

Title: Attachment states of mind and couple relationships in couples seeking to adopt

Running Head: Couples in transition to adoptive parenthood

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Introduction

In recent years the number of families in the USA and Europe who adopt has increased (Hock and Mooradian 2012; 2012; Oliva, Arranz, Parra, & Olabarrieta, 2014; Selman, 2009; US Children's Bureau et al. 2010) with international adoptions more common than domestic adoptions (Juffer et al., 2011). For instance, between 2000 and 2012 39,223 adoptions of foreign children were authorized in Italy, and in 2012 alone there were 3,106 international adoptions by Italian parents (Italian Commission for International Adoptions, 2012). There are common features in the transition to adoptive or biological parenthood, arising from the addition of a new dependent member to a family system (Brodzinsky & Huffman, 1988; Ward, 1998), but existing research suggests that the parenting experiences of biological and adoptive parents are very different owing to the additional challenges adoptive parents face (Ceballo, Lansford, Abbey, & Stewart, 2004; Fontenot, 2007; Levy-Shiff, Goldshmidt, & Har-Even, 1991; McKay, Ross, & Goldberg, 2010). Firstly, adoptive couples follow a different trajectory to parenting from biological parents (Ceballo et al., 2004). Unlike biological parents, adoptive parents must pass through intrusive public scrutiny, legal procedures and ongoing interaction with formal systems to incorporate children into their families (Mooradian, Timm, Hock, & Jackson, 2011), with no certainty about when they will be able to adopt. The time it takes to become adoptive parents is unpredictable, whereas biological parents have the certainty of a nine-month gestation period (Noy-Sharav, 2002; Palacios & Sanchez-Sandoval, 2006). Secondly, many adoptive couples are physically unable to have children, so they have to deal with the emotional pain associated with infertility (Lowe Lustig, 2010; Mooradian et al., 2011), which is correlated with psychological problems and marital difficulties (Abbey, Andrews, & Halman, 1994a, 1994b; Ceballo et al., 2004). Thirdly, parents who adopt children must come to terms with their feelings about parenting 'someone else's' children (Mooradian et al., 2011, Nickman et al., 2005) and they are expected to disclose and communicate openly with their children about their adopted status to help them develop a sense of identity and belonging (Palacios & Brodzinsky, 2010). Fourthly, adoptive parents are more likely to parent children who belong to different ethnicity (Lazarus, Evans, Glidden & Flaherty, 2002). Parents in cross-ethnic adoptions have often to face both the social stigma associated with adoption and reactions from friends and family to the adopted child's ethnicity (McKay et al., 2010; Wegar, 2000). Finally, adoptive couples face particular challenges related to the characteristics of children put up for adoption, which have changed considerably over the last 20 years (Juffer et al., 2011; Smith Rotabi & Gibbons, 2012). Nowadays, adoption of older children prevails (Howe, 2001; Rueter & Koerner, 2008), with severely negative pre-adoption experiences (Pace, 2014; Steele, Hodges, Kaniuk, Hillman, & Henderson, 2003; Van den Dries, Juffer, van Ijzendoorn, & Bakermans-Kranenburg, 2009), often exhibiting social, emotional, behavioral and attachment-related problems (Howe, 2003; Pace, Zavattini, & Tambelli, 2013; Roman, Palacios, Moreno, & Lopez, 2012), and/or bringing special

needs, such as medical problems or developmental disabilities (Goetting & Goetting, 1993; Schweiger & O'Brien, 2005). However, several researchers have pointed out that although over half of all adopted children arrive in their new families with serious developmental delays, for most of them few years after adoption the severe physical difficulties have disappeared and the psychological ones are considerably reduced. These improvements seem to happen mainly because these families tend to offer a high-quality parenting for child development (Oliva et al., 2014; Palacios & Brodzinsky, 2010).

For the attachment theory, adults' style of parenting is widely affected by the Internal Working Models (IWMs; Bowlby, 1969), which are internalized representations of the self, others and self-other relationships, based on the childhood experiences with attachment figures. IWMs in adulthood have usually been assessed by the Adult Attachment Interview (AAI; George, Kaplan, & Main, 1985), which is considered the "gold standard" method for classifying the adult attachment states of mind with respect to attachment (Hesse, 2008). Several studies (e.g. Cassidy & Shaver, 2008) have highlighted that biological parents' secure attachment states of mind may influence the good quality of their parenting (e.g. sensitive, responsive, available, etc), and hence their children's secure attachment, positive adjustment and wellbeing.

A limited but growing number of studies have taken into consideration parents' attachment states of mind in adoptive families (Lionetti, 2014; Pace & Zavattini, 2011; Pace, Zavattini, & D'Alessio, 2012; Steele et al., 2003; Steele et al., 2008; Steele, Hodges, Kaniuk, & Steele, 2010). These studies, on one hand, show that adopted children placed with secure parents seem to hesitate in better affective, cognitive and relational frameworks as time goes by - increasing their attachment security and reducing disorganization (Barone & Lionetti, 2012; Pace et al., 2012). On the other hand, insecure adoptive parents and/or with unresolved loss or trauma may pose a particular risk to the development of a positive parent-child relationship after adoption (Steele et al., 2008; Steele et al., 2010). These findings suggest that attachment states of mind of adoptive couples may predict developmental success in adopted children, and therefore their pre-adoption assessment could be very useful.

