

ADOLESCENTS AND SELF-DESTRUCTIVE BEHAVIOURS: AN EXPLORATORY ANALYSIS OF FAMILY AND INDIVIDUAL CORRELATES

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Abstract

Several studies have shown that as many as 20% of European schooled adolescents report self-destructive thoughts/behaviours. Using multinomial logistic regression analysis, the present study investigated the family and individual variables that predict reports of these behaviours. Three groups, one without reports of self-destructive thoughts/behaviours (NSDTB; $n= 998$), one with reports of self-destructive thoughts/behaviours (SDTB; $n= 268$) and a clinical group (CS; $n= 42$) of adolescents with a mean age of 15.88 ($SD= 2.11$), participated in the study. Parenting styles, parental attachment, family functioning, satisfaction with family relationships, self-esteem and internalising and externalising symptoms, were analyzed. The findings suggest that increases in mothers' quality of emotional bond, fathers' control and family cohesion and decreases in age and mothers' control lead to a decreased likelihood of belonging to the SDTB group. However, being female, perceiving a high level of mothers' inhibition of exploration and individuality, perceiving a high level of fathers' rejection and having a low satisfaction with family relationships increase the probability of belonging to the CS group.

KEY WORDS: *adolescence, self-destructive behaviours, family.*

Resumen

Los estudios demuestran que el porcentaje de adolescentes estudiantes que relata pensamientos y conductas autodestructivas es de aproximadamente 20% en toda Europa. Mediante un análisis de regresión logística multinomial, el presente estudio investigó tres grupos de adolescentes ($M= 15.88$; $SD= 2.11$), uno sin informe de pensamientos/comportamientos autodestructivos (NSDTB; $n= 998$), uno con informe de pensamientos/comportamientos autodestructivos (SDTB; $n= 268$) y un grupo clínico (CS; $n= 42$). Se evaluaron los estilos parentales, el apego de los padres, el funcionamiento familiar, la satisfacción con las relaciones familiares, autoestima y síntomas interiorizados y exteriorizados. Los hallazgos sugieren que la calidad del vínculo emocional con las madres, el control

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de los padres, la cohesión familiar y la disminución en la edad llevan a una menor probabilidad de pertenecer al grupo SDTB. Sin embargo, ser mujer, percibir un alto nivel de inhibición de exploración e individualidad de la madre, un alto nivel de rechazo de los padres y una baja satisfacción en las relaciones familiares, aumentan la probabilidad de pertenecer al grupo CS.

PALABRAS CLAVE: *adolescencia, conductas autodestructivas, familia.*

Introduction

Self-destructive patterns are ranged on a continuum that includes suicidal thoughts, self-destructive behaviours from which the intent to die is absent and suicide-related behaviours that can culminate in suicide (Van Orden et al., 2010). Several studies have confirmed that approximately 20% of adolescents report self-destructive thoughts and behaviours, which represents a challenge for those who work with adolescents, including teachers and mental health professionals (Cheng et al., 2009; Prinstein, 2008; Toro, Paniagua, González, & Montoya, 2009). Moreover, suicide is one of the leading causes of death among adolescents worldwide (WHO, 2006).

The majority of studies investigating this issue have relied on clinical samples; only recent studies have employed community samples of adolescents (Cheng et al., 2009; Prinstein, 2008). However, research that facilitates the accurate identification of the risk factors for self-destructive behaviours and the factors that prevent such behaviours is of utmost importance. Such knowledge is crucial for therapeutic interventions - namely, psychotherapy and family therapy- and for mitigating the risk of engaging in more severe behaviours that may compromise mental and physical integrity (Prinstein, 2008).

In this study, adolescents in a clinical sample (CS) were compared with adolescents from two community samples to identify individual and contextual risk factors. The first community sample comprised adolescents who had never reported self-destructive thoughts and behaviours (NSDTB), while the second community sample comprised adolescents who had reported self-destructive thoughts and behaviours (SDTB).

An ecological perspective of self-destructive behaviours

According to an ecological perspective (Bronfenbrenner, 1977), various factors originating at different systemic levels (individual, microsystem, mesosystem, and macrosystem) interact to influence human development. This perspective is used to explain systemic multifinality, i.e., different life trajectories despite similar initial conditions, and equifinality, i.e., similar life trajectories notwithstanding different initial conditions (Barker, 2000). These ecosystemic assumptions justify a deep analysis of adolescents at risk for self-destructive behaviours and their contexts to enrich therapeutic and preventive intervention. Especially of interest are the immediate contexts (microsystems) of such adolescents, which are embedded in larger contexts (Collins & Steinberg, 2006).

