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Comparison of Adoptees' and Nonadoptees' Experience of Parenthood and Mediating Role of Dyadic Coping

Johanna DESPAX[1*], Evelyne BOUTEYRE[1], Théo GUILLER[2]

[1] EA 3278, Laboratory LPCPP, Aix-Marseille Univ., 13331 Aix-en-Provence, France

[2] EA 3273, Center for Research on the Psychology of Cognition, Language and Emotion (PSYCLE), Aix Marseille Univ., 13331, Aix-en-Provence, France

*Corresponding author: johannadespax@gmail.com

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Corresponding author's contact: johannadespax@gmail.com

Abstract

As most adoption studies have focused on adopted children and their vulnerability, with scant research on adult adoptees' outcomes, the aim of the present study was to compare adult adoptees and nonadoptees on their experiences as parents and to explore more deeply the question of the role among adoptees of the conjugal relationship in the context of parenthood. A total of 268 adoptees matched one to one with 268 nonadoptees responded to several standardized scales (attachment, mental health, resilience, motivations for parenthood, parental stress, dyadic coping, and coparenting). The groups did not differ on the experience of parenthood, thus contradicting most previous studies. They did, however, differ on attachment, mental health and dyadic coping, with adoptees achieving lower scores. Only in the case of adoptees was dyadic coping found to have a mediating role on the relations between psychological characteristics and parental stress. Thanks to our efforts to make our samples as representative as possible, this study sheds new light on adoptees' experience of parenthood, especially after the birth of their first child. Moreover, it presents adoptees from the perspective of resilience and offers new insights into their functioning as parents. It opens up both theoretical and clinical perspectives.

Keywords: adoption, adult, parenthood, dyadic coping, resilience, attachment, mental health.

Introduction

Most of the existing work on adopted adults presents them as a population at risk. For example, they would be more at risk in terms of mental health (Dekker et al., 2017), attachment (Borders Penny, & Portnoy, 2000), and would present difficulties in the context of their conjugal relationships (Feeney, Passmore, & Peterson, 2007). These risk factors could lead them becoming more vulnerable in contexts of stress, such as in the context of parenthood. Indeed, the biopsychosocial model of parental stress (Roskam & Mikolajczak, 2015) shows that special attention must be paid to parents who combine risk factors. However, little work has been done to date on adoptees' parenthood. The existing work presents significant methodological biases (few participants, absence of control group, interest only in the prenatal phase, etc.). The purpose of this study is therefore to explore more deeply the subject of adoptees' parenthood by comparing adoptees to nonadoptees on different scales measuring mental health, attachment, resilience, parental stress, motivation to have children, coparenting and dyadic coping. The role of adoptees' conjugal relationship in the context of parenthood will also be analyzed by testing the mediating role of dyadic coping.

Adopted adults' outcomes

Adoption can be viewed as a *lifelong process* (Brodzinsky, Schechter, & Henig, 1993), for when adoptees become adults, they go through stages of life that resonate with their story. Research on adopted adults has primarily concerned pathological disorders. For example, results indicate that adoptees have poorer mental health (Brown, Waters, & Shelton, 2019; Dekker et al., 2017; Westermeyer, Yoon, & Kuskowski, 2015) and more insecure attachment (Borders et al, 2000; Feeney, Passmore, & Peterson, 2007; Paperny, 2003) than the general population, reinforcing the image of a *population at risk* and justifying further investigation of adoptees' outcomes. However, as pointed out in the literature review by Palacios and