Moving to the couple relationship, a substantial body of research (Castellano, Velotti, Crowell, & Zavattini, 2012; Kwok, Cheng, Chow, & Ling, 2013) has demonstrated the influence of the marital relationship on new parents' adjustment during the transition to biological parenthood, but very little is known about couple adjustment during the transition to adoptive parenthood. The results of the few studies on this topic (McKay et al., 2010) suggest that adoptive couples fare quite well when compared with parents in other family structures, including married biological parents (Oliva et al., 2014). Adoptive parents reported high levels of marital satisfaction (Leve, Scaramella, & Fagot, 2001) and the transition to adoptive parenthood had little negative impact on the quality of marital relationships (Ceballo et al., 2004). Adoptive parents tended to exhibit more social and psychological resources (e.g. social support, introspective

ability) than biological parents (Levy-Schiff et al., 1991), and adoptive mothers showed less marital distress than biological ones (Cohen, Coyne, & Duvall, 1993). Despite reporting a higher frequency of child behavior problems than biological parents, adoptive parents also reported good family cohesion and adaptability (Ceballo et al., 2004; McGlone, Santos, Kazama, Fong, & Mueller, 2002), and their parental well-being and spousal relationships were similar to other family structures (Lansford, Ceballo, Abbey, & Stewart, 2001). Couple relationship characteristics (dyadic coping, dyadic adjustment and conflict resolution) are a significant factor in co-parenting quality in adoptive mothers (Hock & Mooradian, 2012), which is in line with results from numerous studies of biological families (Morrill, Hines, Mahmood, & Cordova, 2010). Similarly, difficulties in couple relationships may represent a risk factor. Families who had experienced adoption disruption reported a worsening of the spousal relationship (Ward, 1998) and a longitudinal study of adoptive families revealed that marital instability predicted early development of disturbed sleep patterns in adopted children (Mannering et al., 2011). Taken together these findings are worthy of attention,

However, most studies of adoptive parents revealed some methodological limitations: focus only on adoptive mothers (Hock & Mooradian, 2012), lack of comparison group of biological parents (Leve et al., 2001), and lack of standardized and validated measures to assess couple relationships (most of the data were collected using single-item instruments) (Ceballo et al., 2004; Leve et al. 2001).

Over the last 15 years, attachment researchers and clinicians have started to explore attachment states of mind with respect to a partner (defined as specific attachment, Crowell, Treboux, & Waters 2002; Treboux, Crowell, & Waters, 2004) usually using a semi-structured interview based on the AAI model (e.g. Current Relationship Interview; CRI, Crowell & Owens, 1996). Some studies of biological families have analyzed attachment states of mind with respect to partner and with respect to caregivers (defined as generalized attachment) and demonstrated that specific attachment influences marital outcome (Castellano et al., 2012), parental style (Behringer, Reiner, & Spangler, 2011) and the subsequent adjustment of children (Cowan, Cowan, & Mehta, 2009; Crowell, Treboux, & Brockmeyer, 2009). It was shown that the children of parents with insecure attachment states of mind towards both partner and caregivers were at greater risk of developing externalizing and internalizing behavior in primary school (Cowan et al., 2009). Mothers with secure attachment states of mind with their parents and partner were more able to express and process negative emotions such as sadness, anxiety and anger than mothers with insecure parental and partner attachment (Behringer et al., 2011). Finally, secure attachment states of mind, both generalized and specific, were associated with positive perceptions of one's relationship with one's partner and low aggression in conflicts with one's partner (Treboux et al., 2004) whereas insecure specific attachment states of mind predicted less use of the cooperative strategy of integrating during conflicts (Castellano et al., 2012). Although there has been growing interest in parental attachment

states of mind in biological families, little is known about generalized and specific attachment states of mind in adoptive parents.

Secure generalized attachment states of mind, without unresolved loss or trauma, and high-quality couple relationships –in terms of specific attachment, positive feelings and thoughts, and marital adjustment- seem to contribute to a positive adoption outcome. As these factors may influence the quality of parenting and hence the child's adjustment after adoption, investigation of these factors in couples before adoption may be valuable. Although some relevant data have been published (Santona & Zavattini, 2005; Cavanna, Migliorini, & Napoli, 2011), there has been no empirical study comparing attachment states of mind and couple relationships in adoptive couples during pre-adoption assessment and biological parents.

This study aimed to make a modest contribution to addressing this gap in the evidence base by comparing couples seeking to adopt with couples who were biological parents, using groups drawn from the general population and matched on age, gender, socio-economic status and length of cohabitation. We compared the quality of attachment state of mind with respect to caregivers and couple relationship variables --assessed using multi-aspect measures including specific attachment states of mind, intimate feelings and thoughts and marital quality - in couples seeking to adopt and a control group of biological parents matched on socio-demographic variables.

Method

Participants

Overall, 156 participants were involved in this study: 39 infertile and childless couples ($N = 78$) who had just started the Social Services pre-adoption selection –which is a requirement for those seeking to adopt a child- and non-adoptive couples ($N = 78$) drawn from the general population by means of a convenience sample. Eligibility criteria for all participants were as follows: committed couple relationship of at least three years duration, mid-range socio-economic status, no history of psychiatric disorders and age between 35 and 45 years.

The choice to select couples with children as control group was motivated by the fact that the majority of prospective adoptive couples choose adoption after numerous attempts to resolve, through health interventions, the problem of infertility (88.2 % of couples resort to adoption because of infertility; Italian Commission for International Adoptions, 2012). For this reason, couples embarking on the adoption process are usually older (42.4 years for fathers, 40.4 for mothers; Italian Commission for International Adoptions, 2012) than couples having their first biological child (mean age at delivery 31.4 years; ISTAT, National Institute of Statistics, 2012). Using childless couples as the control

sample would have incurred the risk of selecting a sample dominated by couples who had chosen not to have children (child free) or were unable to have children (childless) but had not considered adoption. This hypothetical control sample would not have been comparable to the experimental sample, which was characterized by a strong desire to have a child. We therefore considered it appropriate to use as a control sample couples who already had a child at the time of the study.