Research has consistently reported that adolescent self-destructive behaviour is a complex and multidetermined phenomenon (Chan et al., 2009; Joiner et al., 2009; Lewis, Rosenrot, & Santor, 2011; Nock & Mendes, 2008; Randell, Wang, Herting, & Eggert, 2006). Adolescence is challenging due to the profound changes that occur at different systemic contexts and levels during this time. These changes are primarily individual, familial, social (e. g., peers, school) and societal (e. g., values, culture, policies). Successful adaptation to these changes is the challenge of adolescence, and the outcome strongly influences adolescent well-being. When successful adaptation is not accomplished, a crisis can arise that may result in more or less temporary maladaptive trajectories of development and eventual psychopathological symptoms (Soares, 2000). We can therefore assume that self-destructive behaviours indicate a maladaptive developmental trajectory, to which factors from various contexts and systemic levels and their interactions can contribute (Van Orden et al, 2010).

Self-destructive behaviours and familial risk factors: parenting styles, attachment and family functioning

Adolescent suicidal behaviour seems to be associated with a negative perception of familial relationships, especially insecure attachment to parental figures and a negative perception of parenting styles and of parent-adolescent relationships (Ehnavall, Parker, Pavlovic, & Malhi, 2008; Forteza, Mariño, Mondragón, & Mora, 2000; Sampaio, 2002; Wagner, Silverman, & Martin, 2003).

Research on parenting styles (Enhavall et al., 2008; Milesky, Schlechter, Netter, & Keehn, 2007) has repeatedly demonstrated that perceiving parents as caring and supportive diminishes the likelihood that adolescents will develop psychological problems, such as self-harming behaviour, and promotes positive development. Similarly, Groholt (2000, cit. in Randell et al., 2006) found that adolescents who had been hospitalised for self-destructive behaviours perceived significantly less parental support than adolescents from community samples with or without reports of self-destructive behaviour. Parental control also seems to be related to some externalising behaviours such as delinquency and drug abuse (Baumrind, 1991; Oliva, Parra, & Arranz, 2008; Wang, Dishion, Stormshak, & Willet, 2011). However, there is no empirical evidence that parental control is associated with adolescent self-destructive behaviours (Wong, Man, & Leung, 2002). Research has also demonstrated an association of parental rejection with decreased mental health and self-destructive behaviours. In a study of 12- and 13-year-old adolescents (Fotti, Katz, Afifi, & Cox, 2006), researchers found that rejection was positively associated with suicidal ideation and attempts. This association seems to be stronger for females. Likewise, a longitudinal study showed that high parental rejection and low parental acceptance were associated with suicidal ideation in adolescence and young adulthood (Steinhausen, & Metzke, 2004).

Research has consistently demonstrated that the security of attachment, whose central component is the emotional bond, is associated with successful developmental trajectories, good mental health, higher self-esteem, better self-concept and more positive family relationships (Rocha, Mota, & Matos, 2011;

Yang, Wang, Li, Teng, & Ren, 2008). Mattanah and colleagues (2011) also found evidence supporting the importance of attachment to parents in the separation-individuation process. Conversely, insecure patterns of attachment are associated with both internalising and externalising symptoms (Lee & Hankin, 2009; Roelofs, Meesters, Huurne, Bamelis, & Murriss, 2006). Depression symptoms, in particular, seem to be associated with the insecurity of the mother-child emotional bond (Allen & Land, 1999).

Insecure attachment patterns are also associated with self-destructive behaviours, suicidal ideation and depressive symptoms. Adam, Sheldon-Keller and West (1996) propose that suicidal tendencies arise from attachment patterns established in infancy and seem to be particularly associated with preoccupied attachment patterns. Experience with insecure attachments causes adolescents to develop negative self-representations that lead to low self-esteem, hopelessness, and difficulty regulating emotions and sustaining interpersonal relationships, which can promote the development of psychological maladaptions, including self-destructive behaviours. Research has repeatedly confirmed the association between insecure patterns of attachment and suicidal thoughts (DiFilippo & Overholser, 2000) and behaviours (Wichstrom, 2009). Secure attachment allows autonomy and emotional self-regulation, indispensable factors in adolescent identity development, to flourish. Therefore, parents should create a secure environment in which exploration is encouraged and adolescents can rely on the emotional bonds they have established with their parents (Allen & Land, 1999).

