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Articles

Attachment Representations and Emotion Regulation Strategies in Parents of Children with Disruptive Behaviour Disorders

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Abstract

Although a growing body of research suggests a robust association between insecure attachment, emotion regulation problems and externalizing problems, as Disruptive Behaviour Disorders (DBD), in children, only a few studies have explored these constructs in their parents. Moreover, the role of the father is often neglected. The current study aimed to investigate attachment representations and emotion regulation strategies in parents with DBD children (considering mothers and father separately), compared with a comparison group. The research involved 100 Italian parents: 36 clinical parents (18 mothers and 18 fathers) of children aged 8-12 years with a diagnosis of DBD, and 64 parents (32 mothers and 32 fathers) of children with no clinical symptoms. Parents' attachment representations were assessed through the Adult Attachment Interview and their emotional regulation strategies through the Emotion Regulation Questionnaire. The clinical status of children was the result of an evaluation by two mental health experts and a compilation by both parents of the Child Behavior Checklist 6-18 Version. Our results pointed to a greater presence of Insecure-Entangled attachment in DBD mothers and a lower level of Cognitive Reappraisal in DBD fathers compared with comparison parents. Nevertheless, maternal Insecure and paternal Cognitive Reappraisal did not together predict children DBD as the outcome. These preliminary findings make a significant contribution to the topic of emotional functioning of DBD parents, suggesting the importance to further deepen the quality of parenting in the context of DBD children.

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1. Introduction

Disruptive Behaviour Disorders (DBD), including Oppositional-Defiant Disorder and Conduct Disorder, are associated with a range of problematic oppositional, aggressive, destructive and antisocial behaviours, and are linked to peer rejection, poor academic performance and risk of dropping out of school (White & Rank, 2012). Various risk factors are associated with DBD with some studies focusing on parents' functioning, including mental health problems, socioeconomic disadvantage, inconsistent parenting, parental supportiveness and coercive parenting style (Lavigne, Dahl, Gouze, LeBailly, & Hopkins, 2015; Prinz & Jones, 2003).

Nevertheless, studies on parents' attachment representations and parents' emotion regulation strategies of DBD children are limited, although these aspects could connote the emotional functioning of DBD parents influencing their quality of parenting and consequently the developmental trajectory of children with DBD (Guttman-Steinmetz & Crowell, 2006).

In terms of attachment theory, the literature has highlighted that parents' Internal Working Models (IWMs) (Bowlby, 1969) - internalised representations of the Self, Other and Self-Other relationship based on childhood experiences with their own attachment figures and usually assessed in adults by the Adult Attachment Interview (AAI) (George, Kaplan, & Main, 1985) - influence both the IWMs and psychological development of their children (Pace, Santona, Zavattini, & Di Folco, 2015a). Secure parents (characterized by a state of mind that tends to value attachment experiences) appear to show capability in emotion regulation in child-parent relationships and greater resilience. Conversely, Insecure-Dismissing (characterised by a state of mind that tends to minimise, derogate and normalise attachment experiences) and Insecure-Entangled (characterised by a state of mind that tends to emphasise attachment experiences in an angry, passive or preoccupied manner) parents, and/or parents with Unresolved Loss or Trauma (characterised by local and trauma-specific disorganised speech when discussing distressing events), appear to show difficulty in emotion regulation in child-parent relationships and to negatively influence their children adjustment (Cassidy & Shaver, 2016).

Despite greater interest in fathers' attachment representation in biological (Di Folco, Messina, Zavattini, & Psouni, 2017) and adoptive families (Piermattei, Pace, Tambelli, D'Onofrio, & Di Folco, 2017), studies on both parents' attachment states of mind in specific clinical contexts, such as DBD, are scarce. A growing number of studies consider the IWMs of parents of children with psychological problems (Cassibba, Sette, Bakermans-Kranenburg, & van IJzendoorn, 2013; Guiducci, Bizzi, Ferro, & Cavanna, 2018; Pace, Cavanna, Guiducci, Bizzi, 2015b), but the role of the father is often neglected.

