

# The association between maternal resolution of the diagnosis of autism, maternal mental representations of the relationship with the child, and children's attachment

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## Abstract

*Mothers who were classified as resolved showed higher levels of secure base, own and other perspective-taking, and lower level of neutralization than mothers classified as unresolved. Mothers with a higher level of neutralization, compared with mothers with a lower level of neutralization, had children with a higher level of avoidance.*

*The study analyzed the associations between the maternal resolution state of mind of the child's diagnosis, maternal mental representations of the relation with the child, and children's attachment. The associations made between the maternal resolution state of mind and some mothers' and children's variables were also analyzed. The participants were 21 children with high functioning autism or Asperger syndrome ( $M_{age} = 7$  years 9 months;  $SD = 2$  years 4 months) and their mothers ( $M_{age} = 41$  years 2 months;  $SD = 4$  years 7 months). Maternal resolution status was associated with the type of diagnosis and mothers' age. Mothers who were classified as 'resolved', showed higher levels of secure base, their own and other perspective-taking, and a lower level of neutralization, than mothers classified as 'unresolved'. Mothers with a higher level of neutralization, compared with mothers with a lower level of neutralization, had children with a higher level of avoidance.*

**Keywords:** Diagnosis, Maternal mental representation, Attachment, Autism

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## 1. Introduction

The birth of a child with disabilities is a daunting challenge for most families. A child's diagnosis of disability can be the cause of several parental emotional reactions, including shock, denial, and guilt (Turnbull & Turnbull, 2001). In literature, some authors (Pianta & Marvin, 1993; Marvin & Pianta, 1996) have defined the construct of the resolution of the diagnosis (or resolved state of mind) as the process through which the parents of children with disability cope with their feelings associated with the event of the diagnosis. Parents who have resolved their grief thanks to the diagnosis are able to focus on the present and to recognize the child's real condition considering both his/her resources and limitations (Marvin & Pianta, 1996). They are able to recognize changes that have occurred since the time of the diagnosis and to describe their coping mechanisms. Conversely, Pianta, Marvin, Britner and Borowitz (1996) defined the lack of resolution of the diagnosis (or unresolved state of mind) in terms of parental cognitive distortions and biases regarding the child's abilities and difficulties. Parents tend to refer to past experience, and their feelings are oriented towards neglect, victimization, denial, and confusion.

Overall, the process of diagnostic resolution allows parents and children to gain an optimal level of well-being. A resolved state of mind allows parents to cope with the stress due to disability, to take advantage of social support, and to maintain a high level of marital satisfaction (Sheeran, Marvin, & Pianta, 1997). Also, there is evidence that parents with a resolved state of mind most probably have children with secure behavioral attachment patterns (Marvin & Pianta, 1996; Pianta *et al.*, 1996; Barnett, Clements, Kaplan-Estrin, McCaskill, Hill Hunt, & Butler, 2006). In this vein, the lack of resolution of the diagnosis could be one of the possible causes of a disruption in parental behaviors and mental representations of the relation with the child (i.e., their Internal Working Model) that, in turn, could affect the quality of children's mental representations of attachment with the caregiver.

### *1.1. Caregiving system, child's attachment, and impact of the child's diagnosis*

The attachment theory described the caregiving system (Pianta *et al.*, 1996) as the parental structure, complementary to the child's attachment system, including both behavioral aspects and representational processes. The latter, in turn, involve both cognitive and emotional features. Cognitive features concern parental perceptions, attributions, beliefs, and expectations about the child; emotional features concern parental emotional experiences and their representations. Both of them influence parental behavior toward the child.