There were no significant group differences in age (seeking to adopt group: men $M = 39.92$, $SD = 3.45$; women $M = 39.10$, $SD = 3.27$; control group: men: $M = 41.95$, $SD = 6.10$; women: $M = 38.94$, $SD = 6.29$; *Wilcoxon Test*, $W = 871.5$, $p = 0.12$, *ns*, and $W = 765$, $p = 0.97$, *ns*, respectively for men and women) or in length of cohabitation (seeking to adopt group: $M = 11.57$, $SD = 3.11$; control group: $M = 13.34$, $SD = 5.19$; *Wilcoxon Test*, $W = 599.5$, $p = 0.20$, *ns*). Fifty percent of seeking to adopt couples had earned a high school diploma, 30.8% had a University degree, and there was no significant group difference in educational level (women: *Exact* $\chi^2 = 2.175$; $p = 0.55$, *ns*; men: *Exact* $\chi^2 = 2.032$; $p = 0.534$, *ns*).

Procedure

In Italy couples seeking to adopt have to follow an institutional process administered by the Social Services. This includes a set of assessment interviews conducted by a psychologist and a social worker, and a home visit. We cooperated with Social Services to administer the measures used in this study to couples seeking to adopt as they are in charge of the selection process for adoption. Non-adoptive couples were recruited through state schools. All procedures followed were in accordance with the ethical standards of the responsible committee and with the Helsinki Declaration of 1975, as revised in 2000. Informed consent was obtained from all patients for being included in the study.

The set of measures was administered to both partners separately but in parallel, over two sessions: first assessment: the Socio-demographic Questionnaire and the AAI; second assessment (about two weeks later): the CRI, the ECR-R, and the DAS.

The interviews were transcribed verbatim. The transcripts were subsequently coded by two judges trained in both the Main et al. (2002) coding system for the AAI, and the Crowell and Owens (1996) coding system for the CRI. Each coder was completely blind to other data. Inter-rater reliability for the four-way AAI classification (F/A, DS, E, and U) was calculated for a sample of 50% of the transcripts and was 82.5% (Cohen $k=0.62$). Inter-rater reliability for the four way CRI classification (S, D, P, and U) was calculated for a sample of 50% of transcripts and was 90% (Cohen's $k = 0.85$).

Scores on the ECR-R and DAS were digitally computed. In this study *Cronbach's alpha* was 0.87 for the ECR-R and 0.97 for the DAS.

Measures

The following measures were administered to the couples:

Socio-demographic Questionnaire (Santona, 2004) to collect personal and couple data (e.g. date of birth, date of marriage, etc).

Adult Attachment Interview (AAI; Main, Goldwyn, & Hesse, 2002), a well-known semi-structured interview for the assessment of current state of mind with respect to attachment to one's childhood caregivers. AAI transcripts were used to assess possible past experiences with attachment figures in infancy (Loving, Rejection, Neglecting, Role Reversal, and Pressure to Achieve) and current states of mind (Idealization, Lack of Memory, Anger, Derogation, Passivity, Transcript Coherence, Mental Coherence, Metacognitive Monitoring, Fear of Loss, Unresolved Loss, Unresolved Trauma) on a one-to-nine scale. The coding system classifies attachment states of mind into one of the three principal categories: Free Autonomous (F/A), Dismissing (Ds) or Entangled (E). One of two other transversal categories, Unresolved loss or trauma (U) and Cannot Classify (CC), can also be added. Psychometric studies in many countries have shown that attachment classifications provided by the AAI are steady across periods of up to 15 months and are independent of interviewer. The AAI categories were not correlated to the interviewees' cognitive level, social desirability (Bakermans-Kranenburg and van Ijzendoorn, 1993), memory and general discourse style (Crowell et al., 1996; Pianta, Egeland, & Adam, 1996).

The *Current Relationship Interview* (CRI; Crowell & Owens, 1996), a semi-structured interview protocol based on the AAI model, intended to assess state of mind with respect to attachment in adult romantic relationships; it provides a measure of specific attachment representations (Crowell, Fraley, & Shaver, 2008).

The structure of the CRI is analogous to that of the AAI, however the questions (15, plus optional follow-up-questions) deal with the nature of adult relationships. The beginning of the interview involves eliciting a description of previous romantic relationships; the next stage focuses on the interviewee's current relationship with his or her partner and on experience of a 'secure base' and 'safe haven' in this relationship. Subsequent questions focus on assessment of the effects that the relationship with partner may have had on their own personality and development, eliciting a description of the couple relationship between the interviewee's parents and his or her perception of the impact of the parental marriage on the current couple relationship. The CRI ends with questions about the future of the interviewee's relationship with the current partner.