In the case of DBD children, DeKlyen (1996) study focused on maternal attachment representations showing that mothers of DBD preschool boys described their relationship with their parents less coherently than comparisons, indicating less secure attachment representations. Crowell et al. (1991) focusing on mothers and their behaviorally disturbed children, aged 5 to 11 years, found that dismissing state of mind of mothers was associated with oppositional and aggressive symptoms in their children. Madigan et al. (2007) found that maternal reports of externalizing problems were significantly associated with unresolved representations of attachment, disrupted maternal behavior, and disorganized attachment in toddler age.

In addition, the effects of parental representations of attachment on preschooler disruptive behavior were also considered by Greenberg et al. (1993) and Roskman et al. (2011), showing that paternal attachment had both direct and indirect effects on child behaviour while maternal attachment was a distal predictor of child behaviour through child attachment (Roskman et al., 2011). Nevertheless, to our knowledge, no studies focused on the attachment representations of both parents of children diagnosed DBD (not simply with disruptive behaviour) after the pre-school age.

Furthermore, the parents' emotion regulation (ER) - a responsible mechanism in the development and maintenance of psychopathology (Aldao & Nolen-Hoeksema, 2010, 2012; Aldao, Nolen-Hoeksema, & Schweizer, 2010) - is another aspect that would influence both the ER and the psychological development of their children, in which children' ER is acquired through exposure to a range of emotions and by observing parents' verbal and behavioural responses to emotional stimuli (Morris, Silk, Steinberg, Meyers, & Robinson, 2007). ER is the process by which individuals influence what emotions they have when they have them, and how they experience and express them (Gross & Thompson, 2007). Although various models of ER exist, two emotion regulation strategies are considered by the Gross (1998) model: Cognitive Reappraisal (CR) - that is specifically associated with adaptive outcomes - involves re-examining a stressful situation from a different perspective, in order to produce a positive interpretation of the situation and in turn reduce distress; Expressive Suppression (ES) - that shows long-term negative effects on well-being - can be understood as an attempt to hide, reduce or inhibit emotion regulation strategies, on a verbal and non-verbal level, without reducing the subjective and physiological experience of negative emotions that continues unresolved.

However, studies on ER strategies have rarely focused on both parents (Bariola, Gullone, & Hughes, 2011) or examined the psychopathological context (Pace, Di Folco, & Guerriero, 2018). Nevertheless, Shenaar-Golana and colleagues (2017) found that parents of children with ADHD used more emotion regulation strategies than parents of children without ADHD. Zimmer-Gembeck et al. (2019) found an increase of CR in parents of children aged 29-83 months with externalizing behaviors due to the Parent-Child Interaction Therapy. Kohlhoff et al. (2016), examining the ER strategies used by parents of toddlers with conduct problems, found that positive parenting more frequently used CR. Additionally, studies measuring various features of ER, such as controlling impulses' problems and lack of maternal emotion awareness showed high levels of emotion regulation problems in parents with DBD children (Crespo, Trentacosta, Aikins, & Wargo-Aikins, 2017; Duncombe, Havighurst, Holland, & Frankling, 2012; Quetsch, Wallace, McNeil, & Gentzler, 2018).

Within the attachment literature, studies have shown that attachment security is related to adaptive emotion regulation strategies, while individuals with insecure attachment representations tend to present more maladaptive emotion regulation strategies (Gresham & Gullone, 2012). In this perspective, some researchers (Cerniglia et al., 2017; Coppola et al., 2016; Kobak et al., 1993; Mikulincer & Shaver, 2012; Roisman et al., 2004) proposed that specific parents' representations of attachment and specific parents' emotion regulation strategies result in experiences for children that increase the risk of developing along deviant pathways. However, less is known about how the emotional functioning (*i.e.*, attachment representations and emotion regulation strategies) of both parents could connote the quality of parenting in the context of DBD children after the pre-school age. Up until now, the research does not have assessed these dimensions using the AAI, and ERQ measures and considering mothers and fathers separately.

