represents our sample's descriptive.

Table 1
Sample characteristics regarding sex, age, school year, nationality and type of education (n=87)

	n	%
Sex		
male	31	35.6
female	56	64.4
Age		
12	7	8
13	5	5.7
14	7	8
15	14	16.1
16	18	20.7
17	26	29.9
18	10	11.5
Nationality		
Portuguese	84	96.6
Cape Verdean	1	1.1
Brazilian	1	1.1
Croat	1	1.1
School year		
1st cycle (1. º-4. º)	1	1.1
2nd cycle (5. º-6. º)	15	17.3
3rd cycle (7. º-9. º)	44	50.5
High school (10. º-12. º)	27	31
Type of education		
Regular	53	60.9
Professional	34	39.1

In our sample, institutionalization varies from 0 to 204 months (the majority for a period over 30 months). Regarding the present residential unit, the length of stay varies from 1 to 192 months, with 56.3% of our adolescents living in a rural area. For 65.5% of the individuals, this is their first residential unit. Table 2 presents some characteristics of the sample regarding residential care life history.

Table 2
Sample characteristics regarding residential care life history (n=87)

	n	%	min-max	M(SD)
Residence				
Rural	49	56.3		
Urban	38	43.7		
Time in current residential care			1 - 192	38.70 (37.45)
Other residential care houses				
Yes	57	65.5		
No	30	34.5		
Other institutions			0 - 10	0.79 (1.53)
Total time living in residential care			0 - 204	55.11 (48.45)

In Table 3 are presented the reasons pointed by each individual as the cause for have been removed from their families and put into residential care. A significant part of the sample (18.4%) stated that they do not know the reason why they were removed. Curiously, half of the others blamed themselves for the situation they were living in. For those who blamed their families for their present reality, domestic violence or some kind of neglect were the main reasons pointed by the adolescents. As expected, some of the adolescents presented more than one reason to be taken away from their families.

Table 3
Sample characteristics regarding reasons why they live in residential care (n=87)

Reasons	%
Not knowing	18.40
Not attending school	25.94
With drug/alcohol addiction	06.77
Home escape	05.42
Court lawsuits	01.08
Inappropriate behavior	11.43
Being irresponsible	02.86
Domestic violence	14.90
Neglect	18.40
Parental death	03.40
Parental separation	03.40
Economic need	05.70
Depression (care giver)	02.30
Forest fire	01.10

Measures (see annex 1)

Social demographic questionnaire - built in order to collect some information about these adolescents characteristics like gender, age, nationality, grade in school, type of education and then more specifically about their past and current life in the Portuguese child care system.

Childhood Trauma Questionnaire – Short Form, (CTQ-SF; Bernstein et al., 2008; Portuguese version: Matos & Pereira, 2012) - self-report instrument designed to measure the exposure to traumatic events of child abuse, that occurred until the age of 15. In the original version, the questionnaire is composed by 28 items, 25 of which are divided by five types of childhood abuse or neglect, namely sexual abuse, emotional neglect, emotional abuse, physical neglect and

physical abuse: The 3 remaining items composes the index of denial, that measures the social desirability, this means, answering to the questions, by what they think it will be more social accepted.

However in the Portuguese version, , due to the factorial analyses, physical abuse and neglect are combined (items 4, 6, 9, 11, 12, and 17), and the other three factors continue with the same designation as the original version, being sexual abuse (items 15, 20, 21, 23, 24, 25, and 27) emotional abuse (items 3, 8, 14 and 18), and emotional neglect (items 2, 5, 7, 13, 19, 26 and 28). One item has been excluded. In the Portuguese version it was maintained the index of negation (10, 16 and 22), being a total of 27 items in this version. The items are classified according a 5 points likert scale ranging from 1= "*Never true" to 5="Very often true"*.

The total scale of this test has an excellent internal consistency, for Portuguese population (α = .905).For each factor, the internal consistency was in a good range, with the values between acceptable (α = .709) for emotional abuse, to very good (α =.898) for sexual abuse, in between were physical neglect/abuse with good internal consistency (α =.848) and emotional neglect as well (α =.860). In this sample the results were not so high, but still showed good internal consistency. For the total scale in this sample the internal consistency was also good (α = .899), and for each factor as well, with the highest for sexual abuse (α =.857), then physical abuse/neglect (α =.827), and emotional neglect (α = .811) being all three of them with good internal consistency and slightly lower, with acceptable consistency was emotional abuse (α =.754).