Family functioning has also been associated with psychological well-being. According to the Circumplex model of family functioning (Olson & Gorall, 2003), which was the model adopted in this study, cohesion and adaptability are crucial factors in understanding and assessing, even from a clinical perspective, a family system's balance. Cohesion refers to the emotional connections existing among the family elements and describes the way the family understands the balance between union and individuation. Adaptability refers to the balance between stability and change. A familial system's adaptability describes its flexibility in changing its structure, roles and relational rules in response to different situations and developmental stress. The literature seems to confirm associations between family functioning and various forms of dysfunction, especially depression and anxiety symptoms (Guberman & Manassis, 2011) and suicidal behaviour (Fidan, Ceyhun, & Kirpinar, 2011).

Adolescents' skills may also affect their mental well-being. Perosa and Perosa (2001) showed that perception of family cohesion and adaptability were associated with adolescents' ability to express emotions and to manage stressful situations through positive coping skills. In a recent study on adolescents with a mean age of 14 (Wilkinson, Kelvin, Roberts, Dubick, & Goodyer, 2011), it was demonstrated that dysfunctional family functioning predicted suicide attempts independently of depressive symptoms, even though the adolescents studied were in treatment. Similarly, other authors (Randell et al., 2006) found that adolescents with suicide risk differed from their without-risk peers in terms of level of family conflict, negative perceptions of the family's ability to meet their goals, low perception of cohesiveness and high level of negative affection.

Individual risk factors for self-destructive behaviours: self-esteem and psychological adjustment

Both research and clinical work have shown that, although adolescents reporting self-destructive behaviours may not have a psychological disorder as defined by the DSM-IV-TR (Goldston et al., 2009), the presence of psychological symptoms is frequent, especially depressive and anxiety symptoms. The presence of these symptoms seems to be a strong predictor of self-destructive behaviours (Hetrick, Parker, Robinson, Hall, & Vance, 2012; Ougrin et al., 2012) and other risk behaviours as alcohol and drug consumption (Graña & Muñoz, 2000).

Hopelessness and low levels of self-esteem also seem to be strongly associated with the tendency to harm oneself. Self-esteem has been identified as a factor that protects against maladjustment; it helps adolescents to cope with stressful situations in more appropriate ways, preventing them from engaging in self-destructive behaviours (Sharaf, Thompson, & Walsh, 2009) and contributing to well-being (Tevendale, Dubois, Lopez, & Prindiville, 1997). However, there is no evidence that self-esteem decreases as the severity of self-destructiveness increases (Thompson, 2010). Furthermore, adolescents' self-esteem also seems to be affected by family variables, including high levels of family conflict and lack of support (Siyez, 2008), which may contribute to the complex nature of the relationships between this dimension and self-destructive behaviours.

Adolescent engagement in self-destructive thoughts and behaviours also seems to differ across sex and age. Females tend to report more internalising symptoms, especially depressive symptoms, than males and also more self-destructive behaviours (Brown, Jewell, Stevens, Crawford, & Thompson, 2012; Lewinsohn & Clarke, 2000; Ougrin et al., 2012). In addition, several authors have found that suicidal behaviours are more associated with older adolescents, while non-suicidal self-harm typically has an earlier age onset (Ougrin et al., 2012).

The current study

In this study, we examine both family and individual variables from an ecological perspective (Bronfenbrenner, 1977) to develop a more contextual, interactive and integrative perspective of adolescent self-destructive behaviour and to increase understanding of the individual and family factors that can contribute to or prevent these maladaptive trajectories. Specifically, we intended to analyse the contribution of parenting styles, attachment to fathers and to mothers, family functioning, satisfaction with family relationships, psychological symptoms and self-esteem to membership in the community group whose members have reported self-destructive thoughts and behaviours (SDTB) or the clinical group (CS).

Method*Participants*

This study analysed three groups taken from two convenience samples: a community sample and a clinical sample. The community sample comprised 1266

adolescents studying in Portuguese schools and universities. The participants ranged between 11 and 21 years of age and had a median age of 15.87 years old ($SD= 2.11$). The community sample was divided into two groups. The first group comprised adolescents who did not report self-destructive thoughts and behaviours (NSDTB; $n= 998$). The second group comprised adolescents who did report self-destructive thoughts or behaviours (SDTB; $n= 268$). The criteria used for the formation of these two subgroups were the answers given to the items "I hurt myself on purpose or tried to kill myself" and "I think about killing myself" from the Youth Self-Report (YSR; Achenbach, 1991) questionnaire.