Therefore, the present exploratory study aims to examine attachment representations and emotion regulation strategies using AAI and ERQ in both parents (mothers and fathers separately) and their impact on the child during the middle childhood, a crucial period of profound cognitive and emotional changes rarely investigated by the literature. We test the following hypotheses: (i) mothers and fathers of DBD children would show higher frequencies of Insecure attachment than comparisons; (ii) mothers and fathers of DBD children would show higher disadaptive emotion regulation strategies, in terms of lower CR and higher ES, than comparisons; (iii) Insecure attachment and disadaptive emotion regulation strategies of parents would be together associated with DBD children as the outcome. Due to the exploratory nature of the study, we did not have a hypothesis regarding the difference between both parents on these constructs.

2. Materials and Method

2.1 Participants

Overall, 100 Italian parents (50 mothers and 50 fathers) of children of the age 8-12 participated: 18 mothers and 18 fathers of young patients with a primary diagnosis of DBD; and 32 mothers and 32 fathers of children with no clinical symptoms (comparison group). The clinical status of children was a result of an evaluation by two mental health experts (using several clinical interviews with parents and the child regarding the child's developmental history and functioning) and a compilation by both parents of the *Child Behavior Checklist 6-18 Version* (CBCL) (Achenbach & Rescorla, 2001).

Children whose scores exceeded the clinical cut-off on the CBCL for Oppositional Defiant Problems and Conduct Problems subscales (t score ≥ 65) according to the evaluation by two mental health experts were selected as the clinical group. Conversely, children in the comparison group recorded low scores on the Oppositional Defiant Problems and Conduct Problems subscales of the CBCL, not exceeding the clinical cut-off (t score ≤ 65).

Parents of DBD patients were recruited at the Department of Child and Adolescent Psychiatry (G. Gaslini Institute) in Italy, while parents in the comparison group (non-DBD parents) were voluntarily recruited from the general population through public advertisements in schools. All the participants were Caucasian, born and living in the north-west of Italy. Demographic variables (parents' age, parents' educational level and family socio-economic status 'SES') of DBD parents and comparison parents are reported in Table 1.

2.2 Measures

Adult Attachment Interview (AAI) (George et al., 1985). An hour-long, semi-structured interview composed of 20 questions was administered to assess parents' attachment representations. The interviewers inquired about participants' relationships with their attachment figures during childhood and their early attachment experiences, such as illness, upset, separation, loss, etc., asking them to provide specific episodes to support their general memories. They also asked participants to reflect on how their attachment experiences had influenced their adult personality and the reasons for their parents' behaviour toward them during childhood. The AAIs were transcribed verbatim and coded according to the accompanying Adult Attachment Scoring and Classification System designed by Main et al. (2002). The AAI coding system employs 17 ordinal scales of 1-9 points each, organized into two groups: the subject's inferred childhood experience and current attachment states of mind to the parents and globally. Coders then determine the attachment classification to give according to the distribution of scores on the scales, choosing between Secure and Insecure on 2-ways; between Secure, Insecure-Dismissing and Insecure-Entangled on 3-ways; and between Secure 'Free-Autonomous' (F/A), Dismissing (Ds), Entangled (E), Unresolved with respect to loss/abuse (U) and Cannot Classify (CC) on 4-ways. In our study, there were no cases of Cannot Classify.

With regard to the psychometric properties of the AAI classifications, both the reliability (e.g., short-term stability, inter-rater consistency) and the discriminating validity with respect to gender, verbal intelligence, memory, cognitive complexity, social desirability and overall social adjustment have been demonstrated (Bakermans-Kranenburg & van IJzendoorn, 1993; Cassibba et al., 2013). All our transcripts were rated by two expert coders with reliability certificates (*i.e.*, the authors), and who were blind to the clinical status of the participants.