Brodzinsky (2010), recent studies have also highlighted adoptees' resilience and protective factors, thereby nuancing the deficit-centered approach on this population. Some studies show for example a lack of difference in life satisfaction (Ter Meulen, Smeets, & Juffer, 2019), perceived physical health and mental health (Sánchez-Sandoval, Melero, & Jiménez-Luque, 2019) or an absence of difference in psychological adjustment between adoptees and nonadoptees (Del Pozo de Bolger, Dunstan, & Kaltner, 2018). It suggests that the adoption can have some benefits and some risks on the developmental trajectory of the individual. There has been scant research on the relational outcomes of adults who were adopted as children. Studies indicate that adoptees experience less marital happiness than the general population (Feigelman, 1997), as well as more major relationship difficulties, expressed as a fear of abandonment, difficulty trusting people, a feeling of not being worthy of love, a need for control, and so on (Field & Pond, 2018; Verzuli, 2000). Adoptees are half as likely as nonadoptees to forge intimate relationships, live with a partner, and marry (Tieman, van der Ende, & Verhulst, 2006). We also know that the main predictive factor for adoptees' experience of romantic relationships is attachment and that adoptees are more sensitive to relational stressors in their couples than nonadoptees (Feeney et al., 2007). However, a recent meta-analysis has shown that adoptees were similar to nonadoptees for dyadic adjustment and commitment (Deluca Bishop, Claxton, & van Dulmen, 2019). Whether on an individual or on a relationship level, studies regarding adopted adults are quite contradictory. According to Palacios et al. (2019), although adoptees would present on average more psychological difficulties, there would be considerable heterogeneity within this population which could be due to the large number of mediating variables such as the age of placement, or the relationships to adoptive families (Melero & Sanchez-Sandoval, 2017). This could explain the great variability of the results obtained from this population.

Individual and Dyadic Adjustment to Parenthood

In the logical sequence of conjugal life, the transition to parenthood is a major step in the life of any adult. For many authors, parenting is a public health issue, as difficulties related to parenting may have many negative consequences for children. Parenting is also a challenge for parents in terms of adjustment. For Roskam and Mikolajczak (2015), the stress associated with parenthood is multi-factorial and multi-determined. The biopsychosocial model of parental stress developed by these authors (2015) identifies variables related to parents' psychological (personality, mental health, coping and resilience[1], etc.) biological (physical health, genetic, etc.), social (family support), sociodemographic (age, gender, educational level, etc.) and cultural characteristics as determinants. Special attention must be paid to parents who have several risk factors. Adoptees' vulnerability in terms of mental health could lead them to be more vulnerable to parental stress than the general population.

Adjustment to parenthood also concerns the parental dyad. If becoming a parent is a crisis at the individual level for each parent, it is also a crisis for the couple (Romito, 1990). Regarding the couple, issues of parenthood can be understood in the light of three concepts: marital satisfaction, dyadic coping, and coparenting. When they become parents, spouses generally experience a decline in marital satisfaction (Doss, Rhoades, Stanley, & Markman, 2009;). Joint parental stress management relies on dyadic coping skills. The concept of dyadic coping has been widely developed since the 1990s. The systemic approach of dyadic coping is particularly studied by Bodenmann (1995), who describes this concept as all strategies or actions taken by one or both partners when coping with stress. It can be done through communication or behavioral response in order to maintain or balance the relationship (Razak, Hoesni, Zakaria, Ismail, 2015). According to the systemic approach of dyadic coping,

[1] There are many definitions of resilience (capacity, functioning, balance, or personality trait), but it can be defined as the ability to maintain normal psychological and physiological functioning despite exposure to stress and adversity (Elbau, Cruceanu, & Binder, 2019).

stress among couples will affect both partners either directly or indirectly and on couple level (Randall & Bodenmann, 2009). There would consequently be interdependence in the dyadic management of stress (Bodenmann, Meuwly, & Kayser, 2011; Razak, Hoesni, Zakaria, Ismail, 2015). On the other hand, there exist different types of dyadic coping. Some types are described as "positive", others as "negative", depending on their effectiveness and their consequences on the couple relationship (Razak, Hoesni, Zakaria, Ismail, 2015). Finally, dyadic coping is a particularly important variable in predicting the functioning of the couple. Indeed, numerous studies have shown its influence on marital satisfaction, on the persistence of the relationship, or even on the well-being or mental health of each partner (Bodenmann, Meuwly, & Kayser, 2011). One last concept is particularly enlightening when it comes to describing the sharing of the task of being a parent: coparenting. According to Feinberg (2002, p. 173), *coparenting* refers to "the ways that parents work together in their roles as parents (…): support versus undermining in the coparental role; differences on childrearing issues and values; division of parental labour; and management of family interactions, including exposure of children to interparental conflict". Many studies emphasize the importance of prevention and interventions centered on coparenting in the period around the birth of the child (Bouchard, 2014; Feinberg, 2002). They highlight factors (e.g., parental attachment security) that predict coparenting quality (Bouchard, 2014). Studies looking at adoptees' conjugal relations have underlined their peculiarities and difficulties. Thus, whether it is on the individual or dyadic level, the parenthood stage may be particularly challenging for adoptees, whose psychological and dyadic adjustment is often described as being more fragile than that of the general population.