The coding system is also similar to that of the AAI because interview transcripts are used to analyze and assess experiences with the partner and style and coherence of discourse on one-to-nine scales. There are three set of scales. The first set is used to assess participant's history (Intensity of Past Relationships, Quality of Parents' Marriage, and

Stated Satisfaction with the Relationship). The second set is used to assess partner and participant variables (Love, Rejecting, Involving, Controlling, Dependency, Communication, Caregiving and Careseeking). The third set is used to assess current state of mind (Valuing Intimacy, Valuing Independence, Angry Speech, Derogation of Partner or Attachment, Idealization/Normalization of Partner/Relationship, Passivity of Speech, Fear of loss, Unresolved/Disorganized Loss or Trauma in Previous Relationships, and Overall Transcript Coherence). Classification in terms of attachment categories - Secure (S), Dismissing (D), Preoccupied (P), Unresolved (U) - is based on the scores for each scale and on an overall assessment of the interview. In the CRI as in the AAI, ability coherently to describe one's relationship with a partner, regardless of the quality of the relationship is also taken into consideration. The discriminant validity of the CRI has been confirmed by a number of studies (Roisman, Collins, Sroufe, & Egeland, 2005; Treboux et al., 2004); CRI attachment security category was not related to education, intelligence, gender, length of the relationship or the presence of depressive symptoms. In a study of young couples' transition to marriage (Crowell, Treboux, & Waters, 2002) CRI attachment security category was stable over 18 months in 50% of participants.

Experiences in Close Relationships Scale-Revised (ECR-R; Brennan, Clark, & Shaver, 1999; Fraley, Waller, & Brennan, 2000), a thirty-six-item self-report instrument which assesses feelings and behavior related to attachment in romantic relationships on a Likert scale. The items are clustered along two empirically derived orthogonal dimensions: 1) *Avoidance of intimacy*: the items associated with this dimension measure the level of (conscious) preoccupation related to sharing emotional nearness (e.g. 'I prefer to not show my partner how I feel deep down', 'I want to get close to my partner, but I keep pulling back'); 2) *Anxiety about abandonment*: the items associated with this dimension are expressions of a preoccupation with the relationship or need for intimacy (e.g. 'I worry about being alone', 'I often want to merge completely with romantic partners and this sometimes scares them away'). We categorized participants according to their scores on both dimensions (Anxiety; Avoidance) using the thresholds reported in a meta-analysis (Brennan et al., 1999), 51.66 for the Avoidance scale and 65.52 for the Anxiety scale in a sub-sample of married couples.

In line with the theoretical arguments of Bartholomew and Horowitz (1991), and as suggested by Fraley and Spieker (2003) we used a four-way classification of attachment style, combining scores on both dimensions: Secure (S; low Anxiety and low Avoidance), Preoccupied (P; high Anxiety and low Avoidance), Dismissing (D; high Avoidance and low Anxiety), and Fearful (F; high Anxiety and high Avoidance).

Several studies have assessed the psychometric properties of the ECR-R, including its factorial structure, validity and reliability (Cronbach's $\alpha = .89$ for Avoidance and $\alpha = .87$ for Anxiety) (Busonera, San Martini, Zavattini, & Santona,

2014; Lancee, Maunder, Fraley, & Tannenbaum, 2004; Sibley & Liu, 2004). Test-retest reliability of a sub-sample of 5 items from the ECR produced correlations higher than .70 with an 8-week interval (Lancee et al., 2004).

The *Dyadic Adjustment Scale* (DAS; Spanier, 1976, 1979), a thirty-two-item self-report measure which assesses a couple's adjustment on a Likert scale. The questionnaire provides a measure of the representation that each partner has of the relationship with respect to four principal dimensions, *Dyadic Consensus (DCon)*, which captures perceived agreement on various topics; *Dyadic Satisfaction (DS)*, which provides a measure of happiness with the relationship; *Dyadic Cohesion (DCoh)* which assesses the amount of time partners spend on shared pleasurable activities (such as social interests, dialogue, work, shared tasks) and *Affectional Expression (AE)*, which captures the way couples express and communicate feelings, love, and sexuality.

The sum of scores on the subscales provides an overall Dyadic Adjustment score (range 0-151; *Cronbach's* $\alpha = .92$).

We classified participants' Dyadic Adjustment (high or low) using a threshold score of 114.8 as recommended in the manual *The Dyadic Adjustment Scale* (Spanier, 2001). Another study confirmed that this threshold discriminates underlying distress within a couple relationship (Bubsy, Cristensen, Crane, & Larson, 1995).

Several studies have demonstrated the content validity, concurrent validity, construct validity and reliability of the DAS and the subscales, which can be used independently, and confirmed the factorial structure of the DAS. The overall reliability of the scale has been estimated at .96 for the 32 items whilst the reliability of the subscales ranges from .73 to .94 (Spanier, 2001).

Data analysis

Results were analyzed using the Statistical Package for Social Science (SPSS, Version 19.0). We decided to use primarily non-parametric tests which are appropriate for variables of this type because they do not require that the sample is drawn from a normally distributed population (Siegel & Castellan, 1988). The *Mann Whitney U* test was used for two-sample comparisons of ordinal variables, while the *Kruskal-Wallis* test was used for comparison of more than two samples. The *Fisher's* (extended) exact test and the *Chi Square* exact test were used for group comparison of categorical variables. The significance level for all analyses was $p < .05$. To overcome the problem of dependence between observations of the members of a couple each analysis was performed separately for men and women.

Results

Table 1 shows the distribution of attachment classifications derived from the AAI (F/A, Ds, E and U/CC), CRI (S, D, P, and U) and ECR-R (S, D, A, and F) and dyadic adjustment assessed by the DAS (high/low adjustment) in the seeking-to-adopt group and the control group. As only one participant was classified as CC on the AAI this category was merged with the U category to give a single U/CC group, as suggested by Bakermans-Kranenburg and Van Ijzendoorn (2009). In some analyses the number of participants was less than the total sample size ($N = 156$) because some interviews and questionnaires could not be coded for technical reasons (e.g. problems with the audio-recording, missing self-reports, etc).

[Table 1 around here]

Analysis of AAI, CRI, ECR-R, and DAS (high/low adjustment) scores did not reveal any significant associations with age or educational level in either men or women (p -value between .06 and .99, see Table 2).