Interest in the study of the representational process of the caregiving system

depends on the fact that parenting behavior is predicted not only by the adults' states of mind about their primary relationship with their caregivers (Main & Goldwyn, 1984; Van Ijzendoorn, 1992) but also by mental contents regarding their actual relationship as parents (Stern, 1991; Teti & Gelfand, 1991; Baden & Howe, 1992; Slade, Belsky, Aber, & Phelps, 1999; Button, Pianta, & Marvin, 2001; Sayre, Pianta, Marvin, & Saft, 2001). Furthermore, there is consistent evidence of the relation between parents' representational processes and children's quality of attachment (Fonagy, Steele, Moran, Steele, & Higgitt, 1991).

Thus, because of its intrinsic systemic nature, the caregiving system could be disrupted when psychological interactive processes between parents and child are altered (Main & Hesse, 1990; George & Solomon, 1996; Lecciso, Petrocchi, & Marchetti, in press). As a matter of fact, a child's diagnosis of disability is a possible cause of trauma for the caregiving system, challenging existing beliefs and feelings about parenting (Pianta *et al.*, 1996).

In literature, the impact of the diagnosis of autism on parenting has been analyzed by studies investigating the association between the parental perspective on the relation with the child and the resolution of the diagnosis as measured by Marvin and Pianta (1996). Specifically, the construct of maternal insightfulness (Ainsworth, 1969; Koren-Karie, Oppenheim, Dolev, Sher, & Etzion-Carasso, 2002), which is the ability to interpret facts of life and events from the child's point of view, was analyzed. Hutman, Siller and Sigman (2009) hypothesized that mothers with a high level of insightfulness and mothers who are resolved with respect to the child's autism diagnosis would be able to play with their children in a responsive manner. Although the authors found a positive association between insightfulness and maternal synchronicity during play, they failed to find an association between resolution status and maternal behavior during play. Oppenheim, Koren-Karie, Dolev and Yirmiya (2009) tested the hypothesis that a combination of insightfulness and resolution would most likely be associated with secure attachment behavior. As expected, mothers who were resolved and insightful were more likely to have secure children than mothers who were unresolved and noninsightful.

These studies dealing with the impact of the resolution of the diagnosis of autism on the parental mental representation of the relationship with their child have focused only on the maternal insightfulness variable. In contrast, in the present study, we investigated the representational features of the caregiving system considering the mother's tendency not only to view her child as a mentalistic partner but also to think about herself as a mentalistic partner and a secure base and to not avoid the negative elements of the relation with her child.

### *1.2. Variables associated with the resolution of the diagnosis process in different pathological conditions and in autism.*

Studying a range of disabilities, some authors have considered the effect of the parental resolution state of mind, as defined and measured by Marvin and Pianta (1996), on variables regarding children and variables regarding mothers. Pianta *et al.* (Marvin & Pianta, 1996; Pianta *et al.*, 1996) analyzed mother-child dyads in the case of diagnoses of cerebral palsy and epilepsy. Barnett *et al.* (2006) considered the resolution of the diagnosis in the case of neurological disorders and congenital disfigurement. Kearney, Britner, Farrell and Robinson (2011) studied maternal resolution of diagnosis in some child psychiatric populations (ADHD vs. several non-ADHD conditions). Four previous studies have analyzed the resolution of the diagnosis process in autism spectrum disorders (ASD): two studies involved mothers and children with ASD (Wachtel & Carter, 2008; Hutman *et al.*, 2009); another study was conducted with mothers and children with autism disorder (AD) or pervasive developmental disorder not otherwise specified (PDD NOS; Oppenheim *et al.*, 2009); and finally, one study involved parents of children with both AD and PDD-NOS (Milshtein, Yirmiya, Oppenheim, Koren-Karie, & Levi, 2010).

When the parental resolution of the diagnosis was studied in relation to children's variables, researchers have not found any associations with mental ORchronological age (Wachtel & Carter, 2008; Hutman *et al.*, 2009; Oppenheim *et al.*, 2009; Milshtein *et al.*, 2010), children's expressive, receptive language, and non-verbal IQ (Hutman *et al.*, 2009; Oppenheim *et al.*, 2009), and adaptive abilities (Milshtein *et al.*, 2010). Again, Pianta *et al.* (Marvin & Pianta, 1996; Pianta *et al.*, 1996) found similar results considering mental age and the severity of the symptoms in the case of cerebral palsy and epilepsy. Also, Kearney *et al.* (2011) did not find significant associations between children's demographic characteristics (child's age, child's gender) and mothers' resolution status. In contrast, Barnett *et al.* (2006) found that resolution of the diagnosis was associated with a higher level of children's intellectual functioning.