Adolescent Dissociative Experiences Scale (A-DES; Armstrong, Putnam, Carlson, Libero, & Smith, 1997; Portuguese version: Espírito Santo & Lopes, 2010) – is a unifactorial self-report instrument designed to measure the level of dissociation in adolescents from the age of 11 up to 18 years old. Composed by 30

items classified according an 11 points likert scale, from 0= “it never happens to you”, to 10= “it is always happening to you”. The Portuguese version presented a very good internal consistency (α = 0.94). An equivalent value was obtained in the sample of our research (α = 0.95).

3) *Impulse, Self-harm and Suicide Ideation Questionnaire for Adolescents (ISSIQ-A) [QIAIS-A; Questionário de Impulso, Auto-dano e Ideação Suicida na Adolescência]*, - (Castilho P., Barreto Carvalho, C., Nunes, C. & Pinto-Gouveia, J., 2012), which is a self-report instrument, designed for the Portuguese population, constituted by 64 items, divided by 4 factors, that are A – Impulse (16 items), B – Non suicidal self-injury (14 items), C – Functions (31 items) e D – suicidal intention (3 items). In the present study it will only be considered factor B, which is linked to self-harm. The answer to the items is done through the Likert scale of 4 points that goes from 0= “never happens to me”, to 3= “always happens to me”. Only C is nominal. This questionnaire was developed for the Portuguese population, and it showed a good the internal consistency (α =0.86), and for factor B “self-harm”, internal consistency was also very good (α =0.91) (Nunes, 2012).

For this study particular sample, the internal consistency was very good (α =0.97) of this questionnaire, and factor B’s internal consistency was slightly higher (α =0.92), than the original one.

****> .9 excellent ; α > .8 good; α > .7 acceptable; α > .6 questionable; α > .5 poor; α < .5 unacceptable (George & Mallery, 2003)

Procedures

Data collection

To accomplish this investigation, around 24 residential care houses were contacted in two districts of the center of Portugal, mainly via electronic mail. These mails contained a formal request (see annex 2) to the directors of the institutions, a resume of the main objectives of the studies and an explanation of the instruments to be applied and of the ethical procedures to take in account during data collection. These contacts have been reinforced by personal visits and phone calls. At the end, 8 institutions were available to collaborate.
The protocol that has been applied was supporting two different research projects and data collection has been conducted by two researchers. In 3 of the Residential Homes, the application of the protocol has been made by the psychologist who worked there.

The application of the protocol was collective, to a maximum of 5 adolescents at a time. It was explained to them that the task was not mandatory, that it was anonymous and that they could decide not to participate at any moment of the completion of the protocol. It was also clarified that the data would only be used collectively. With some adolescents the fulfillment of the protocol had to be more accompanied in order to clarify some of their doubts.

Data analysis

The questionnaires were randomly numbered with an identification number. The data analyses were performed, first using Statistical Package for Social Sciences - IBM SPSS 22.0 (SPSS IBM; Chicago, IL); and then it was used MPLUS v7, with the MCR estimator.

In order to study the distribution of the subjects in the sample, the analyses started by looking for univariated outliers, being considered outliers, the subjects that deviate from the mean more than 2.5 SD. After finding them, it was necessary to winsorize the values.

Winsorization is a linear transformation of the extreme values of the distribution maintaining their relative position (Howell, 2011; Tabachnick & Fidell, 2007). It was then studied the variable distribution, specially the kurtosis, that has more impact in correlational or regression studies (DeCarlo, 1997). The histograms were analyzed, particularly on the variables where the standardized kurtosis was more than 2 (Cramer, 1997). It was studied the linearity of correlations, recurring to the comparization between r2 and eta2. The results allow concluding that not only exists a nonlinear relationship between the predictor variable and the mediating variable, but also between the criterion variable and the predictor variable. Regarding the relation of the criterion variable with the mediating variable, there is no evidence of a nonlinear relation. It has been considered the Spearman correlation due to the described deviations of the variables from the normal curve.