Adoptees' Parenthood

To our knowledge, little work has been done on the subject of adoptees' parenthood. In two systematic reviews of the literature on this topic (Despax & Bouteyre, 2019; Field & Pond, 2018), each including 10 studies, the results are divided into four main themes. The first is the reactivation of the adoptee's history in the context of parenthood. Several authors have stressed that becoming a parent can remind adoptees of their early experiences (Brodzinsky, Schechter, & Henig, 1993; Gatzke, 2015; Hampton, 1997; Pérez, Sala, & Ortega, 2016). This resurgence of the past can be painful in the absence of answers to emerging questions. Pinkerton (2010) considers that information about their adoption pathway can constitute an important resource for adoptees, who can use it to make sense of their transition to parenthood. Lastly, Greco, Rosnati, and Ferrari (2015) have shown that the vision of adoptees' spouses of the adoption history influences the relationship that adoptees have with their own story.

The second theme identified in the literature is the specificity of certain parenthood issues. Although adoptees share most of the issues of parenting with nonadoptees, some are specific to them. For example, a particularity of adoptees in relation to parenthood is the exacerbated importance of the biological link (Brodzinsky, Schechter, & Henig, 1993; Horowitz, 2011; Jordan & Dempsey, 2013; Moyer & Juang, 2011; Pinkerton, 2010; Sherr, Roberts, & Croome, 2018). Adoptees yearn to have *same blood* offspring or children who bear a physical resemblance to them. Some traits that are also present in the general population are amplified among adoptees, including the fear of transmission, the fear of abandoning their own child (Hampton, 1997), and difficulty identifying with the parental model provided by adoptive parents (Brodzinsky, Schechter, & Henig, 1993; Horowitz, 2011; Moyer & Juang, 2011; Pierron, 2017). These more marked traits in adoptees would lead them to have less of a desire for children than nonadoptees (Horowitz, 2011), to conceive their first

child at a later age (Collishaw, Maughan, & Pickles, 1998), or even to give up the idea of becoming a parent altogether (Sherr, Roberts, & Croome, 2018). However, most of these studies presented their results as a series of problems encountered by adoptees when they access parenthood. Somehow, the methods they used did not allow the authors to affirm that the problems they identified were specific to this population. The almost systematic absence of a control group was an important bias that hindered the generalization of some results. Finally, the issue of transmission to children has also been studied in 51 transracial adoptees from South Korea (Zhou, Kim, Lee, & Lee, 2020). Three different forms of transmission have been identified by these authors. First, ethnic socialization: Adopted parents would try to pass on part of their (Korean) culture of origin to their children but would not always feel legitimate or authentic about doing so. They would thereby discover the culture of their country of origin at the same time as their children. The second type of transmission is racial socialization. Adopted parents would feel the urge to prepare their children for racism and would discuss discrimination issues more than their adoptive parents had with them. Finally, adoption socialization describes the need for adoptees to talk about their adoption pathway with their children. Most of the participants said that this form of transmission was important to them, and that they wanted to have more talks about it with their children than their adoptive parents had with them.

The third theme emanating from existing studies is that of a change in relationships with parents (biological and adoptive) in the context of parenthood. Regarding relationships with biological parents, existing research highlights an emotional ambivalence (empathy, gratitude, or anger) that frequently leads to a search for origins when the adoptee becomes a parent (Pinkerton, 2010; Sherr, Roberts, & Croome, 2018). The ensuing reunion can then lead to the emergence of a second model of identification on which adoptees construct their parenthood (Gatzke, 2015). Regarding relations with adoptive parents, having a biological

connection with someone may diminish adoptees' sense of belonging to their adoptive family, and thus fuel a conflict of loyalty (Brodzinsky, Schechter, & Henig, 1993).

The fourth and final theme is that of parenthood as a potential source of resilience. The few studies to have dealt with this aspect (Gatzke 2015; Hampton 1997; Jordan & Dempsey 2013; Pinkerton 2010; Pierron 2017) show that becoming a parent can promote a kind of *healing* or *rebirth*. For these authors, it can be understood as a repair process allowing adoptees to revisit their story. It is an opportunity to give meaning to conflicts that have hitherto remained unresolved. This can be explained by the creation of a biological connection, the strengthened sense of belonging, and the nascent identity of parent.