Significant kappa coefficients ($k = .833$; $p < .001$) among mothers and ($k = .833$; $p < .001$) among fathers for 4-ways classifications (F, Ds, E, and U) were found.

Emotion Regulation Questionnaire (ERQ) (Gross & John, 2003). A self-report administered to assess parents' emotion regulation. It is a 10-items measure of propensity to use Cognitive Reappraisal (items 1, 3, 5, 7, 8 and 10; e.g., 'When I want to feel less negative emotions, I change the way I'm thinking about the situation') and Expressive Suppression (items 2, 4, 6 and 9; e.g., 'I keep my emotions to myself'). Participants respond on a seven-point Likert scale (1 = strongly disagree, 7 = strongly agree). The ERQ has been reported to have high internal consistency (Cronbach's $a = .79$ for Reappraisal, $.73$ for Suppression) and three-month test-retest reliability ($r = .69$ for both scales), as well as sound convergent and discriminant validity (Gross & John, 2003). In the current study, we used the Italian version of the ERQ (Balzarotti, John, & Gross, 2010), for which the internal consistency coefficients were Reappraisal $a = .77$ and Suppression $a = .71$, for both parents.

Child Behavior Checklist (CBCL 6/18). The Child Behavior Checklist (CBCL 6/18) (Achenbach & Rescorla, 2001) is a widely-used, 112-item parent-report measure of emotional and behavioral problems in children and adolescents between 6 to 18. Each item is scored on a 3-point scale, ranging from 0 to 2. In this study, CBCL was used to examine Oppositional Defiant Problems and Conduct Problems. The CBCL has good psychometric properties (Achenbach & Rescorla, 2001) and the Italian version was validated in 2002 by Frigerio and Montirosso. In our study, the measure was completed by both parents and it demonstrated adequate internal consistency ($\alpha = 0.92$).

2.3 Procedure

The study was approved by the Gaslini (IRCSS) Ethics Committee for the parents' DBD group and by the Ethics Committee of the Department of Educational Science of Genoa, Italy for the parents' comparison group. All participants were informed about the aim and procedure of the study. They submitted their written informed consent and were advised of their option to withdraw at any time.

The assessments were conducted in a private room at the hospital for the DBD group (after the child diagnostic assessments) and the homes of the parents' comparison group by an expert researcher. During the meeting (lasting approximately 1 hour and 30 minutes), parents provided socio-demographic information and responded to the AAI and ERQ. Only two mothers and one father in the DBD group did not agree to participate in the Adult Attachment Interview. Their reasons for not participating were lack of interest, difficulties with being audio-recorded and time constraints.

This study was part of a larger research project investigating family and individual characteristics in DBD patients. At the end of the assessment, we offered participants who completed the whole procedure a report containing a synthesis of the outcomes for each instrument.

2.4 Statistical Analysis

The results were analyzed using the Statistical Package for Social Science (SPSS, Version 21.0; IBM Corp., Armonk, NY, USA). We decided to use non-parametric tests (e.g., Mann–Whitney U, Fisher’s Exact test, Chi-Square exact test, Spearman’s *rho*) which are appropriate for variables of the type used in this study because they do not require that the sample be drawn from a normally distributed population (Siegel & Castellan, 1988). Besides, logistic regression analysis to test the association of parents’ attachment and emotion regulation with DBD children as the outcome. The level of significance for all analyses was $p < .05$.

3. Results

3.1 Descriptive data

As shown in Table 1, comparing DBD parents and comparison parents, no differences were found regarding parents' age, socioeconomic status and educational level ($p > .05$). Correlating these demographic variables with both the AAI (Secure/Insecure) and ERQ scores, fathers' ES (ERQ) was negatively associate with family SES ($rho = -.411, p = .033$) and with fathers' educational level ($rho = -.476, p = .010$), as well as fathers' attachment was negatively associate with family SES ($rho = -.404, p = .008$) and with fathers' educational level ($rho = -.439, p = .016$).