Descriptive statistics were made to understand the characteristics of the final sample, regarding gender, age, nationality, school level, type of education and information related with the adolescents residential care history.

The analyses were made by using a different number of statistical procedures, namely: i) Calculation of Cronbach's alpha coefficient for the study of internal consistencies; ii) Descriptive statistics of central tendency and dispersion; iii) Mann-Whitney Test to compare means; iv) analysis of structural equation for the mediating study.

IV - Results

1) Analyses of the exposure to traumatic events and social desirability

In our analysis, and according to the literature, we considered 4 subtypes of exposure to traumatic events: sexual abuse, physical abuse/ neglect, emotional abuse and emotional neglect. Table 4 clearly presents the descriptive of each subtype of traumatic events obtained in our sample.

Emotional neglect was, by far, the most meaningful form of childhood trauma reported by the adolescents, being the only one placed between "rarely true" and "sometimes true". All other means representing other traumatic events were placed between "never true" and "rarely true", with emotional abuse being the second most frequent event.

The index of denial ranked high in this sample, being place between "sometimes true" and "often true" in the CTQ scale, with a mean (SD) of 3.49 (1.07), which means that these adolescents do not want to admit that their reality was so painful, or they do not want to answer wrongly, in terms of social acceptance, because it is expected that for adolescents that are put marginalized from the society, that social desirability is important for them. Hypotheses H1, adolescents in residential care highly report to have lived traumatic experiences, was not verified, because these adolescents did not score high in the trauma questionnaire.

Table 4
Mean, standard deviation and potential and actual range for the different types of traumatic events. (n=87)

		Range	
	M(SD)	Potential	Actual
Sexual abuse	01.30(.49)	1-5	1 - 2.74
Physical abuse/neglect	01.62(.87)	1-5	1 - 3.85
Emotional Neglect	02.43 (1.08)	1-5	1 - 4.71
Emotional abuse	01.82(.97)	1-5	1 - 5

1.1. Exposure to traumatic events according to gender

Besides the global results, it is of utter importance to analyze our results according to different individual variables. Given so, table 5 presents the descriptive of the four different subtypes of traumatic events according to gender. In our sample, it is clear that girls tend to rank higher in every subtype of trauma except for the emotional abuse. Nevertheless, only sexual abuse presents a statistically significant difference between boys and girls ($p = 0.02$), meaning that girls report more than boys to have been victims of sexual abuse. Hypotheses H1.1, girls report to have experienced more traumatic experiences than boys, is partially verified, because regarding sexual abuse, girls do score higher than boys, but in the other types of trauma there are no differences.

Table 5
Mean, standard deviation, Z test and significance level regarding gender differences in the different factors of trauma (n=87)

	Boys (n=31) M(SD)	Girls (n=56) M(SD)	Z	p
Sexual abuse	1.16(0.38)	01.38(0.53)	-2,37	0.02*
Physical abuse/neglect	1.60(0.82)	01.63(0.80)	-0.37	0.71
Emotional neglect	2.50(1.10)	02.40(1.08)	-0.53	0.59
Emotional abuse	1.60(0.69)	01.94(1.09)	-1.11	0.27

*p<.05

1.2. Exposure to traumatic events according to age group

At this point we divided our sample in two age groups, G1 included adolescents aged between 12 and 15 years old, and G2 which included the ones aged between 16 and 18. Table 6 presents the descriptive of the four subtypes of traumatic events according to age group.

Even though, apparently older individuals tend to rank higher in sexual abuse, emotional neglect and emotional abuse, no statistically significant differences were observed. Which means that adolescents in residential care, equally report having been exposed to traumatic events no matter how old they are. In Hypotheses H1.2, we say that, younger adolescents report more trauma than the older ones, which does not verify, due to the fact that there are not significative differences, regarding age differences.