Although few in number, the studies published so far capture various aspects of adoptees' experience of parenthood. However, they have several important limitations. First, at a methodological level, the majority of these studies relied on qualitative methods, such as the thematic analysis of semi structured interviews. Because they involved very small numbers of participants, the results of these studies could not be generalized. Moreover, as the two systematic reviews (Despax & Bouteyre, 2019; Field & Pond, 2018) point out, the samples were not representative (sex ratio, ethnic origin of adoptees, recruitment solely through nonprofit organizations, or no control group). The participants encountered in these studies were almost exclusively adopted in North America, constituting an important cultural bias and making it difficult to generalize the results to adoptees in Europe, where adoption practices are very different. In France, the law of adoption is stricter than in the United States in order to ensure maximum protection for the adopted child. By being adopted through full adoption in France, the child acquires the same rights as a biological child. Another significant difference to the United States is that French laws require the adoptive parents to be followed frequently by diverse health professionals. The background check on the adoptive parents is also systematic. We believe that these cultural differences could be protective

factors for adopted children in France. Differences could therefore be observed between studies conducted in the United States and France or Europe in general. Most of the authors concerned, aware of these limitations, encouraged more in-depth and methodologically sound research on this subject, which has important theoretical and clinical implications.

The current study

Objective 1: Compare adoptees with nonadoptees in respect of their experience of parenthood (motivation to have a child, parental stress, coparenting). We hypothesize that they will show less motivation to have a child, more parental stress and lower scores for coparenting than nonadoptees. We will also compare adoptees with nonadoptees on their psychological characteristics (attachment, mental health and resilience), and on their relational characteristics (dyadic coping). On the basis of previous research, we hypothesize that adoptees will score lower for all the psychological characteristics and for dyadic coping. Our objective is to determine whether or not the differences we presume to find for the psychological and relational variables can also be found for the variables related to the experience of parenthood.

Objective 2: On the one hand, we know from the biopsychosocial model of parental stress (Roskam & Mikolajczak, 2015) that attachment, mental health, resilience and dyadic coping determine parental stress in the general population. On the other hand, we know from Feeney et al. (2007) that adoptees are more sensitive to relational stressors from their current romantic relationships than nonadoptees. This poorer joint management of stress could affect their ability to manage stress related to parenthood. Our objective is therefore to determine whether the risk and protective factors usually acting on parental stress (attachment, mental health, resilience) exert their effect by passing through dyadic coping in a similar way for both groups. In view of the above cited literature, we hypothesize a mediating effect of dyadic coping on the link maintained between the psychological characteristics of adoptees and their

parental stress. We believe that this effect will be observed only in adoptees and not among nonadoptees.

Method

Participants

Two groups of participants were recruited: adoptees (n = 268, mean age = 38.14 years, SD = 10.50) and nonadoptees (n = 268, mean age = 37.57 years, SD = 10.44). Each group was constituted of 230 women and 38 men. This study was conducted in France and all participants were French speakers. Participants received no financial compensation for their participation. Power analysis was performed to determine the appropriate number of participants, using the pwr package of R software (R Core Team, 2017). More specifically, when we set the expected effect size to a low-to-moderate level (d = 0.40), with power at 0.80 and the statistical significance threshold at 0.05, the corresponding number of participants was 198. Accordingly, a total of 198 participants (99 per group) was required. Our sample was therefore satisfactory (268 participants in each group: in each one 153 parents, of whom 128 were raising their children with a partner - not necessarily the father/mother of their child).

Adoptees were matched one to one with nonadoptees, to ensure that differences between the two groups were not determined by sample heterogeneity. Participants were matched on the following criteria: sex, age (matched as closely as possible), marital status (cohabitee, spouse, single, civil partner, widow(er), or divorcee), parental status (parent or not), education level, and employment status (not in employment, in employment, student, jobseeker, or retired). The initial adoptee group was made up of 283 respondents, but as adoptees were removed from the dataset when no satisfactory match could be found (above criteria not met), the final groups each comprised 268 adoptees. All parents were biological parents. Thanks to our large sample and to the matching, we avoided the three biases that are frequently encountered in adoption studies, and which were identified by Hodges, Steele,

Hillman, Handerson, and Kaniuk (2005) as too small a sample, measures restricted to vulnerability, and samples that cannot be compared, owing to differences in the characteristics of the adopted and nonadopted participants. In the present study, the focus will be more on the differences between adoptees and nonadoptees regarding parenthood rather than on the impact of the adoptees' adoption pathway on their experience of parenthood.