When parental variables have been taken into consideration, research has not found a relationship with parents' age (Hutman *et al.*, 2009; Oppenheim *et al.*, 2009; Milshtein *et al.*, 2010; Kearney *et al.*, 2011), IQ (Milshtein *et al.*, 2010), socioeconomic status (Milshtein *et al.*, 2010; Kearney *et al.*, 2011), educational level (Hutman *et al.*, 2009; Kearney *et al.*, 2011), and the autism-spectrum quotient (Milshtein *et al.*, 2010). In contrast, associations between resolved state of mind and high educational status (Oppenheim *et al.*, 2009) and between resolved state of mind and high family income (Hutman *et al.*, 2009) were found.

Another variable considered in literature is the time taken since receiving the diagnosis. Previous research studies did not find any association between the diagnosis resolution status and the time since receiving the diagnosis (Marvin & Pianta, 1996; Pianta *et al.*, 1996; Wachtel & Carter, 2008; Hutman *et al.*, 2009; Oppenheim *et al.*, 2009; Milshtein *et al.*, 2010; Kearney *et al.*, 2011) except for Barnett *et al.* (2006).

Finally, the diagnosis resolution status was analyzed also regarding the type of diagnosis. In this vein, only Milshtein *et al.* (2010) compared different types of autism diagnosis (AD *vs.* PDD-NOS) without finding significant associations with parental resolution status. Equally, Pianta *et al.* (1996) did not find any difference between the status of the resolution of the diagnosis of cerebral palsy and epilepsy, and Kearney *et al.* (2011) did not find any difference when comparing different child psychiatric populations (ADHD *vs.* non-ADHD), while Barnett *et al.* (2006) found that parents of children with neurological disorders were more likely to be classified as unresolved than parents of children with physical disfigurement.

## 2. Aims

The present paper aims to analyze some aspects of the resolution of the diagnosis in mothers of children with mental disability such as high functioning autism (HFA) or Asperger syndrome (AS). The first aim is to analyze the associations between the diagnosis resolution status with some mothers' variables (age, education level, and profession) and with some children's variables (chronological age, developmental indexes, time since the diagnosis, and type of diagnosis). The second aim is to analyze the association between the diagnosis resolution status and maternal mental representations of the relationship with their children. The third aim was to analyze the link between mothers' and children's mental representations of their relationship.

## 3. Method

### 3.1 Sample

Twenty-one child-mother dyads (10 with high functioning autism – HFA, 11 with Asperger syndrome – AS) took part in the research; 19 children were boys (10 with HFA) and 2 were girls (both with AS). The children were between 5 and 13 years old ( $M = 7$  years 9 months;  $SD = 2$  years 4 months) and

had a total IQ > 70 (range 81-138,  $M = 104.81$ ,  $SD = 15.42$ ). See Table 1. The children received their diagnosis at the Child Psychiatry Unit of the E. Medea Scientific Institute. The inclusion criteria were: age from 5 to 14 years; IQ > 70; age of language production older than 4 years of age; clinical diagnosis of HFA or AD formulated by a child psychiatrist according to the International Classification of Disease (ICD-10, World Health Organization, 1992) and the Diagnostic and Statistical Manual of Mental Disorders (DSM IV-TR, American Psychiatric Association, 2000). The diagnoses were independently confirmed by an expert child psychologist through direct observation and discussion with each child's parents. Only children for whom the diagnoses concurred were included in the study. The exclusion criteria were: neurologic, genetic, infectious, or metabolic disorder, seizure disorder, and present or past use of any psychoactive drugs.