Table 6
Mean, standard deviation, Z test and significance level regardind age group differences in the different factors of trauma (n=87)

	G1:12-15 (n=33) M(SD)	G2:16-18 (n=54) M(SD)	Z	p
Sexual abuse	1.24(0.43)	1.34(0.52)	- 0.98	0.33
Physical abuse/neglect	1.64(0.92)	1.61(0.73)	- 0.61	0.54
Emotional neglect	2.39(1.07)	2.46(1.09)	- 0.30	0.77
Emotional abuse	1.72(1.08)	1.88(0.91)	- 1.58	0.12

2) Analyses of the dissociative experiences

Dissociative experiences are a way to evade reality and, according to literature, they are very frequent in adolescents living in residential units.

In our sample (see table 7), adolescents obtained a low mean in ADES, having a mean of 3, when the scale goes from 0 to 10, which means that regarding their experiences in the present, they do not engage in dissociative behaviors, which goes against our Hypothesis H2, that adolescents in residential care experience high levels of dissociation.

Table 7
Mean, standard deviation and potential and actual range for dissociation. (n=87)

		Range	
	M(SD)	Potential	Actual
ADES_Total*	3.00(1.98)	0-10	0.10-7.68

*****Adolescent dissociative experiences scale

2.1. Analyses of dissociation regarding gender

As presented in table 8, regarding gender, the difference has no statistical significance (p=.11), meaning that boys and girls in residential care do not differ in terms of dissociative behaviors. A Hypothesis H2.1 - girls report to have experienced higher levels of dissociation than boys - is refuted.

Table 8
Mean, standard deviation, Z test and significance level regarding gender differences in dissociation (n=87)

	Boys (n=31) M(SD)	Girls (n=56) M(SD)	Z	p
ADES_Total	2.62(2.08)	3.22(1.90)	-1,59	11

*****Adolescent dissociative experiences scale

2.2. Analyses of dissociation regarding age group

As for age group, this difference presented no statistical significance, meaning that older adolescents and young ones behave the same way regarding dissociation, which make us deny Hypotheses H2.2 - older adolescents report higher levels of dissociation than the younger ones. Table 9 shows ADES means for the age groups.

Table 9
Mean, standard deviation, Z test and significance level regarding age group differences in dissociation (n=87)

	G1:12-15 (n=33) M(SD)	G2: 16-18 n=54) M(SD)	Z	p
ADES_Total	3.25(2.22)	2.85(1.82)	-0.70	.48

*****Adolescent dissociative experiences scale

3) Analyses of the Non-suicidal Self-injury Behaviors (NSSIB)

The results obtained in the factor about NSSI showed that all means are low, which in terms of the QIAIS-A scale, places them between never happens to me and it happens to me sometimes, as can be seen in table 10, leading to the conclusion that in this sample, only few adolescents engage in these type of behaviors. So Hypotheses H3, that says adolescents in residential care highly exhibit NSSI Behaviors, does not verify.

Table 10
Mean, standard deviation and potential and actual range for NSSIB. (n=87)

		Range	
	M(SD)	Potential	Actual
QIAIS_B_NSSI	.25(.36)	0-3	0-1.28
QIAIS_b_RiskBeh	.22(.45)	0-3	0-2.67
QIAIS_B_Total	.25(.43)	0-3	0-2.83

** Impulse, Self-harm and Suicide Ideation Questionnaire for Adolescents*

3.1. Analyses of NSSIB regarding gender

Some unexpected results may be observed in table 11. Because no differences were found regarding gender in NSSIB and risky behavior, so Hypotheses H3.1, where we state that girls report to have experienced more NSSIB than boys, cannot be verify.

Table 11
Mean, standard deviation, Z test and significance level regarding gender in NSSIB (n=87)

	Boys(n=31) M(SD)	Girls (n=56) M(SD)	Z	p
QIAIS_NSSI	0.21(0.36)	0.28(0.37)	-0.93	0.35
QIAIS_Riskbeh	0.35(0.64)	0.15(0.28)	-0.23	0.82
QIAIS_Total	0.32(0.61)	0.22(0.30)	-1.09	0.28

** Impulse, Self-harm and Suicide Ideation Questionnaire for Adolescents*

3.2. Analyses of NSSIB regarding age group

Regarding age group analysis, in our sample, although the means in the older age group are slightly higher, as seen in table 12, due to the fact that the differences are not statistically significant, it is not possible to conclude that older adolescents tend to engage more in non-suicidal self-injury behaviors, leading to the conclusion that Hypotheses H3.2, older adolescents report to have experienced more NSSIB than the younger ones, it is not verified.