[Table 2 around here]

Furthermore, a possible relationship between attachment type - measured through AAI and CRI - and couple relationship quality – measured through the five scales of DAS - have been tested. The results of Kruskal-Wallis used within the two groups, and by gender, indicate no relationships among these variables

Categories. Although slightly more seeking-to-adopt couples (57.1%, see Table 1) than controls (47.4%) had secure generalized attachment states of mind, group comparison did not show a statistically significant difference between the two groups in men (*Exact* $\chi^2 = 6.25, p = .10, ns$) or women (*Exact* $\chi^2 = .61, p = .90, ns$).

Scales. Seeking-to-adopt mothers had significantly lower scores on the Idealization of Father, Anger Towards Mother, and Overall Derogation and Irresolution of Loss scales of the AAI (Table 3) than non-adoptive mothers. Seeking-to-adopt fathers had significantly lower scores on the Idealization of Mother, Idealization of Father and Lack of Memory scales of the AAI and higher Meta-cognitive Monitoring scores than the control group.

[Table 3 around here]

Categories. Seeking-to-adopt fathers were more likely to have a secure specific attachment states of mind with respect to their partner than the control fathers (*Exact* $\chi^2 = 10.97 p < .01$), but this result was not found in women (*Exact* $\chi^2 = 3.85. p = .18$).

Scales. Seeking-to-adopt mothers had significantly higher scores on the Valuing Intimacy, Valuing Independence, Anger Towards Others and Passivity scales of the CRI and were more likely to be categorized as Unresolved with respect to Previous Romantic Relationships than control mothers (Table 3). Similar results were found

in men, although there was no difference between seeking-to-adopt and control fathers in Anger Towards Others score (Table 3).

Categories. The overwhelming majority of couples seeking to adopt (98.5%) showed a secure attachment style, compared to only 55.1% of the control group (Table 1). This difference was confirmed statistically by independent comparisons for men (Exact $\chi^2 = 17.864$, $p < .001$) and women (Exact $\chi^2 = 19.270$, $p < .001$).

Dimensions. Seeking-to-adopt mothers and fathers had significantly lower scores on the Anxiety and Avoidance dimensions than controls (Table 4).

[Table 4 around here]

Categories. Astonishingly, all the couples in pre-adoption assessment were classified as having high dyadic adjustment, whereas 59% of control couples fell into this category (Table 1). This difference was confirmed in independent statistical comparisons of men (*Fisher* exact test, $p < .001$) and women (*Fisher* exact test, $p < .001$).

Dimensions. Couples seeking to adopt had significantly higher scores on all subscales of the DAS (DS, DCon, DCoh and AE) and higher overall dyadic adjustment scores (Table 4) than controls.

Discussion

Our data showed significant differences between two types of families (seeking to adopt/childless parents and non-adoptive/biological parents) matched on a range of socio-demographic variables (age, educational level and length of cohabitation) in terms of attachment states of mind with respect to caregivers (AAI), partners (CRI), feelings and thoughts about intimate relationships (ECR-R) and dyadic adjustment (DAS).

First, we examined the generalized attachment states of mind (AAI) of the two groups and our results did not reveal a significant difference between them in terms of four-way AAI classification. Our data did not reveal a significant difference between them in terms of four-way AAI classification. The distribution of categories in our sample of parents seeking to adopt was overlapping to those considered in Bakermans-Kranenburg and Ijzendoorn's meta-analysis (2009, mothers: 56% F/A, 16% Ds, 9% E and 18% U/CC; fathers: 50% F/A, 24% Ds, 11% E and 15% U/CC), suggesting that potential adopters show patterns of generalized attachment similar to the non-clinical samples (Cavanna et al., 2011; Salcuni, Ceccato, Di Riso, & Lis, 2006). However there were significant group differences in scores on the AAI scales. More specifically, both partners in seeking to adopt couples had lower scores in all the scales associated with a dismissing pattern (Idealization, Derogation, and Lack of Memory) and higher Metacognitive

Monitoring scores. We propose two following possible explanations of these results. Firstly, parents seeking to adopt have often to overcome many obstacles (e.g. infertility, selection process, etc) before they are able to adopt a child. Therefore, to negotiate this complex adoption process and become parents they need to have a strong investment in parenthood and place a high value on intimate, affectionate relationships, which is opposite to the dismissing traits. The second explanation, which is not mutually exclusive of the first, is that parents seeking to adopt are more likely to reflect and analyze their own attachment relationship histories, partly because of the complexity of the parental pathway they are following, which includes meetings with specialist social workers and often requires considerable mentalization skills. Nevertheless, the prevalence of a state of mind which are less prone to idealization, derogation, and denial (lack of memory) in potential adopters is likely to be helpful, because of the impact that the ability to provide coherent and believable attachment narratives has on the probability that adopted children will revise their insecure IWMs after placement (Pace et al., 2012; Steele et al., 2008). Indeed, seeking to adopt couples would expect to face children who had been considerably harmed in their IWMs as a consequence of their adverse pre-adoption attachment experiences (Pace et al., 2013). Adopted children would act out their insecure and/or disorganized patterns in the new adoptive families, often showing highly challenging, rejecting, and demanding attachment behaviours (Steele et al., 2010). On one hand, having one or more parents with secure AAI was associated with a significantly lower insecurity of children (Pace et al., 2012; Steele et al., 2008) and was protective against their attachment disorganization (Barone & Lionetti, 2012). On the other hand, having an adoptive parent with insecure or unresolved AAI seems to elicit aggression, bizarre themes, role-reversal, and caregivers' representations as unreliable and unpredictable in their adopted children (Steele et al., 2003; Steele et al., 2008). Therefore, the assessment of generalized attachment states of mind of couples, at the beginning of the adoption process, could help the social workers to capture specific attachment-related issues - such as a past and unintegrated loss, or a discrepancy between semantic vs episodic memory with respect to the caregiver - that could deserve exploration and elaboration during the pre-adoption assessment in order to improve the earned-security of parents, together with their ability to reflect on their past experiences.