The mothers' age was between 32 and 48 years old ( $M = 41$  years 2 months;  $SD = 4$  years 7 months) and had a total IQ > 70 (range 95-147,  $M = 125.75$ ,  $SD = 12.38$ ). They had an average educational level of 13 years and 9 months ( $SD = 3$  years 4 months). Two mothers were factory workers, 4 were teachers, 8 were office workers, 1 was a freelancer, and 6 mothers were housewives. The time since receiving the diagnosis ranged from 4 months to 10 years ( $M = 2$  years 3 months,  $SD = 2$  years 3 months). See Table 1.

### 3.2 Instruments

#### (a) Mothers

*IQ estimation.* Two verbal subtests (information and vocabulary) and two performance subtests (picture completion and block design) of the WAIS-R (Orsini & Laicardi, 1997) were used to estimate the mothers' general intelligence as recommended by Doppelt (1956).

*Maternal reaction to child's diagnosis.* The Reaction to Diagnosis Interview (RDI; Pianta & Marvin, 1993) was employed to measure maternal reaction to the diagnosis of autism of their children. The five questions asked them to recall experiences, events, and specific episodes describing the moment of diagnosis, thoughts and feelings since the diagnosis, and maternal past or current research regarding causes that may have played a role in the child's disability. The maternal interviews were coded by two authors of this paper who were blind (to any other children's and mothers' data; one coder received training from Prof. R. Pianta. The interviews were codified as either resolved or unresolved (Pianta & Marvin, 1993). To be codified as resolved, mothers had to show:

Table 1 - *Children's and Mother's variables*

	<i>Minimum</i>	<i>Maximum</i>	<i>M</i>	<i>SD</i>
<b>Mothers</b>				
Age	38	42	42y-2m	4y-7m
IQ	95	147	125.75	12.38
Time since receiving the diagnosis	4m	10y	2y3m	2y3m
<b>PDI</b>				
Secure Base	2	7	5.05	1.24
Self Perspective-Taking	3	7	5.24	1.22
Own Perspective-Taking	3	7	5.86	1.11
Neutralization	1	5	2.57	1.40
<b>Children</b>				
Age	5y	13y	7y9m	2y4m
<b>IQ</b>				
IQv	85	139	108.24	14.76
IQp	71	128	100.48	16.25
Total IQ	81	138	104.81	15.42
<b>Vineland</b>				
Communication	42	134	98.71	25.42
Socialization	23	89	54.95	19.21
Daily Living Skills	30	115	68.95	25.14
Composite	35	106	73.90	21.90
<b>SAT</b>				
Attachment Scale	3	12	9.76	2.40
Self-Reliance Scale	4	10	7.14	1.80
Avoidance Scale	6	10	7.30	1.53

*Note:* y: years; m: months; IQ: Intelligence Quotient; IQv: Verbal Intelligence Quotient; IQp: Performance Intelligence Quotient; PDI: Parent Development Interview; SAT: Separation Anxiety Test.

1) processes of re-orientation and re-focusing of attention on the present reality; 2) problem-solving ability regarding the present situation; 3) ability to recognize changes in the child since the time of the diagnosis; and 4) accurate representations of the child's abilities. To be codified as unresolved, mothers had to show: 1) cognitive distortions (i.e., unrealistic beliefs or denial); 2) active search for reasons for the child's disability; 3) intense emotions associated with the experience of the diagnosis; and 4) thoughts and problem-solving ability focused on the time of the diagnosis. Twelve mothers were classified as resolved (57%) and 9 were classified as unresolved (43%). Inter-rater reliability was  $K = 0.92, p < .001$ .