Table 12
Mean, standard deviation, Z test and significance level regarding age group in NSSIB (n=87)

	G1:12-15 (n=33) M(SD)	G2:16-18 (n=54) M(SD)	Z	p
QIAIS_NSSI	0.25(0.39)	0.26(0.35)	-0.58	0.57
QIAIS_Riskbe	0.15(0.37)	0.27(0.49)	1.74	0.08
QIAIS_Total	0.22(0.42)	0.28(0.44)	1.37	0.17

** Impulse, Self-harm and Suicide Ideation Questionnaire for Adolescents*

4) Associations between trauma, dissociation and NSSIB

As seen in table 13, the correlations presented are positive. Considering magnitude, dissociation has a moderate correlation with emotional abuse and NSSIB (Spearman correlation coefficient of 0.38 and 0.40 respectively). Dissociation and sexual abuse presents a low, yet still significant, correlation (r = 0.28). However, neither emotional neglect nor physical abuse/ neglect present a significant correlation with dissociation in our sample.

Higher correlation values were observed among different types of trauma, but the only correlation that can be classified as strong (r = .57) is the one between physical abuse/ neglect and emotional abuse.

Surprisingly, no significant correlation was found between emotional neglect and NSSIB.

The analyses of table 13 make us to conclude that our Hypotheses H4 - there are moderate to strong relations between trauma, dissociation and NSSI, in adolescents living in residential care - can only be partially verified.

Table 13 shows the different Spearman correlation coefficients between dissociation, trauma and NSSIB.

Table 13

Non parametric correlations between dissociation, traumatic events, and non-suicidal self-injury behaviors.

Measures	ADES	CTQ_SexAbu	CTQ_EmoNeg	CTQ_FisAbuNeg	CTQ_EmoAbu	QIAIS_B_NSSI
ADES	-	0.28*	0.10	0.16	0.38**	0.40**
CTQ_SexAbu	-	-	0.18	0.44**	0.46**	0.32**
CTQ_EmoNeg	-	-	-	0.32**	0.42**	0.04
CTQ_FicAbuNeg	-	-	-	-	0.57**	0.38**
CTQ_EmoAbu	-	-	-	-	-	0.42**
QIAIS_B_NSSI	-	-	-	-	-	-

** correlation is significant at the 0.01 level (2-Tailed)

* correlation is significant at the 0.05 level (2-Tailed)

The interpretation of the values obtained was made based on Cohen's (1988) proposal: values between *r*=.10 to *r*=.29 corresponds to a weak correlation, values between *r*=.30 to *r*=.49 are the ones that have a moderate correlation and, finally values between *r*=.50 e *r*=1.0 are considereds strong correlations.

5) Dissociation as mediator of the relationship between trauma and NSSIB

In order to understand if dissociation was in fact a mediator of the relationship between childhood trauma and non-suicidal self-injury behaviors (NSSIB), analyses of the first model with the 4 independent variables (IV) theoretically advocated have been performed (see fig. 1) although for sexual abuse and physical abuse/neglect significant correlations with the mediating variable were not observed.

None of the VI obtained significant estimates with the mediating variable, nor with the dependent variable. Only dissociation was a predictor for NSSI, this result, makes us to conclude that Hypotheses H5, for these adolescents, trauma and dissociation are predictors of NSSI behaviors, is only partially verified (see table 14).

Figure 1
Graphic representation of the differences relations studied in this investigation

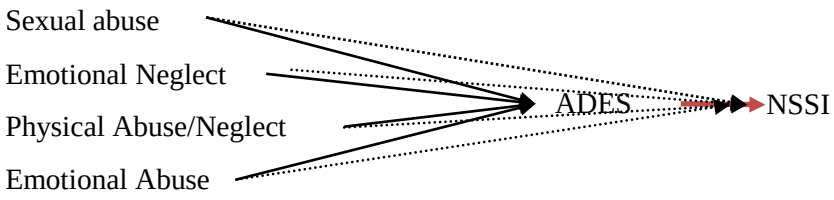

Table 14
Estimate, standard error, relation between estimative/standard error, and significance level in the relation between dissociation, trauma and NSSIB (n=87)