Table 1 and 2 summarize the participants' sociodemographic characteristics, and the characteristics of their adoption pathway.

(Table 1 about here)

(Table 2 about here)

Procedure

Adopted adults were contacted in several ways. Some of them (n = 115) were members of adoption charities such as La Voix des Adoptés, l'AFOR, Mouvement Retrouvailles or Racines Coréennes. These participants were contacted via social media groups and sent a link to access the online survey. Other adoptees were contacts of members of adoption charities, or members of social media groups, but were not directly involved in adoption charities (n = 153).

Nonadopted adults were contacted via social media groups and collaborative platforms. There was a single inclusion criterion for all participants: aged at least 18 years. The initial sample before the matching with adoptees contained 650 participants. For experimental reasons, adoptees were told that they would be taking part in a survey on adoptees' parenthood, but not that their results would be compared with those of nonadoptees. Nonadoptees were told that they would be taking part in a survey on the experience of parenthood. The objective of this procedure was to avoid the possible biases that may arise

when two groups know that they are being compared with each other. The online form completed by the nonadoptees was exactly the same as the one administered to the adoptees, except for certain questions that specifically concerned the former. Both groups were instructed to respond to scales measuring the parental experience by referring to their experience with their first child.

To ensure a sufficient number of participants, we decided to use an online questionnaire. Participants gave their informed consent by clicking on the "Continue" button. They were then informed that they could withdraw from the study at any time and assured that the data would be stored anonymously and that they would not be identified in any publications. This study received the approval of an ethics committee (University of Lille, no. 2018-316-S66).

Measures

Psychological Characteristics.

We measured *attachment* with the Relationship Scales Questionnaire (RSQ; Bartholomew & Horowitz, 1991), translated into French and validated by Guédeney, Fermanian, and Bifulco (2010). In this self-report questionnaire, participants have to respond while thinking about their close relationships. The RSQ features 30 items rated on a Likert-like scale ranging from 1 (*Not at all*) to 5 (*Very*). Items include statements such as "It is quite easy for me to be close to people". The RSQ has two dimensions: security and detachment. We found satisfactory to very satisfactory internal consistency for both dimensions ($\alpha = 0.882$ for security dimension and $\alpha = 0.697$ for detachment dimension).

Resilience was measured with Wagnild and Young's (1993) resilience scale, which is the one recommended for research of this kind (Ahern, Kiehl, Sole, & Byers, 2006; Windle, Bennett, & Noyes, 2011). This scale has been used with a wide variety of populations. Authors conceptualize resilience as a personality trait that favors adaptation. Items are

statements such as "My life has a meaning". The resilience scale features 25 items rated on a Likert-like scale ranging from 1 (*Strongly disagree*) to 7 (*Strongly agree*). The original version has good internal consistency (α = .84-.94). It has been translated into 36 languages, including French (Jourdan-Ionescu, Ionescu, Tourigny, Hamelin, & Wagnild, 2015). Two dimensions are assessed with this scale: self-acceptance/life acceptance and personal skills. We found a satisfactory internal consistency for the total score in our sample (α = 0.898).

Mental health was measured with the Brief Symptom Inventory (Derogatis, 1983). This self-report questionnaire featuring 53 items is intended to assess the presence of clinical symptoms in adolescents and adults. It is the abridged version of the SCL-R-90 (Derogatis, 1983). Items include statements such as "I am easily annoyed or irritated". Respondents rate the frequency of onset of each symptom during the previous week on a Likert scale ranging from 0 (*Not at all*) to 4 (*Extremely*). The scale is composed of nine dimensions (somatization, obsession-compulsion, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism) and three global indices of distress: global severity, positive symptom distress, and positive symptom total. These indices measure current symptoms, symptom intensity, and number of reported symptoms. We only used the global severity index in the present study. The authors report good internal consistency and reliability for all dimensions ($0.71 < \alpha < 0.85$) (Aroian & Patsdaughter, 1989, in Derogatis & Spencer, 1993). The French version of the questionnaire was produced by the ANQ (2012), based on the German version translated by Franke (2001). We found a very satisfactory internal consistency for the total score in our sample (α = 0.962).