Representational aspects of the caregiving system. The Parental Development Interview (PDI; Pianta, O'Connor, & Marvin, 1993; Pianta, O'Connor, Morog,

Button, Dimmock, & Marvin, 1995; Lecciso, & Petrocchi, 2012) was used to measure maternal representational process of the caregiving system. The interview is composed of 20 questions asking both for specific episodes of interaction with the child and for thoughts and emotions linked to these experiences (Pianta *et al.*, 1993). The maternal interviews were coded by two authors of this paper who were blind to any other children's and mothers' data. One coder received training from Prof. R. Pianta. The maternal answers were analyzed following Pianta *et al.*'s (1995) revised coding system. For the specific purpose of this research, three scales were chosen: secure base, perspective-taking (e.g., mentalistic dimension), and neutralization. The secure base dimension considered maternal mentions about her role in comforting, soothing, or having contact with the child, especially when the child experiences a stressful situation. The perspective-taking dimension (referred to as other-perspective-taking) considered maternal mentions of child's feelings, thoughts, and any other mental states and thus showed maternal willingness to think of the child as having an independent mind. Because this original scale referred to the child's mental states, to better analyze the mentalistic dimension, an own-perspective-taking scale was created and analyzed. The latter measured a similar construct but referred to the maternal ability to talk about oneself as having a mind. The neutralization dimension referred to the maternal attempt to take distance from negative affective feelings regarding the relationship with the child. This scale reflected maternal willingness to discuss negative-oriented emotions during the interview. For each scale, the score ranged from 1, no evidence of the construct, to 7, full evidence of the construct. Answers with vague or no evidence of the construct were coded with low scores (1, 2); answers characterized by adequately elaborated construct descriptions received medium-level scores (3, 4, 5); and answers characterized by highly elaborated construct descriptions got high-level scores (6, 7). Inter-rater reliability was high for all scales ( $r_s > .96$ ).

### *(b) Children*

*Parents' Report.* The Vineland Adaptive Behavior Scales-I expanded form (VABS; Balboni & Pedrabissi, 2003) was used to assess children's socialization, communication, daily living, and motor skills (only for children younger than 6). Four age-equivalent scores and a final composite score were obtained

*IQ estimation.* Two verbal subtests (information and vocabulary) and two performance subtests (picture completion and block design) of the age-appropriate Wechsler Intelligence Scale (WISC-III-R; Rubini & Padovani, 1986; WPPSI; Orsini & Picone, 1998) were used to estimate children's general intelligence,



as recommended by Sattler (1992). Children's mental representations of attachment. The narrative semi-projective Separation Anxiety Test (SAT; Klagsbrun & Bowlby, 1976; Slough, Goyette, & Greenberg, 1988; Liverta-Sempio, Marchetti, & Lecciso, 2001) was used to assess children's mental representation of their relationship with their parents. Mental representations are evoked by photographs representing three mild and three severe situations of separation of the child from his/her parents. The scoring system composed of three scales and devised by Slough *et al.* (1988) was used. The attachment scale measures the degree to which children express vulnerability or need in the three severe situations of separation on a four-point scale (range 3-12). The self-reliance scale measures the degree to which children express self-confidence in the three situations of mild separation on a four-point scale (range 3-12). The avoidance scale assesses the degree of elusion of the discourse about separation in all six situations on a three-point scale (range 6-18). All the interviews were coded independently by two coders, and the inter-rater reliability was high for all three scales ( $r_s > .98$ ).

### 3.3 Procedure

The Ethical Committee of the E. Medea Scientific Institute approved the research. All parents with children who met the inclusion criteria received an information sheet explaining the aims of the research and signed a consent form for themselves and for their child to participate in this research study. The children's measures were administered first in one section in the following order: WPPSI/WISC-III-R subscales and Separation Anxiety Test. The mothers received their measures in one section: WAIS-R subscales, VABS, PDI, and RDI.

## 4. Results

### 4.1 Reaction to the diagnosis of autism – mothers' variables

Non-parametric ANOVAs (Mann-Whitney U Test) showed no significant associations between the diagnosis resolution status and both maternal educational level and maternal profession. The diagnosis resolution status was associated with the mothers' age: the mothers codified as resolved were older ( $M = 43$ ,  $SD = 4.50$ ) than the mothers codified as unresolved ( $M = 38.80$ ,  $SD = 4.00$ ),  $U = 25.50$ ,  $p = .041$ .