	Estimate	Standard error	Estimate/ standard error	p
ADES				
Sexabu	0.04	0.10	0.35	0.73
EmoNeg	-0.07	0.11	-0.64	0.52
	0.03	0.17	0.19	0.85
PhyAbuNeg				
EmoAbu	0.30	0.17	1.79	0.07
NSSIB				
Sexabu	0.07	0.11	0.60	0.55
EmoNeg	-0.02	0.12	-0.20	0.84
PhyAbuNeg	0.19	0.15	1.25	0.21
EmoAbu	0.08	0.17	0.53	0.60
ADES	0.36	0.09	3.96	0.00**

Also, when excluded the independent variables sexual abuse and emotional neglect, as seen in table 15, the 2 predictor variables of the neither equation, nor physical neglect/abuse or emotional abuse were predictors of dissociation or NSSI. The correlation between the mediator and the de VD (NSSI) was .40, and the VD did not correlated with the factor emotional neglect.

Table 15
Estimate, standard error, relation between estimative/standard error, and significance level in the relation between dissociation, trauma and NSSIB (n=87)

	Estimate	Standard Error	Estimate/ standard error	P
ADES				
PhyAbuNeg	0.03	0.15	0.22	0.83
EmoAbu	0.29	0.17	1.75	0.08
NSSIB				
PhyAbuNeg	0.21	0.15	1.43	0.15
EmoAbu	0.09	0.16	0.59	0.56
ADES	0.37	0.09	4.04	0.00**

All analyses were made with the 4 Vis lead to the result that none of them significantly correlated with the mediator variable and the criteria variable, leading us to the conclusion that, for this sample no mediating effect was observed, so Hypotheses H6, for these adolescents, dissociation mediates the relation between trauma and NSSI behaviors, cannot be verified in this investigation.

V - Discussion

Over the last few years, a growing amount of research has been conducted to better understand the impact of childhood trauma, the manifestation, the etiology of dissociative and non-suicidal self-injury behaviors, in children and adolescents. However, it is still scarce the information about the way these same variables manifest or even interact in the case of adolescents that develop under abnormal circumstances, like residential care. The main objective of this research has been to contribute to the understanding of the psychological functioning of adolescents that develop in the context of residential care, studying the relations between traumatic experiences in childhood, dissociation and non-suicidal self-injury behaviors. More precisely, we aimed to study the mediating role of dissociation between the other two variables. Before studying the mediation, each variable has been individually analyzed.

Results showed that the adolescents in residential care from our sample reported to have lived less traumatic experiences of maltreatment than we expected. This is an interesting result, especially when it is known that child maltreatment in the family context is one of the main reasons why children and adolescents are removed from their homes and placed in out-of-home care. However, this same result gains some sense when we look into the reasons the adolescents presented when asked about why they were placed in residential care. Some did not know, others presented reasons that were related to themselves and only 14.9% indicated domestic violence and 18.4% referred neglect.

Our reflection about this result make us hypothesize that adolescents in residential care may tend to report their experiences based on a survival and false self (Nobre-Lima, 2009) that makes them devalue the traumatic nature of the reasons for their removal. Additionally, the expectation created by the adolescents over the years of institutionalization that their families are going to change thus

allowing their return, may reinforce this tendency. During this time and in order to deal with the fact of living apart from their family, the adolescents tend to build an idealized view of their families, to which they will return one day, thus denying the maltreatments they were victims and ascribing to themselves the fault for the removal (Nobre-Lima, 2009). They do that, by never losing hope that someday they will be able to return home, because their families will get better, which can also lead to an attempt of suppress the childhood memories in order to make the dream of returning home, more viable. In fact, when asked about the reasons for their removal many adolescents atributted to themselves the responsibility for the placement in residential care. Also, in the Childhood Trauma Questionnaire they obtained a high index of social desirability.