Table 1. Demographic variables of DBD and comparison groups

		DBD mother	Comparison mother	Statistics	DBD father	Comparison father	Statistics
Mean age (SD)		44.33 (5.82)	46.77 (4.59)	U = 228.500, $p = .788$	46.56 (6.94)	49.70 (5.55)	U = 202.500, $p = .220$
Education (%)	Degree	56	33	<i>Exact chi² test</i> = 5.59, $p = .064$	39	40	<i>Exact chi² test</i> = .117, $p = 1.000$
	High school diploma	22	57		44	43	
	Middle school diploma	22	10		17	17	
		DBD	Comparison	Statistics			
Family SES (%)	< 15000 €/y	7	14	<i>Fisher Exact test, p = .453</i>			
	>15000 €/y	93	86				
Mean Oppositional Defiant Problems (SD)	CBCL score	64.07 (7.14)	54.59 (4.72)	U = 65.000 $p = .000^{**}$			
Mean Conduct Problems (SD)	CBCL score	64.21 (9.88)	52.25 (4.30)	U = 67.500 $p = .000^{**}$			

Note. $^{**} p < .001$

3.2 Attachment and emotion regulation: comparison between parents with DBD children and comparison parents

Comparing DBD parents with comparison parents (mothers and fathers separately) respect to attachment representations (AAI), DBD mothers showed a higher frequency of both Insecure classification on 2-ways (56% vs 25%, Fisher Exact Test = 4.55, $p = .051$) and Entangled classification on 3-ways (53% vs 13%, Exact $\chi^2_{(2)} = 7.99, p = .011$). These significant differences were confirmed on 4-ways (Exact $\chi^2_{(3)} = 9.41, p = .013$), as shown in Table 2. Analysis of the standardized residuals (adjusted residuals, z) suggested that on 4-ways there were more DBD mothers classified as Entangled ($z = 2.3$) and less as Secure ($z = 2.1$) to the comparison mothers. No significant differences were found for any of the attachment categories' distribution (2, 3, 4-ways) for fathers (p values ranged from .551 to .924).

Table 2. Distribution of AAI categories in parents with DBD children and comparison parents

		DBD mothers % (z)	Comparison mothers % (z)	Statistics Exact $X^2, (p)$	DBD fathers % (z)	Comparison fathers % (z)	Statistics Exact $X^2, (p)$
2-ways	F	44 (-2.1)	75 (2.1)	4.55 (.051)*	41 (-.8)	53 (.8)	.63 (.551)
	I	56 (2.1)	25 (-2.1)		59 (.8)	47 (-.8)	
3-ways	F	47 (- 2.3)	81 (2.3)	7.99 (.011)*	47 (-.4)	53 (.4)	.21 (.924)
	Ds	0 (-1.0)	6 (1.0)		29 (.1)	28 (-.1)	
	E	53 (2.9)	13 (-2.9)		23 (.4)	19 (-.4)	
4-ways	F	37 (-2.1)	69 (2.1)	9.41 (.013)*	47 (-.4)	53 (.4)	1.09 (.819)
	Ds	0 (-1.0)	6 (1.0)		23 (-.3)	28 (.3)	
	E	50 (3.2)	9 (-3.2)		18 (.5)	13 (-.5)	
	U	12 (-.3)	16 (.3)		12 (.7)	6 (-.7)	

Note. F: secure/autonomous; I: Insecure; Ds: Dismissing; E: Entangled; U: Unresolved Loss or Trauma; z : adjusted residual, z ; * $p < .05$

Table 3 shows the ERQ scores of parents of DBD children and comparison parents (mothers and fathers separately). No significant differences between the two groups of mothers on the CR or ES subscales were found ($p > .05$). Elsewhere, DBD fathers showed a significantly lower level of CR than that shown by comparison fathers ($U = 41.500, p = .035$), while no difference in paternal use of ES strategy was found ($p > .05$).