### 4.2 Reaction to the diagnosis of autism – children's variables

Non-parametric ANOVAs showed no significant associations between re-

solution status to diagnosis, children’s age, children’s developmental indexes (IQv, IQp, and IQ total score; Vineland communication, socialization, daily living skills, and composite scales), and time since diagnosis. See Table 1 for means and standard deviations. A significant association emerged between the diagnosis resolution status and type of diagnosis (HFA vs. AS),  $\chi^2(4) = 4.07$ ,  $p = .044$  (Table 2). 80% of the mothers with children with HFA solved the diagnosis event compared to 36% of the mothers of children with AS. Based on the odds ratio, mothers with children with HFA were 7 times more likely to resolve the diagnosis process than mothers of children with AS.

Table 2 - *Distribution of frequency of RDI and type of children’s diagnosis (between brackets expected frequencies).*

	HFA	ASP
Resolved Status of the Diagnosis	8 (5.7)	4 (6.3)
Unresolved Status of the Diagnosis	2 (4.3)	7 (4.7)

Note: HFA: High Functioning Autism; ASP: Asperger syndrome

Considering that result, non-parametric ANOVAs were carried out to examine possible differences between HFA and AS regarding children’s developmental indexes (IQ, VABS). Significant results emerged on IQv,  $U = 99.50$ ,  $p = .011$ , IQp,  $U = 90$ ,  $p = .013$ , and IQ total score,  $U = 96.50$ ,  $p = .002$ . For all variables, children with HFA got lower scores ( $M_{IQv} = 98.60$ ,  $SD = 9.86$ ;  $M_{IQp} = 91.50$ ,  $SD = 12.22$ ;  $M_{IQtotal} = 94.40$ ,  $SD = 9.88$ ) than children with AS ( $M_{IQv} = 117$ ,  $SD = 13.08$ ;  $M_{IQp} = 108.64$ ,  $SD = 15.49$ ;  $M_{IQtotal} = 114.27$ ,  $SD = 13.45$ ).

#### 4.3 Association between the reaction to the diagnosis and maternal mental representations of the relationship

All the non-parametric ANOVAs carried out between the diagnosis resolution status and the PDI scores yielded the level of significance (see Table 1 for means and standard deviations). Mothers classified as resolved ( $M = 5.80$ ,  $SD = .56$ ) significantly differed in their secure base scores from mothers classified as non-resolved ( $M = 4$ ,  $SD = 1.12$ ),  $U = 6.00$ ,  $p = .0001$ . Mothers classified as resolved ( $M = 6.50$ ,  $SD = .52$ ) differed significantly in other-perspective-taking scores from mothers classified as non-resolved ( $M = 5$ ,  $SD = 1.12$ ),  $U = 8.50$ ,  $p = .0001$ ; equally, mothers classified as resolved ( $M = 6$ ,  $SD = .95$ )

differed significantly in their own-perspective-taking scores from mothers classified as non-resolved ( $M = 4.22$ ,  $SD = .67$ ),  $U = 12.00$ ,  $p = .002$ . Finally, mothers classified as resolved ( $M = 1.58$ ,  $SD = .79$ ) significantly differed in neutralization score from mothers classified as non-resolved ( $M = 3.89$ ,  $SD = .78$ ),  $U = 105.00$ ,  $p = .0001$ .