Concerning the differences found in the reports of traumatic experiences according to gender, the only difference found was in the traumatic experience of sexual abuse, with girls reporting having been more victims than boys of this type of maltreatment. This corroborates the existing literature that states that girls are more likely to have been sexually abused than boys and that they are more likely to present trauma symptoms and exhibit problematic sexualized behavior (Connor, Doerfler, Toscano, Volungis, & Steingard, 2004; Collin-Vézina, Coleman, Milne, Sell, & Daigneault, 2011). No differences were found in the other trauma types, which goes against literature that state that girls also score higher regarding emotional abuse than their male colleagues, and are more likely to be physically abused (Boyer, Hallion, Hammell, & Button, 2009). Regarding variations in the report of traumatic experiences according to the age group, no differences were found.

In what concerns dissociative behaviors of the institutionalized adolescents of our sample, it was found that they scored low in the dissociative scale, thus not manifesting a tendency to dissociate. Boys and girls, like younger and older adolescents, did not differ on their

dissociative behaviors. This result was against what we had hypothesized. According to the existing literature, boys use more this type of coping mechanisms than girls (Swannell et al., 2012) and also younger adolescents dissociate more than older ones, due to the fact that they are more likely to create their own world by day dreaming (Tomunen et al., 2007).

Surprisingly, in our sample correlations between traumatic experiences and dissociation were inexistent or weak. Consequently, those experiences didn´t predict dissociative behaviors.

According to the literature, a history of childhood trauma has been implicated in the aggravation of dissociative tendencies (Teicher et al., 2003), and dissociative symptomatology is reported to correlate positively with self-reported childhood history of sexual abuse, physical abuse, emotional abuse, and neglect (Irwin, 1999), which made us predict a different result in our study.

Regarding the last point of descriptive analyses, results showed that non suicidal self-injury behaviors are not that frequent among adolescents of or sample.

No differences were found between gender neither in the practice of NSSIB nor in the exhibition of risky behaviors. This result diverge fromt other research findings. Barrocas, Hankin, Young, and Abela (2012), have found that although girls score higher in the behaviors of non-suicidal self-injury behaviors, boys score higher in more dangerous behavior regarding drug and alcohol abuse. Thornberry et al. (2013) found that the only risky behavior where girls score higher than boys is in sexual promiscuity.

One of the main objectives of this work was to understand whether different kinds of trauma predicted NSSI or not. Correlations between traumatic experiences and NSSIB were moderate, but those experiences did not predict self-injury behaviors. Once again, these results do not corroborate other findings that revealed strong correlations between child maltreatment and non-suicidal self-injury

behavior, especially in girls that were sexually abused (Brown & Plener, 2017; Glassman, Weierich, Hooley, Deliberto & Noch, 2007; Gratz et al., 2002; Kaess et al., 2013).

As we hypothesized, dissociation is a predictor of non-suicidal self-injury behavior, which is consistent with other studies (Armey & Crowther, 2008) Nevertheless, and contrary to what we expected, dissociation did not mediate the relation between childhood trauma and NSSI. Rallis, Deming, Glenn and Nock (2012) pointed that dissociation as a predictor of non-suicidal self-injury represents a mean of generate feeling, since that by dissociating these adolescents are escaping from their hard reality. In order to feel again, they engage in this type of behavior, because is something that they can control, on the contrary of what is happening in their lives. These same authors also say that early abuse can increase the feelings of dissociation. In order to deal with that kind of feeling, adolescents can engage in non-suicidal self-injury behavior to feel alive. Swannell et al (2012) found that dissociation mediates the relation between childhood trauma and NSSIB, especially for boys.

As a whole, the results found in our study makes us consider two possible explanations. In one hand, the survival mode in which these adolescents live in order to cope with the consequences of past traumatic experiences and present adversities can make them develop a false self that is strong, healthy adaptive and even appealing to others. This ideia has been stressed in the study of Nobre-Lima (2009) where the author studied, among other things, identity construction of adolescents in residential care. These adolescents also tend to avoid situations of major stress (Struik, 2014), thus escaping from situations where their emotions are activated and inevitably confronted. When they answer to self-report instruments like the ones used in the present research, adolescents in residential care might be influenced in their responses by the survival and false self meanwhile developed and, consequently, hiding their weaknesses ans vulnerabilities. If this self

makes them avoid confrontation with their hard reality and negative emotions, the responses they give may not correspond to the reality they lived, nor to their present inner experiences and behaviors. Self-report questionnaires can lead to an adulteration while answering the questions, with the respondent thinking that there are correct and wrong answers, regarding social influence of what is "normal" and what it is not (Diener, 1994). In research conducted with adolescents, this explanation is even more plausible (Gilman & Barry, 2008). The high index of social desirability may translate this situation.