Table 3. ERQ scores in parents with DBD children and comparison parents

	DBD mothers M (DS)	Comparison mothers M (DS)	Mann-Whitney U	DBD fathers M (DS)	Comparison fathers M (DS)	Mann-Whitney U
CR	31.00 (7.13)	28.36 (7.96)	163.5	4.13 (2.36)	13.62 (12.1)	41.5*
ES	10.53 (5.95)	11.56 (6.06)	166.0	3.75 (2.49)	6.14 (6.39)	72.0

Note. CR: Cognitive Reappraisal; ES: Expressive Suppression; * $p < .05$

3.3 Predicting children DBD

Considering that DBD children correlated positively to maternal Insecure attachment on 2-ways ($r_{ho} = .308, p = .033$) and negatively to paternal CR ($r_{ho} = -.398, p = .032$), it is conducted at exploratory level a logistic regression analysis to assess the interaction between maternal attachment (1 = Secure; 2 = Insecure attachment) and paternal CR on DBD children (1 = comparison children; 2 = clinical children) as the outcome. The summary model fit was not significant and the interaction of these variables was not associate with DBD as the outcome ($B = -.14, p = .799, \beta = 1.57$).

4. Discussion

This study was focused on analyzing the emotional functioning of mothers and fathers of children 8-12 aged with DBD, severe child psychopathology that has a high cost for communities, to deepen the quality of parenting in the DBD context. In particular, the researchers focused on parents' attachment representations and emotion regulation strategies, comparing mothers and fathers of children with DBD separately with a comparison group drawn from the general population with similar demographic variables.

The first hypothesis was that parents of young DBD patients would show higher frequencies of Insecure attachment representations than comparisons. The findings on DBD mothers are in line with these of DeKlyen's study (1996), in which DBD mothers are less Secure than comparison group mothers. Conversely to the literature (Crowell et al., 1991; Madigan et al., 2007), the findings show an over-representation of Entangled attachment (50%) rather than Dismissing or Unresolved attachment (35% in Madigan study *vs* 12% in this study). However, the findings on the attachment representations of DBD mothers are in line with other clinical studies, as the Italian meta-analysis by Cassibba et al. (2013), in which parents of children with various psychological problems are less often Secure and more often Entangled (17% Ds, 12% F, 25% E, 46% U) than those in comparison group. Although eighteen DBD mothers are not representative of the entire population with DBD children, this datum suggests that DBD mothers show the maximizing of attachment needs which involve being absorbed in one's feelings or emotions. The absence of a strong sense of self and reflecting ongoing dependence on their parents probably leaves no room for their new relationship (Pace et al., 2015b). This may generate difficulty in relating intimately with others, as with their children, reducing the latter's opportunities to learn good interpersonal skills (DeKlyen, 1996).

We would suggest that a maternal state of mind that tends to emphasise attachment experiences in anger, passive or preoccupied manner can expose the child to greater vulnerability hindering the transition from childhood to adolescence in which simultaneous needs of autonomy and emotional dependence to caregivers are expressed (Bizzi, Shmueli-Goetz, Castellano, & Cavanna, 2018; Bizzi, Ensink, Borelli, Charpentier-Mora, & Cavanna, 2019).

Conversely, attachment significant differences between clinical and comparison groups are not found in fathers. Although it is necessary to be cautious with the interpretation of this datum due to the paucity of studies on the fathers' attachment, this result suggests that mothers' and fathers' attachment representations may differentially connote the quality of the parenting (Bretherton, 2010; Di Folco et al., 2017; Piermattei et al., 2017; Roskman et al., 2011), influencing in different ways the relationships with the child (Madigan et al., 2007).