#### *4.4 Association between mother's and children's mental representations of the relationship*

Non-parametric ANOVAs (Kruskal-Wallis Test) found a significant relation between the mothers' neutralization of the negative emotions scale of the PDI and the children's avoidance scale of the SAT,  $H(2) = 6.34$ ,  $p = .042$ . See Table 1 for means and standard deviations. Mann-Whitney tests were used to follow up on this finding and a Bonferroni correction was applied, so all the effects are reported at a .016 level of significance. There were no differences in avoidance scores either between low and medium levels of neutralization or between medium and high levels of neutralization. However, when low and high levels were considered, a significant difference emerged in the avoidance score,  $U = -19.28$ ,  $p = .015$ . Mothers with a higher level of neutralization had children with a higher level of avoidance ( $M = 9.50$ ,  $SD = .71$ ) than mothers with a lower level of neutralization ( $M = 6.88$ ,  $SD = 1.46$ ).

## 5. Discussion

The first set of results concerned the association between the diagnosis resolution status and mothers' variables. The findings did not show any association between the status of the resolution with the diagnosis and maternal profession. The evidence is in line with prior research on autism that did not find an association with socio-economic status (Milshtein *et al.*, 2010). In the present study, no association between the diagnosis resolution status and maternal level of education was found. This finding replicates results found by Hutman *et al.* (2009) but is in contrast to those found by Oppenheim *et al.* (2009). Finally, unlike previous research (Wachtel & Carter, 2008; Hutman *et al.*, 2009; Oppenheim *et al.*, 2009; Milshtein *et al.*, 2010), we found that mothers who resolved their child's diagnosis were older than those who did not. It should be noted that, in three (Wachtel & Carter, 2008; Hutman *et al.*, 2009; Oppenheim *et al.*, 2009) of the four mentioned studies (Milshtein *et al.*, 2010), the mothers' mean age was lower than in our study. Possibly, the phase of the life-course (Erikson, 1978, 1982) that our participants were going through allowed

them to gain high personal integration that, in turn, facilitated processing of the child's diagnosis in a non-traumatic way. On the whole, our findings and the comparison between them and those of other studies outline a not fully unambiguous trend. This evidence highlights, once more, the need to consider mothers' variables.

A second set of results concerns the association between mothers' resolution of their child's diagnosis and children's variables. The results confirmed those of previous studies on children with autism by showing no associations between maternal resolution of the diagnosis and the amount of time elapsed since the diagnosis (Wachtel & Carter, 2008; Hutman *et al.*, 2009; Oppenheim *et al.*, 2009; Milshtein *et al.*, 2010), children's age (Wachtel & Carter, 2008; Hutman *et al.*, 2009; Oppenheim *et al.*, 2009; Milshtein *et al.*, 2010), IQ (Hutman *et al.*, 2009; Oppenheim *et al.*, 2009), and adaptive behavior (Milshtein *et al.*, 2010).

The resolution of the diagnosis was associated with the type of diagnosis: mothers of children with HFA were more likely to have resolved their state of mind regarding the diagnosis than mothers of children with AS. Milshtein *et al.* (2010) did not find any association between maternal resolution and the type of diagnosis of children (AD vs. PDD-NOS). Similar findings emerged in Pianta *et al.* (1996), who compared cerebral palsy and epilepsy and in Kearney *et al.* (2011), who compared different child psychiatric populations (ADHD vs. non-ADHD). However, Barnett *et al.* (2006) found that mothers of children with physical disfigurement were more likely to have resolved their state of mind regarding the diagnosis than mothers of children with neurological disorders. Thus, while in some cases (Pianta *et al.*, 1996; Milshtein *et al.*, 2010; Kearney *et al.*, 2011), it seems that the resolution of the diagnosis depends only on the parents' characteristics, in other cases (Barnett *et al.*, 2006) the parental perception of children's specific disorders seems to play a distinctive role. In fact, as Pianta, Marvin and Morog (1999) suggested, the progressive nature (*vs.* stable) of the disorder, its unpredictability (*vs.* predictability), the severity of its course, and parents' hope (*vs.* hopelessness) of remission could also increase the risk that parents will not properly elaborate the diagnosis of their child. Furthermore, in the present study, there is evidence that children with AS showed higher IQ than children with HFA. This aspect could represent a constraint in the processing of the diagnosis of autism by parents because children's skills could seem less impaired in AS than in HFA, which gives hope to parents for a (pseudo) normal condition for their child. We are not stating that the type of diagnosis determines its resolution but that the process of the resolution of the diagnosis could be more complex in the case of specific clinical conditions (e.g., AS) than others (e.g., HFA). According to

Pianta *et al.* (1999), parents do not elaborate all kinds of diagnoses following the same path: in our particular case, higher intelligence functioning in children with AS could increase the risk that their mothers will not resolve the diagnosis.