On the other hand, we cannot forget that although these adolescents have had a traumatic childhood, they are now living for some time in a context that is supposed to be protective. They can, in fact, present low levels of dissociation and NSSIB because the experience of out-of-home care has helped them develop new and more adaptive strategies to deal with adversity. More recently, it has been advocated that residential homes should follow therapeutic models of care to help institutionalized children and adolescents overcome their difficulties and problems (Anglin, 2002), thus facilitating more adaptive developmental pathways.

This study presents some limitations. As in other studies with adolescents in residential care, sample collection is demanding and the numbers of individuals that participate rarely correspond to our aim. In the present sample the unbalanced number of boys and girls should be taken into account when analyzing some results. Additionally, non-parametric statistic tests are less sensitive to the existence of statistical differences.

VI - Conclusion

The aim of this research has been to study the relations between dissociation, childhood trauma and non-suicidal self-injury behavior (NSSIB) in adolescents living in residential care, more specifically to understand if dissociation has a mediator role between the different kinds of childhood trauma and engaging in NSSIB. Our findings showed that: 1) sexual abuse and emotional abuse are weakly associated with dissociative behaviors, but don´t predict them; 2) presenting signs of dissociation can predict non-suicidal self-injury behaviors; but 3) dissociation do not mediate the relation between the experience of traumatic events and NSSIB.

Results obtained raised more questions than explanations. More research is needed in order to understand how adolescents in residential care deal with their experiences of victimization and the impact they have in their mental health. It is important to better understand the use of dissociation in this context, how it manifests and the consequences for adolescents behaviors. Also, it should not be neglected the hypotheses that these adolescents use coping mechanisms to deal with the experiences of victimization and with the fact of living in residential care, that are protective of their mental health instead of contributing to its deterioration. Future research on this field should consider the impact of institutional practices, especially those subscribed in therapeutic care, in the development of coping mechanisms that make adolescents more resilient and more adaptive.

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Annexes

Annex 1 – Request for Collaboration

Exmo.(a) Senhor(a) _____
Diretor(a) _____
Assunto: Pedido de autorização para participação numa investigação para Tese de Mestrado.

Somos Inês Pereira de Sousa e Margarida Peres, estudantes do Mestrado em Psicologia da Educação, Desenvolvimento e Aconselhamento, na Faculdade de Psicologia e Ciências de Educação da Universidade de Coimbra, e encontramo-nos no corrente ano letivo a desenvolver um trabalho de investigação no âmbito das nossas Teses de Mestrado sobre os comportamentos de auto dano em adolescentes em acolhimento e sobre o papel mediador dos comportamentos dissociativos na relação entre o trauma e o autodano nos mesmos adolescentes. O nosso protocolo de investigação é comum pelo que estamos a recolher em conjunto os dados para ambas as teses. Esta investigação está a ser efetuada sob a orientação da Professora Doutora Luiza Nobre Lima, docente da já referida faculdade.

Por forma a concretizar este projeto de investigação, necessitamos da colaboração de adolescentes com idades entre os 12 aos 18 anos, que estejam em acolhimento residencial, no preenchimento de três breves questionários. Neste sentido, vimos solicitar a Vossa Excelência, autorização para os jovens que habitam na instituição que é por si dirigida, participem nestes estudos, pois a disponibilidade das Instituições que acolhem estes jovens para colaborarem com esta investigação é fundamental para a sua concretização.

A informação recolhida é anónima e estritamente confidencial. Nenhum questionário respondido será tratado individualmente, uma vez que os dados só serão estatisticamente analisados no seu conjunto.

Para eventuais esclarecimentos, deixo aqui os meus contatos:

Correio eletrónico: inespersousa22@gmail.com Telemóvel: 927304443

Grata pela atenção dispensada a este assunto, com os meus melhores cumprimentos.

Coimbra, ….. de ……. de 2018

_____ _____

Inês Sousa (Mestranda de Psicologia) Prof. Doutora Luiza Nobre Lima (Orientadora)