The NSDTB group was 48% male, and the mean age of participants was 19.95 ($SD= 2.1$). The majority of the members of this group lived with their nuclear families (71%). The SDTB group was 42.5% male, and the mean age of participants was 15.6 ($SD= 2.1$). The majority of the members of this group lived with their nuclear families (72%). The CS group was composed of 42 adolescents. The mean age of this group was 16 ($SD= 1.86$). Members of this group had been referred to clinical consultations focused on self-destructive behaviours from hospitals and other public community services in Lisbon and the surrounding areas. Only 14% of the participants were male, and 59.5% lived with their nuclear families.

Measures

- "The Inventory for Assessing Memories of Parental Rearing Behaviour" (*Egna Minnen Beträffande Uppfostran*, EMBU-A; Gerlsma, Arrindell, Van Der Veen, & Emmelkamp, 1991) adapted for the Portuguese population by Lacerda (2005). This self-report assesses the perceptions of paternal and maternal rearing styles. Our exploratory factorial analysis of the Portuguese version identified a three-dimension scale explaining 38.6% of the variance: Emotional support (ES) (e. g., "Do your parents clearly show that they like you?"), Rejection (e. g., "Do your parents refuse to speak to you for a long time if you do something wrong?"), and Control (e. g., "Do your parents forbid you to do things that other children are allowed to do because they are afraid that something might happen to you?"). This scale has 40 items, which the participants rate on a 4-point Likert scale (1= "no, never"; 4= "Yes, most of the time"). Our alpha reliability coefficients for the father version were .94, .89, and .69, respectively. For the mother version, internal consistency coefficients were .93, .89 and .65, respectively. These alphas indicate a higher internal consistency than the original factorial structure (Gerlsma et al., 1991), which varied between .58 and .88, and are similar to those found in the Portuguese evaluation of the scale, which varied between .73 and .94.
- "The Father/Mother Attachment Questionnaire" (FMAQ; Matos, Barbosa, & Costa, 2001). This self-report measure assesses the adolescent's attachment to his or her mother and father and comprises three dimensions: Quality of emotional bond (QEB) (e. g., "I rely on my father's/mother's support in difficult moments of my life"), Separation anxiety and dependence (SAD) (e. g., "I can only face new situations when I am with my father/mother"), and Inhibition of

exploration and individuality (IEI) (e. g., "At home, it is a problem whenever I have a different opinion from my mother/father"). The FMAQ is a 30-item scale, and participants rate their responses on a 6-point Likert scale (from 1= "I totally disagree" to 6= "I totally agree"). Alpha reliability coefficients for the father version were .93, .88 and .81, respectively. The internal consistency coefficients for the mother version were .92, .86 and .82, respectively. These alpha values are consistent with those obtained from the original study, which ranged from .71 and .94.

- "The Family Adaptability and Cohesion Evaluation Scale" (FACES-II; Olson, Porter, & Bell, 1982). This instrument was used to assess family functioning, we used, which is a 30-item scale. Participants rate their responses on a five-point Likert scale (from 1= "almost never" to 5= "almost always"). The Portuguese adaptation of this scale (Fernandes, 1995) comprises 28 items that are rated on a similar Likert scale. Both the original and the Portuguese measures comprise two dimensions: Cohesion (e. g., "Family members feel closer to people outside the family than to other family members") and Adaptability (e. g., "Each of us has a say in major family decisions"). In this study, the Portuguese version did not show a good fit to the data. Therefore, an exploratory analysis was performed to identify a factorial structure with a better fit. We found a shorter (five items each), two-dimension (Cohesion and Adaptability) scale that explained 38.79% of the variance. It should be noted that higher scores in the cohesion dimension correspond to lower perceptions of familial cohesion. Alpha reliability coefficients were .69 for cohesion and .80 for adaptability.
- "The Satisfaction with Familial Relationships" (SFR). An index of satisfaction with family relationships was developed for this study to measure adolescents' satisfaction with their paternal and maternal relationships and with the family's emotional climate (e. g., "How do you get along with your father/mother?"). Participants rated their responses on a 5-point Likert scale (from 1= "very bad" to 5= "very well"). Although the measure only consists of three items, the internal consistency (Cronbach's alpha) was .76.
- "The Rosenberg Self-Esteem Scale" (Rosenberg, 1995), translated and adapted to Portuguese by Azevedo and Faria (2004). This scale was used to measure self-esteem. The Self-Esteem Scale is a 10-item scale (e. g., "I am able to do things as well as most other people"), and participants rate their responses using a 6-point Likert scale (from 1= "I totally disagree" to 6= "I totally agree"). The internal consistency of this scale was .87, which is similar to the Cronbach's alpha of the original version (.89).
- "The Youth Self-Report" (YSR; Achenbach, 1991), Portuguese version by Fonseca & Monteiro (1999). This self-report scale used to measure psychological symptoms. The Portuguese version is a 112-item scale, and participants rate their responses using a three-point Likert scale (from 0= "not true" to 2= "frequently true"). The scale has six dimensions that assess the following symptoms: "Antisocial", "Hyperactivity", "Anxiety/Depression", "Isolation", "Somatic Complaints" and "Thought Problems". The scale has a good internal consistency (Cronbach's alphas varying between .70 and .80).