Second, with respect to specific attachment states of mind, we found that secure CRI attachment states of mind were more prevalent in seeking-to-adopt fathers than in the control group, suggesting that they have an attachment representation of their couple relationship which is characterized by coherence, openness, objectivity and value for the affective bond. This may be because couples seeking to adopt need to overcome their failure to procreate and be open to the concept of adoptive parenthood. The ability of the male partner to understand and value 'secure bases' and perceive adult relationships as a possible source of support, intimacy and personal growth (Glover, McLellan, & Weaver, 2009; Lowe Lustig, 2010) may represent a facilitating factor in this process and also a buffer against partner's insecurity of attachment (Cowan & Cowan, 2000) with respect to the developmental outcomes of the future relationship with the

child. People seeking to adopt had higher scores on the Valuing Intimacy and Valuing Independence CRI scales, which are markers of secure attachment, but they also had higher scores for Passivity and Lack of Resolution in previous romantic relationships, although none received unresolved CRI classification. These results which are currently difficult to interpret, warrant further investigation. Anyway, the high presence of couples with secure attachment states of mind, both specific and generalized (58%), among potential adopters can be considered as a protective factor in the adoption. Indeed, the concordance of secure AAI/CRI has been associated both with good skills to regulate negative emotions in biological mothers (Behringer et al., 2011), and with the partners' abilities to maintain positive feelings and behaviours about their couple's relationship in both low and high stress conditions (Trebooux, 2004), which are likely to be present during the placement of a child through adoption. However, the presence of insecure generalized and/or specific attachment states of mind among couples seeking to adopt (42%), could be a risk factor that may adversely affect the wellbeing of both the children, and the marital relationship (Cowan et al. 2009, Crowell et al., 2009), and deserves to be carefully considered by the adoption social workers during the assessment phase.

Third, in terms of positive feelings and thoughts within the couple relationship (ECR), our results showed that couples seeking to adopt had more secure attachment styles and less anxiety and avoidance than the control group. The low levels of anxiety and avoidance - which characterize the secure attachment style - show that the partners in the experimental sample are characterized by self-confidence and confidence in the dyadic relationship. These subjects do not feel uncomfortable with respect to the feelings of dependence and do not fear closeness or abandonment by their partners because they have high expectations of the relationship. They rarely resort to avoidant behaviors since they know the importance of independence but, at the same time, they are able to enhance intimacy. Couples with a secure style are able to offer mutual support and proximity, tend to deal with conflicts in a cooperative manner and report high levels of satisfaction within the relationship (Santona & Zavattini, 2005). This suggests that people seeking to adopt are at ease with intimacy and value emotional proximity, belonging and affective sharing. The dimension of intimacy seems to be invested of positive meanings for personal wellbeing, whilst the personal experiences are not characterized by fear of abandonment (Santona & Zavattini, 2005). Positive feeling prevails in the couple relationships of couples seeking to adopt, along with a strong investment in the relationship, which represents a place of comfort and a source of wellbeing, despite the wound that infertility has inflicted on their reproductive project (Gibbson & Brown, 2012; Noy-Sharav, 2000).

Finally regarding the marital quality (DAS), we found that couples seeking to adopt had higher overall DAS scores and higher scores on the subscales of the DAS (DS, DCoh, DCon and AE) (Mooradian et al., 2011) than biological parents. As widely confirmed in the literature, having children - as does our control group - would reduce marital quality, even if many studies focused on the first period after the child's birth, to a maximum of 18 months

(Castellano et al., 2012). However, further research (Mitnick, Heyman, & Smith Slep, 2009) pointed out that dyadic adjustment would suffer fluctuations in the different phases of the couple's life cycle, tending to decrease at times of transition (e.g. the beginning of the marriage, child's birth, etc.), but to stabilize at other times (e.g. after three years of marriage, etc.). The choice of a control group with school-age children and a long stable relationship was made in order to capture a phase of a couple's life cycle less susceptible to these fluctuations in marital quality. Therefore the higher dyadic adjustment scores of couples seeking to adopt suggest that the partners have reached a good balance between stability and flexibility in negotiating possible life changes, in mutual ordinary attempt to manage differences within the couple, individual anxiety and worries, feelings of satisfaction, and cohesion and agreement on important problems related to the couple's life (Spanier, 1979, 2001). These skills –useful in coping with the crisis of infertility and in making a success of adoptive parenthood - suggest that couples seeking to adopt benefit from personal resources such as the ability to communicate and share, a positive self-concept and a good level of reciprocal knowledge, which are related to high dyadic satisfaction. Our results seem to be in line with the existing literature on the marital quality of adoptive parents after adoption (Leve et al., 2001; Ceballo et al., 2004), confirming the higher levels of dyadic adjustment of couples also during the pre-adoption phase. In conclusion, couples seeking to adopt seemed to show a 'medium to high' state of mind with respect to attachment to caregivers (AAI), and a 'very high' profile in couple relationships, both at the semi-conscious level, (CRI) and on the more explicit and conscious level (ECR-R and DAS). This very positive picture of potential adoptive couples' unity and cohesion - relationship qualities which may be necessary to cope with the emotional crisis of infertility - may constitute a protective factor when it comes to adoptive parenthood, although social workers and psychologists in the adoption field should consider also potential risks. It is possible that scores on the couple relationships dimensions may reflect a degree of idealization; the very high scores of potential adopters on self-report questionnaires such as ECR-R and DAS support this interpretation. This idealization of the couple relationship may decrease dramatically during the stressful transition from 'couple' to 'family with children' following a strongly desired and much anticipated child placement. This work has important limitations. Firstly, we have not tested the associations between the variables assessed by the AAI, CRI, ECR-R and DAS at the pre-adoption stage and the couples' relationship with their adopted children, although we have not ruled out the possibility of longitudinal follow-up. The lack of analysis of couple agreement on the reported assessments (AAI, CRI, DAS, and ECR-R) and the dependence of members of a couple's responses are further limitations. Moreover, there were no video-recorded observations to complement the narrative interview data and self-report measures; this would have provided further insight into the interactions within the couple and partners' individual characteristics (e.g. generalized and specific attachment states of mind). Finally, a major limitation of this study was the