Parenthood Experience.

We measured the *motivation to have a child* with the Echelle de Motivation à Avoir un Enfant (EMAE; Gauthier, Sénécal, & Guay, 2007). This self-report questionnaire features 19 items in the form of answers to the general question "Why do you want to have a child?" (e.g.,

"To give a new meaning to my life") and is intended for people who have no children but also for people who are already parents. The answers are rated on a Likert-like scale ranging from 1 (*Does not correspond at all*) to 7 (*Corresponds very strongly*). This scale was developed in the light of self-determination theory (Deci & Ryan, 2000), and is divided into five factors: intrinsic motivation, three types of extrinsic motivation (identified, introjected and external), and amotivation (which is defined as a lack of intrinsic and extrinsic motivation). Internal consistency coefficients are acceptable for all subscales ($.794 < \alpha > .892$) in our sample.

Parental stress was assessed with the Parental Stress Index (PSI), originally created by Abidin (1983) in its English version. The PSI is composed of 36 items formulated as statements such as "My child rarely does things that please me". The answers are rated on a Likert-like scale ranging from 1 (*Strongly disagree*) to 5 (*Profoundly agree*). We used the French version of the PSI (Bigras, LaFrenière, & Abidin, 1996). This scale yields three subscores and a total score: Parents score, Children score, Parent-Child score, and total PSI score. Internal consistency coefficients are satisfactory for the total score in our sample ($\alpha = 0.937$).

Finally, the quality of *coparenting* was measured with McHale's (1997) coparenting scale in its French adaptation (Frascarolo, 2009). This scale consists of 16 items. For some questions, parents are asked to estimate the frequency of certain behaviors in specific situations. The answers are rated on a Likert-like scale ranging from 1 (*Absolutely never*) to 7 (*Almost constantly, one to two times per hour*). The items are divided into four factors: family integrity, conflict, affection, and denigration. Internal consistency is satisfactory for integrity ($\alpha = 0.822$), denigration ($\alpha = 0.735$) and conflict ($\alpha = 0.824$), but lower for affection ($\alpha = 0.532$).

Relational Characteristics.

Dyadic coping was measured with the Dyadic Coping Inventory (DCI; Bodenmann, 2008), in its validated French version (Ledermann et al., 2010). This scale takes the form of a self-report questionnaire featuring 37 items divided into six subsections. Each subsection is preceded by a question intended to specify a particular stress situation (respondent's stress, partner's stress, shared stress, etc.). Items are statements such as "He does not take my stress seriously". Answers are rated on a Likert-like scale ranging from 1 (*Very rarely*) to 5 (*Very often*). The DCI is composed of 11 subscales or five aggregated subscales (dyadic coping by oneself, dyadic coping by the partner, negative dyadic coping, positive dyadic coping, total score). The internal consistency is very good for the total score ($\alpha = 0.929$) in our sample.

Nulliparous or single persons were accepted in the sample because their situation allowed them to answer the scales concerning psychological and/or relational characteristics, and the scales related to the experience of pre-parenthood. Thus, only those who already had children completed the scales regarding parental experience ($n = 153$). The Dyadic Coping Inventory and the coparenting scale were only completed by the 128 parents who were raising their first child with a partner (not necessarily the child's father/mother).

Data analytic plan

To meet our first objective (comparing the two groups), we ran *t* tests to observe the differences between adoptees and nonadoptees. We applied a Bonferroni correction to this analysis. We then ran a mediation analysis to test the mediating effect of dyadic coping between psychological characteristics and parental stress for adoptees and nonadoptees (N= 128 for each group). All these analyses were performed with JAMOVI software. In the case of missing data (e.g., for measures related to the parenthood experience for nulliparous participants), the software only included participants whose data were complete in the analysis. Thus, 268 responses per group were taken into account in the analyses including the

following variables: attachment, mental health, resilience and motivation for having children. 153 responses per group are taken into account in the analyses including parental stress and 128 responses per group are included in the analyses including dyadic coping and coparenting.