An exploratory factor analysis was conducted on the YSR to identify an optimal structure because previous studies have shown a different dimensionality for this scale in Portugal (Cruz, Narciso, Pereira, & Sampaio, 2013). The results showed that the optimal structure comprised four factors: Internalisation-Depression (e. g., "I feel worthless or inferior to others"), Internalisation-Anxiety (e. g., "I'm nervous or tense"), Externalisation-Destructiveness (e. g., "I deliberately try to hurt or kill myself"; "I destroy my own things"), and Externalisation-Exhibitionism (e. g., "I have a hot temper"; "I show off or clown around"). Alpha reliability coefficients were .83, .70, .85, and .71, respectively.

Procedures

Data collection was conducted in nine schools and colleges in the greater Lisbon and Portugal East Coast that accepted our solicitation for collaboration. In the case of schools, the data collection began after authorisation was received from the national Office for Monitoring Surveys in Schools and from each school's administration. The questionnaires were completed during class in groups and were taken voluntarily. The surveys were conducted anonymously and with informed consent from all participants and parents. We excluded adolescents who were not authorised by their parents to participate in the study, those who did not answer all of the measures, and those whose answers had doubtful validity.

The clinical sample was recruited in clinical consultations and consisted of those who agreed to collaborate with this investigation. All of the participants were beginning treatment (attending the first of four treatment sessions), and the questionnaire was completed only after informed consent was obtained from both the adolescent and his or her caretaker.

Results

Before proceeding with the main analysis, it should be noted that, in this study, we found that 21% of the total community sample of adolescents ($n= 268$) reported having SDTB "sometimes" or "frequently". We also found that, of these 268 adolescents, 71% had never been referred to a psychological consultation, and only 6% were undergoing a psychotherapeutic process at the time of the evaluation. We used a multinomial logistic regression analysis to validate the constitution of the three adolescent groups (NSDTB, SDTB and CS). Specifically, we regressed the group membership in the four psychological symptoms dimensions and the self-esteem dimension. The results yielded a statistically significant model, $R^2_{\text{Nagelkerke}} = .48$, $\chi^2_{(10)} = 557.66$, $p < .001$. Importantly, the estimated parameters (table 1) revealed that each psychological symptom dimension predicted membership in the CS group, meaning that participants in this group expressed significantly more depression, anxiety, destructive and exhibitionism symptoms than the NSDTB participants. Membership in the SDTB group is predicted by self-esteem and all of the psychological symptoms dimensions, except for exhibitionism. Higher scores in these dimensions and lower scores in self-esteem

were associated with a higher probability of belonging to the SDTB group than to the NSDTB group. Therefore, our procedure for defining group membership was clearly successful in classifying participants according to their psychological symptoms.

Table 1

Logistic multinomial regression model with Internalisation-Depression, Internalisation-Anxiety, Externalisation-Destructiveness, Externalisation-Exhibitionism and Self-esteem as predictors of group membership

Variables	SDTB		CS	
	B	Odds	B	Odds
Intercept	-3.22***		-4.82***	
Inter-Depression	2.74***	15.41	2.35***	10.51
Inter-Anxiety	.54*	1.71	2.04***	7.72
Exter-Destructiveness	5.50***	16.65	5.62***	7.69
Exter-Exhibitionism	.35	1.42	-1.79**	.17
Self-esteem	-.31**	.73	-.34	.73

Notes: SDTB= self-destructive thoughts and behaviours; CS= clinical sample. * $p < .05$; ** $p < .01$; *** $p < .001$.

Main analysis

We also used *multinomial logistic regression* models to determine which family variables increase the probability of belonging to each of the three groups (table 2). The three groups were compared to identify the stronger predictors of membership for each group. The NSDTB group served as the reference group for the purposes of comparison. Two regression models were estimated.