difficulty in choosing a unique and really comparable control group that differed exclusively for the study object variable (transition to adoptive vs biological parenthood), keeping the other variables matched (age, socioeconomic level, motivation towards parenting, etc). As explained above, in this study we selected a control group of couples with school-age children matched on socio-demographic variables (age, nationality, socio-economic status, length of cohabitation, education level). However, further studies with couples seeking to adopt should involve three more control groups: 1) couples in transition to biological parenthood (who cannot be matched on age and length of cohabitation with couples seeking to adopt), 2) couples matched on socio-demographic variables who are not infertile but do not want to have children (child free); 3) couples matched on socio-demographic variables who are infertile but do not want to adopt (childless).

In summary, the main objective of this study was to compare seeking-to-adopt and non-adoptive couples to produce a profile of potential adoptive parents. Nevertheless, in further investigations it would also be interesting to explore possible differences in the attachment states of mind of infertile couples seeking to adopt and infertile couples who do not attempt to adopt.

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Table 1

Distributions of the categories of AAI, CRI, ECR-R, and DAS in the two groups

		Seeking-to-adopt group					Control group				
		Free/Auton.	Dismissing	Entangled	U/ CC	Tot.	Free/Auton.	Dismissing	Entangled	U/CC	Tot.
AAI	Men	21 (53.8%)	9 (23.1%)	3 (7.7%)	6 (15.4%)	39	16 (41%)	19 (48.7%)	1 (2.6%)	3 (7.7%)	39
	Women	23 (60.5%)	8 (20.5%)	2 (5.3%)	5 (13.2%)	38	21 (53.8%)	(20.5%)	3 (7.7%)	7 (17.9%)	39
	Total	44 (57.1%)	17 (22.1%)	5 (6.5%)	11 (14.3%)	77	37 (47.4%)	27 (34.6%)	4 (5.1%)	10 (12.8%)	78
		Secure	Dismissing	Preoccupied	Unresolved	Tot.	Secure	Dismissing	Preoccupied	Unresolved	Tot.
CRI	Men	30 (83.3%)	1 (2.8%)	5 (13.9%)	0	36	25 (64.1%)	11 (28.2%)	2 (5.1%)	1 (2.6%)	39
	Women	31 (83.8%)	2 (5.4%)	4 (10.8%)	0	37	28 (71.8%)	8 (20.5%)	3 (7.7%)	0	39
	Total	61 (78.2%)	3 (3.8%)	9 (11.5%)	0	73	53 (67.9%)	19 (24.4%)	5 (6.4%)	1 (1.3%)	78
		Secure	Avoidant	Anxious	Fearful	Tot.	Secure	Avoidant	Anxious	Fearful	Tot.
ECR-R	Men	34 (100%)	0	0	0	34	23 (59%)	14 (35.9%)	0	2 (5.1%)	39
	Women	33 (97.1%)	1 (2.9%)	0	0	34	20 (51.3%)	11 (28.2%)	1 (2.6%)	7 (17.9%)	39
	Total	67 (98.5%)	1 (1.5)	0	0	68	43 (55.1%)	25 (32.1%)	1 (1.5%)	9 (11.5%)	78
		Low Adjustment		High Adjustment		Tot.	Low Adjustment		High Adjustment		Tot.
DAS	Men	0		34 (100%)		34	17 (43.6%)		22 (56.4%)		39
	Women	0		34 (100%)		34	15 (38.5%)		24 (61.5%)		39
	Total	0		68 (100%)		68	32 (41%)		46 (59%)		78

Table 2

Classifications and demographic variables

Demographic variables	Gender	ECR-R			
		AAI	CRI	Sec., Anx., Avoid., Fearful	DAS
		F/A, Ds, E, U/CC	S, D, P, U		high/low adjustment
<i>Age</i>	M	Kruskal-Wallis $\chi^2=3.127$, df=3, $p=.372$	Kruskal-Wallis $\chi^2=3.474$, df=3, $p=.324$	Kruskal-Wallis $\chi^2=1.403$, df=2, $p=.496$	U-Mann Whitney=303.000, $p=.058$
	F	Kruskal-Wallis $\chi^2=.135$, df=3, $p=.987$	Kruskal-Wallis $\chi^2=1.014$, df=2, $p=.602$	Kruskal-Wallis $\chi^2=5.194$, df=3, $p=.158$	U-Mann Whitney=358.500, $p=.295$
<i>Educational level</i>	M	χ^2 exact =10.630, $p=.298$	χ^2 exact = 5.250, $p=.802$	χ^2 exact =4.897, $p=.498$	χ^2 exact =3.950, $p=.285$
	F	χ^2 exact =11.033, $p=.263$	χ^2 exact = 13.129, $p=.067$	χ^2 exact =11.810, $p=.248$	χ^2 exact =.599, $p=.886$