The second hypothesis was that parents of young DBD patients would show a higher level of maladaptive emotion regulation strategies than comparisons. No differences between DBD and comparison mothers to ER strategies are found. Conversely, DBD fathers show similar ES but a lower level of CR compared with comparison fathers. Therefore, in contrast to Shenaar-Golana et al. (2017), no differences in ES strategy are found. This may suggest that the role of ES remains unclear in the DBD context rather than in ADHD context. However, the limited presence of CR in DBD fathers points to their difficulty in re-examining stressful situations from a different perspective, thereby failing to come up with a positive interpretation of the situation to decrease their distress. Considering that positive parenting more frequent used CR (Kohlhoff et al., 2016), a possible explanation of this finding is that the low level of CR characterizes the quality of parenting of fathers with DBD children that are often faced with pressure, stress, feelings of anger, helplessness, and frustration for the child's behavior (Shenaar-Golana et al., 2017). This datum suggests once again that mothers' and fathers' emotional functioning operate in different ways and this may have a various impact on the child's development (Bariola et al., 2011).

The third hypothesis concerned if parental Insecure attachment and parental disadaptive emotion regulation strategies would be together associated with DBD children as the outcome. Starting from the ideas that specific parents' attachment representations and parents' emotion regulation increase the risk of developing along deviant pathways (Cerniglia et al., 2017; Coppola et al., 2016; Kobak et al., 1993; Mikulincer & Shaver, 2012; Roisman et al., 2004), the findings do not confirm the researchers' hypothesis. Although in this study emerges that the high frequency of maternal Insecure attachment and the weak presence of CR in fathers are common

in DBD parents, the interactions of these aspects are not enough to be associated with DBD children as the outcome.

Nevertheless, the intergenerational transmission hypothesis of attachment representations and emotion regulation strategies (Cassidy & Shaver, 2016), these findings emphasize strongly the need to include other variables and a larger sample to fully explicate the emotional functioning of parents in the developmental trajectory of DBD children.

Overall, although the disrupted emotional functioning of DBD families does not seem to implicate the promotion of disruptive behaviour problems in middle childhood, the strong presence of Insecure attachment (mainly Entangled attachment) in mothers and the weak presence of CR in fathers are aspects that clinicians may consider in a preventive way to limit the vulnerability of parenting in a crucial period of profound cognitive and emotional changes of the child.

This study has several limitations. First, our study being a cross-sectional study we cannot make any causal inferences about the associations found between attachment representations, emotion regulation strategies, and DBD diagnoses. It could be that mothers become Insecure and fathers with lower CR levels because they have DBD children, not the other way around. Therefore, future studies using longitudinal designs are needed to better understand directional relationships between these factors. Secondly, the sample size is small. Studies using larger sample sizes to examine the role of mothers and fathers separately are needed before firm conclusions can be drawn. Thirdly, CR and ES are just two of many possible strategies we can use to regulate our emotions. The examination of other emotion regulation strategies will contribute to a more comprehensive understanding of the relationships that exist between parent and child. Moreover, we only used a self-report questionnaire to evaluate ER. Future research should adopt a multi-method approach. Fourthly, an evaluation of the personality of the parents is missing, a methodological limitation that restricts the generalisability of our results. Finally, data on child attachment and child emotion relation is not examined. Behavioural problems have a detrimental impact on the emotion-related behaviours of parents raising children with DBD; hence, future research should consider child emotional functioning.

Notwithstanding the above limitations, the present study adds to previous literature in several ways. No other research has so far focused on parental emotional functioning considering mothers and father separately and the association with DBD children during middle childhood. Prevention and intervention programs on parenting, especially in Italy and in several other countries, are often based on mother-based procedures (Pace et al., 2015).

Thus, this study can constitute one of the first contributions toward the development of new policies, which must consider the role of fathers in children's mental health as primary (Cerniglia et al., 2017).

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