In the first model, we determined whether sex and age predicted group membership (Model 1). The results indicate that the model is statistically significant, $R^2_{\text{Nagelkerke}} = .03$, $\chi^2_{(4)} = 28.07$, $p < .001$, and show that being female increases the probability of belonging to the CS group. Age predicted membership in the SDTB group; likelihood of belonging to this group decreases as age increases. In the second model, we added the family variables as predictors to identify the family dimensions that are more strongly associated with group membership (Model 2). This model was also statistically significant, $R^2_{\text{Nagelkerke}} = .249$, $\chi^2_{(30)} = 240.81$, $p < .001$. The parameters estimated showed that being female, perceiving a high level of inhibition of exploration and individuality from one's mother, a high level of rejection from one's father and low satisfaction with family relationships increased the probability of belonging to the CS group. Moreover, the data suggested that being female, perceiving a low quality of emotional bond with one's father and mother, a low level of control and a high level of rejection from one's father, a high degree of control from one's mother

and a low level of family cohesion increase the probability of membership in the SDTB group.

Table 2

Logistic multinomial regression model with sex, age, parenting styles, attachment to fathers mothers family functioning and satisfaction with family relationships as predictors of group membership

Variables	Model 1				Model 2			
	SDTB		CS		SDTB		CS	
	B	odds	B	odds	B	Odds	B	odds
Intercept	-.37		-6.56***		-.69		-6.02	
Demographic								
Sex	.20	1.22	1.71***	5.51	2.81*	1.33	1.55***	4.71
Age	-.08**	.92	.03	1.03	-.03	.97	.05	1.05
Attachment								
QEB father					-.54***	.58	.11	1.12
IEI father					.08	1.09	-.46	.63
SAD father					-.006	.99	1.91	1.21
QEB mother					-.5.71*	.003	-.84	.43
IEI mother					1.49	1.16	.63*	1.88
SAD mother					.23	1.26	.28	1.33
Parenting styles								
ES father					-.006	0.99	-.17	.85
Control father					-.51**	.598	.195	1.22
Rejection father					.696**	2.01	1.37*	3.95
ES mother					.117	1.12	.22	1.24
Control mother					.45**	1.56	-.30	.74
Rejection mother					.38	1.47	-.30	.74
Family functioning								
Cohesion					-.36**	.697	-.37	.69
Adaptability					.04	1.04	-.41	.66
SFR					-.04	.96	-.93**	.396

Notes: SDTB= self-destructive thoughts and behaviours; CS= clinical sample; QEB= Quality of Emotional Bond; IEI= Inhibition of Exploration and Anxiety; SAD= Separation Anxiety and Dependence; ES= Emotional Support; SFR= Satisfaction with Family Relationships. * $p < .05$; ** $p < .01$; *** $p < .001$.

Discussion

Our primary goal was to examine both the family variables (parenting styles, attachment to father and mother, family functioning, and satisfaction with family relationships) and individual variables (psychological symptoms and self-esteem) that contribute to adolescent tendencies towards self-destructive thoughts/behaviours. Our aim was to better understand the individual and family factors that put adolescents at risk for or protect them from maladaptive trajectories. Findings identified both individual and family risk factors for belongingness to the SDTB or the CS group.

The results showed significant differences between the NSDTB group and the SDTB and CS groups in terms of individual and family variables. Therefore, in accordance with the empirical literature (Goldston et al., 2009; Resch, Parzer, Brunner, & BELLA study group, 2008), both the SDTB and the CS group reported significantly more psychological symptoms, in general, than their peers in the NSDTB group. These symptoms indicate the presence of maladaptive trajectories in the SDTB and CS groups.

These results also validated the criteria used to define the three groups because the SDTB group showed fewer differences from the NSDTB group than did the CS group. However, it should be highlighted that there are few significant differences between the SDTB and CS groups. This finding is consistent with Randell et al. (2006) findings that two community samples of adolescents with low and moderate risk of self-destructive behaviours did not differ significantly from one another, but both samples differed from a no-risk sample. However, we should make allowances for a therapeutic effect in the clinical sample. Although all of the CS adolescents were in the initial phase of the therapeutic process, the impact of initiating therapy and the therapeutic relationship is well established in the literature (Ougrin et al., 2012) and may have contributed to more positive results in the CS group. This potentiality could have caused the CS group to have a higher degree of similarity to the SDTB group.