These considerations on the maternal resolution of the diagnosis in relation to the disability of their child shed some light on another finding of our study. Although compared at a descriptive level, the percentage of mothers who have resolved the diagnosis in our sample (57%) was higher than those of previous studies – 33% in Oppenheim *et al.* (2009) and 36% in Milshtein *et al.* (2010). Nevertheless, in our study, considering the maternal resolution of the diagnosis separately for each type of diagnosis, the percentage of mothers who resolved the diagnosis of HFA (80%) is higher than that of mothers of children with AS (36%), which is similar to the percentages observed in the afore-mentioned studies. These considerations support Pianta *et al.*'s (1999) hypothesis regarding the influence of parental perceptions of the child's disability on their diagnosis resolution. As a consequence, the authors pointed out the need to distinguish between different subtypes of a similar – although different – clinical condition when investigating the reaction to a diagnosis.

A third set of findings regards the relation between the resolution of the diagnosis and the maternal mental representation of the mother-child relationship. On the basis of the existing literature (see Pianta *et al.*, 1996), it has been expected that the diagnosis of autism may have a specific traumatic impact on the caregiving system, in both its emotional and mentalistic aspects. Mothers who resolved their child's diagnosis were more able to view themselves and their child as mental agents, to think about themselves as a secure base, and to not avoid the negative features of the relationship. These results confirmed other findings (Marvin & Pianta, 1996; Pianta *et al.*, 1996) demonstrating that a child's diagnosis of a disability is a factor that can alter the maternal mental representation of the mother's relationship with the child. The maternal experience of a child's disability can sift, distort, and modify her mental representations of the relationship with the child. As a consequence, the difficulty in processing and resolving the diagnosis event leads to poor emotional and mentalistic representations, as shown by our findings.

The last set of results concerns the associations between the mental states of mothers and those of children. The degree to which mothers neutralized the negative aspects of the relationship with their children is associated with the degree to which children avoid the discourse about separation. Even though these dimensions are elicited by two different instruments, they assess the same attachment component: the inability to cope with the negative aspects of the parent-child relationship. Moreover, it is important to stress that the negative components of a relationship are the most critical in the case of a diagnosis of infant disability.

The association between these two dimensions emblematically emerges in a group of children with a diagnosis of autism, a condition in which it is necessary for the parents to get in touch with the problematic aspects related to the diagnosis and their own relationships with offspring. Furthermore, the link between the two dimensions may be interpreted in light of the hypothesis about an inter-generational transmission of internal working models (for a review, see Van Ijzendoorn, 1992) and, in particular, of avoidant representational patterns.

Finally, considering altogether the findings obtained by using different measures (RDI, PDI, and SAT), we hypothesize a complex model in which mothers' elaboration of the experience of their children's disability (RDI) could also be integrated into the maternal mental representation of their relationship (PDI). The maternal mental representation could have an effect on parenting behavior and, as a consequence, may contribute to the development of a child's mental representations of the relationship with the mother (SAT)<sup>7</sup>. Future research is recommended to test the hypothesized model with a larger number of participants to jointly consider the relationships between these constructs.

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<sup>7</sup> The hypothesized model could be further expanded considering other variables, such as the interpersonal trust (Lecciso, Petrocchi, Liverta-Sempio, & Marchetti, 2011) which is linked to the affective bond and influences children's socio-relational ability and their more general well-being (Rotenberg, 2010).

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