Table 3

CRI scales of states of mind												
Valuing of intimacy	6.50	1.04	6.55	1.10	4.65	1.54	4.72	1.87	241.500	<0.001	293.000	<0.001
Valuing of independence	4.51	0.75	4.36	0.77	3.70	1.22	3.72	1.40	377.000	<0.001	470.500	0.014
Anger partner	1.22	0.64	1.49	1.09	1.35	0.80	1.36	0.54	654.500	0.230	668.000	0.246
Anger other	1.22	0.63	1.49	0.99	1.22	0.66	1.06	0.29	694.500	0.452	578.500	0.005
Derogation partner	1.14	0.33	1.24	0.55	1.21	0.51	1.12	0.39	699.000	0.446	640.000	0.107
Derogation attachment	1.17	0.61	1.05	0.23	1.04	0.18	1.00	0.00	677.000	0.216	665.000	0.240
Idealization partner/ relationship	2.99	1.07	2.86	1.31	3.05	1.39	3.14	1.45	692.000	0.458	589.000	0.150

Passivity 2.61 1.38 2.38 1.05 1.96 1.46 1.96 1.45 418.500 <0.001 485.500 0.006
Descriptive statistics of the study's variables on AAI and CRI scales

AAI scales of states of mind	Seeking-to-adopt group				Control group				Statistical test			
	Men		Women		Men		Women		Men		Women	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	U-Mann Whitney	<i>p</i>	U-Mann Whitney	<i>p</i>
Idealization M	2.82	2.07	2.43	1.83	4.13	2.15	2.81	1.92	473.000	0.003	610.500	0.086
Idealization F	2.39	1.81	2.41	1.95	3.59	2.07	3.04	1.76	493.000	0.003	545.500	0.020
Anger M	1.05	0.22	1.10	0.51	1.37	1.18	1.22	0.47	699.000	0.085	631.500	0.042
Anger F	1.19	0.60	1.03	0.16	1.19	0.78	1.21	0.82	740.500	0.370	666.000	0.091
Derogation M	1	0	1.01	0.08	1.08	0.24	1.04	0.18	682.500	0.058	722.000	0.382
Derogation F	1.24	1.06	1	0	1.27	0.91	1.36	1.09	725.000	0.337	665.000	0.061
Derogation General	1.12	0.72	1.01	0.08	1.37	1.01	1.46	1.19	665.500	0.054	624.500	0.010
Lack of Memory	1.92	1.41	1.95	1.74	2.74	1.98	2.71	1.92	517.500	0.005	523.500	0.007
Meta-cognitive monitoring	1.15	0.43	1.13	0.41	1.00	0.00	1.04	0.18	663.000	0.027	698.500	0.156
Passivity	2.69	1.75	2.55	1.69	2.12	1.31	2.99	1.77	623.500	0.081	619.000	0.103
Fear of Loss	1	0	1	0	1.05	0.32	1.23	0.76	380.000	0.661	304.000	0.264
Unresolved Loss	2.26	2.06	2.37	1.95	2.23	1.53	2.88	1.93	584.500	0.091	572.500	0.037
Unresolved Trauma	1.35	1.22	1.37	1.17	2.16	2.02	1.63	1.19	69.000	0.148	53.000	0.324
Coherence of transcript	4.86	1.65	5.22	1.76	4.97	1.49	5.00	1.40	734.000	0.396	662.500	0.211
Coherence of mind	4.63	1.69	5.12	1.88	4.87	1.55	4.88	1.44	688.500	0.236	656.500	0.194
Fear of Loss	1.06	0.33	1.00	0.00	1.01	0.08	1.12	0.51	700.000	0.480	666.000	0.130
Unresolved Trauma	1.92	0.28	1.95	0.23	1.17	0.82	1.11	0.39	111.000	<0.001	111.000	<0.001
Coherence of transcript	5.53	1.02	5.78	1.18	5.28	1.22	5.45	1.37	571.000	0.206	633.500	0.179

Table 4

Descriptive statistics of the study's variables on the ECR-R and DAS scales

	Seeking-to-adopt group				Control group				Statistical test			
	Men		Women		Men		Women		Men		Women	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	U-Mann Whitney	<i>p</i>	U-Mann Whitney	<i>p</i>
ECR-R scales												
Anxiety	37.19	9.55	36.01	8.13	49.23	11.47	53.50	18.90	276.000	<0.001	243.000	<0.001
Avoidance	33.49	7.21	35.58	7.85	48.77	14.29	49.43	12.84	232.500	<0.001	254.000	<0.000
DAS scales												
Satisfaction	43.12	1.48	43.36	1.93	31.44	4.49	31.31	4.03	0.000	<0.001	2.000	<0.001
Cohesion	23.67	3.55	23.82	3.56	15.74	4.38	16.31	3.03	101.000	<0.001	81.500	<0.001
Consensus	63.69	4.73	63.88	5.01	49.65	9.22	51.37	7.43	96.000	<0.001	99.000	<0.001
Affectional Expression	15.18	1.29	15.26	1.08	9.46	2.16	8.94	2.55	13.000	<0.001	3.000	<0.001
Global DAS	145.66	8.69	146.33	8.90	106.29	17.43	107.93	13.13	12.000	<0.001	8.000	<0.001