The CS group differed significantly from the NSDTB group in all of the psychological symptoms dimensions: Internalisation-Depression, Internalisation-Anxiety, Externalisation-Destructiveness and Externalisation-Exhibitionism. However, the differences between the SDTB and NSDTB groups were found in Self-Esteem and all of the psychological symptoms dimensions except for Externalization-Exhibitionism. The scores for exhibitionist behaviours were not significant in the CS group, perhaps because these adolescents already succeeded in obtaining help for their difficulties (Ougrin et al., 2012).

We verified that Self-Esteem is a risk factor only for the SDTB group; Self-Esteem decreases as the probability of belonging to the SDTB group increases. The association between perceived self-esteem and the emergence of self-destructive thoughts and behaviours is well documented in the literature (Rizwan & Ahmad, 2010; Thompson, 2010). Some authors even believe that self-esteem protects against suicidal behaviours, increasing adolescent resilience (Sharaf et al., 2009). Unexpectedly, however, in our study, a decrease in self-esteem did not increase the probability of belonging to the CS group. This result may have occurred because psychological symptoms play a more important role when a maladaptive trajectory involving self-destructive thoughts and behaviours is already underway.

We must also consider that the instrument used to assess self-esteem, the Rosenberg Self-Esteem Scale (Azevedo & Faria, 2004), is not the most adequate; it may only allow for a holistic evaluation of self-image.

Still in what concerns psychological symptoms the abovementioned seem to be consistent with the finding that Internalisation-Depression, Internalisation-Anxiety and Externalisation-Destructiveness significantly differed the SDTB and CS from the NSDTB, as expected since these symptoms are common in adolescence with SDTB reports (Ougrin, 2012).

The results revealed that perceptions of a decreasing quality of emotional bond with one's father and mother, paternal control and family cohesion and increasing perceptions of maternal control and paternal rejection increase the probability of belonging to the SDTB group. However, perceiving a high level of maternal inhibition of exploration and individuality, a high level of paternal rejection, and low satisfaction with family relationships increase the probability of belonging to the CS group.

The emotional support parenting style did not predict group membership. This is an unexpected finding because the association between self-destructive thoughts and behaviours and emotional support seems to be well supported by the literature (Oliva et al., 2009). It is possible that the items of the Emotional Support dimension, one of the three dimensions of the EMBU-A (Gerlsma et al., 1991), inquire more specifically about parenting practices and do not consider more global and affective meanings of emotional support. In fact, although this instrument was conceptualised to assess parenting styles, its items emphasise parenting practices. However, further investigation is needed to better understand the processes underlying these results.

According to Wong et al. (2002), there is no empirical evidence confirming the association between parental control and self-destructive thoughts and behaviours in adolescence. However, our results revealed that paternal Control is an important preventive factor against self-destructive thoughts and behaviours in SDTB group members. In contrast, maternal control seems to be a risk factor because it increases the probability of belonging to this group. Previous research has also shown the importance of both parents' guiding and monitoring behaviours to adolescent well-being. Such behaviour may be interpreted positively by adolescents as an expression of care (Rohner & Pettengill, 1985). Because research has revealed the importance of both paternal and maternal parenting styles in the adaptive trajectories of their children (McKinnney & Renk, 2008), we did not expect opposite results for the effect of maternal and paternal Control. According to gender role differences (Gerlsma & Emmelkamp, 1994), mothers are more associated with an affective and relational role, and fathers primarily have an instrumental and less central role. Therefore, it is possible that adolescents may interpret maternal control as being more hostile and less affective. However, because fathers are expected to be less emotional, control may be perceived as an instrumental way of parenting in which caring and affection is embedded in guidance and monitoring activities. However, further research is needed to clarify this result.

In this study, we found that paternal rejection, but not maternal, also seems to be a risk factor because it increases the probability of belonging to both the SDTB and CS groups. However, our results are only partially consistent with previous research that found strong associations between self-destructive thoughts and behaviours and rejection by both parents (Steinhausen & Metzke, 2004; Wong et al., 2002). These results seem to indicate that further investigation is needed to clarify the role of parenting styles, particularly maternal parenting styles, on self-destructive thoughts and behaviours. For instance, dimensions of maternal parenting styles may be associated with self-destructive thoughts and behaviours through mediational paths that are not considered by this model. Indeed, previous research has suggested that relationships between parenting styles and adolescent psychological adjustment may be indirect (McKinney, Donnelly, & Renk, 2008).

Low quality of emotional bond with one's mother and father and high maternal inhibition of exploration and individuality seem to be risk factors for self-destructive behaviours and thoughts because they increase the probability of belonging to the SDTB and the CS group, respectively. A key function of attachment is to provide a secure environment for practising autonomy and emotional self-regulation. To successfully develop these attributes, adolescents must rely on emotional bonds established with parents (Allen & Land, 1999). More particularly, adolescents must rely on the bonds established with their mothers because mothers play the principal role in childcare and affect expression. Moreover, because adolescence represents an exploratory phase, that is essential to the development of an autonomous identity (Mattanah et al., 2011), adolescents may be particularly vulnerable to maternal barriers to exploration and individuation. Such barriers could eventually diminish psychological adjustment and become a risk factor for self-destructive thoughts and behaviours. By the other side, being fathers more peripheral, that may potentially justify that inhibition of exploration and individuation from fathers, do not differentiated between the groups.

Separation anxiety and dependence from both parents did not showed to be a significant predictor. This may be due to the fact that adolescents are very involved in increasing their autonomy and moving centrifugally from the family to other important contexts. In this developmental task this dimension may be less relevant that the quality of emotional bond and the inhibition of exploration and anxiety (Rocha et al., 2011; Yang et al., 2008).

Low cohesion and low satisfaction with family relationships appear to be risk factors for self-destructive thoughts and behaviours because they increased the probability of belonging to the SDTB and the CS group, respectively. This finding could suggest that low satisfaction with family relationships represents a severe risk for adolescents' psychological adjustment and for self-destructive thoughts and behaviours in particular. This phenomenon is consistent with the results reported by Oliva et al. (2009), which showed that when faced with stressful life events, adolescents with negative perceptions of family relationships reported more psychological symptoms than those with positive perceptions. Although causality cannot be established, these findings support the buffer effect of positive family relationships.

Concerning family variables, we believe that, in general, our results are consistent with previous research on adolescent risk for self-destructive thoughts and behaviours. They confirm that satisfaction with family relationships, familial emotional support, family cohesion, and parental monitoring and supervision diminish the probability of engaging in self-destructive behaviours (Randell et al., 2006); prevent isolation, self-devaluing and self-destructive thoughts; and foster a sense of self-value, self-respect, and competence (Sharaf et al., 2009). Moreover, in positive family environments, adolescents tend to express themselves in more appropriate ways and react to adversity with more positive coping strategies (Oliva et al., 2009; Perosa & Perosa, 2001). Negative perceptions of family relationships can contribute to a low sense of belonging (Joiner et al., 2009), which represents a risk factor for adolescents, particularly in stressful contexts.

The results seem to reveal that being female increases the probability of belonging to the CS and to the SDTB groups, but age did not predicted the probability of belonging to any of the groups (model 2). It must also be noted that there was a higher percentage of girls than boys in the SDTB than the NSDTB group and an even larger discrepancy in the percentage of boys and girls in the CS group. This finding is consistent with the literature, which suggests that these differences may be associated with distinct, gender-based modes of expressing feelings and emotional difficulties and to gender differences in the more frequent psychological symptoms, as well as to one's past and developmental experiences (Kaess et al., 2011).

We must highlight that, in the present study, 21% of the community sample reported having experienced self-destructive thoughts or behaviours. Putting aside the accuracy of these self-reports, the similarity between the SDTB and the CS group and the significant differences between the SDTB and the NSDTB group make this high percentage a concerning statistic. Moreover, the large majority of these adolescents had never been referred to a psychological consultation. Because these adolescents are often isolated and dealing with their difficulties alone, the role of society in general and of schools in particular in preventing self-destructive thoughts and behaviours is of great importance (Wölfer, Bull, & Scheithauer, 2011).

Several limitations of the present study should be noted. First, because this is a cross-sectional study, conclusions about the direction of effects cannot be established. Analysis of mediational processes should also be addressed to better understand the relationships established between the variables investigated. Moreover, future research should include more complex measures to assess the risk for self-destructive thoughts and behaviours. It is also important that future research assess other sources of information, specifically parents, to collect different perceptions about these variables and processes.

In the spirit of an ecosystemic perspective, longitudinal studies would facilitate a more complex understanding of the associations between family and individual variables, and even between these variables and social variables. Such studies could also foster an understanding of the causal processes implicated in these associations that could enrich knowledge about the risk and protective factors implicated in self-destructive thoughts and behaviours. Particularly, longitudinal

studies employing mixed methodologies should consider causal circularity to address perpetual cycles of self-destructive thoughts and behaviours, negative parenting practices and styles and insecure attachment (Wang et al., 2011).

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