Results

Comparison of the two groups

We found differences between the adoptees and nonadoptees. Table 3 reveals that these differences mainly concerned participants' psychological characteristics: attachment security ($t(534) = 5.56$, $p < .001$, $d = 0.48$) and mental health ($t(533) = -5.07$, $p < .001$, $d = -0.43$). Adoptees had lower attachment security and mental health scores. Regarding the variables related to the experience of parenthood (parental stress, motivations for having children and coparenting), there were no differences between the two groups, apart from adoptees showing a higher score for introjected motivation than nonadoptees ($t(436) = -4.57$, $p<.001$, $d= -0.43$). Finally, regarding relational characteristics, adoptees had lower dyadic coping scores ($t(254) = 3.54$, $p <.05$, $d = 0.43$).

(Table 3 about here)

Mediation analysis

Then, mediation analysis showed that dyadic coping was a mediating variable for the relationship between parents' psychological characteristics and parental stress (see Figs. 2a, 2b, 2c). These effects were observed only for adoptees, we didn't find significant mediation effects for nonadoptees. These three mediation analyses met the four conditions required to detect a mediating effect. For all the analyses, the predictor variable was significantly related to both the outcome and mediator variables, the mediator variable was related to the outcome variable, and the initial effect of the predictor variable on the outcome variable diminished

when the mediator was entered as a second simultaneous predictor. For example, the initial predictive power of attachment on parental stress (i.e., β = -0.34, p < .001) was reduced to β = - 0.25 (p < .001) when dyadic coping was entered in the regression analysis. We found that dyadic coping wasn't a mediating variable for the relationship between nonadoptees' psychological characteristics and their parental stress because the last condition has not been met.

(Figure 1 about here)

Discussion

Comparison of adoptees' and nonadoptees' experience of parenthood

The first objective of the present study was to compare adoptees and nonadoptees on the experience of parenthood. As adopted adults, on average, have more psychological difficulties than nonadoptees (Palacios et al., 2019), we hypothesized that adoptees have a worse experience of parenthood. This assumption was refuted, as adoptees had similar scores to those of nonadoptees on all measures relating to parenthood experience. These results are consistent with the above cited studies which have pointed out that there was no difference between adoptees and nonadoptees for some psychological variables (Del Pozo de Bolger, Dunstan, & Kaltner, 2018 ; Ter Meulen, Smeets, & Juffer, 2019 ; Sánchez-Sandoval, Melero, & Jiménez-Luque, 2019). Our finding that adoptees and nonadoptees had similar amotivation scores was not consistent with the results of Horowitz (2011) and Sherr, Roberts, and Croome (2018), who found that adoptees had less of a desire to have children. This absence of a difference between the groups is mostly surprising as the two did differ on most of the psychological and relational variables (attachment, mental health, and dyadic coping), with lower scores for adoptees. This goes against the predictions of the biopsychosocial model of parental stress (Roskam & Mikolajczak, 2015), according to which psychological and dyadic characteristics are predictive of parental stress. There are several possible explanations for this

paradox. First, even though significant differences were observed between the two groups for the psychological and relational variables, the adoptees' scores remained within the scales' *normality* thresholds. Thus, the adoptees did not exhibit excessively insecure attachment, were not considered pathological from the point of view of mental health and had a dyadic coping score that was within the norm. They were also as resilient as nonadoptees. These results are in line with those of Côté and Lalumière (2019). They also found that adoptees were less adjusted than nonadoptees. But most adoptees had adjustment scores which are included in the normality thresholds. This could explain why their scores were comparable to those of the control group on the measures related to parental experience. Next, 60% of our sample of adoptees had been adopted before the age of 1 year. Early adoption is an important protective factor for adoptees (Escobar & Santelices, 2013) that could explain the scores obtained by our sample. We could also hypothesize that our positive results might be influenced by the cultural context (i.e., being adopted in France). As explained, French laws regarding adoption might be more protective of adopted children. Finally, several authors (Belsky, Jaffee, Silgo, Woodward, & Silva, 2005, Chen & Kaplan, 2001) argue that part of an individual's parenting style is determined by the parental style of their own parents. However, one study (Leung, 2014) showed that adoptive parents have a predominantly *authoritative* style of parenting that promotes good child development and harmonious parenting (Baumrind & Black, 1967). Furthermore, potential adoptive parents expressed a higher level of positive feelings and thoughts within the relationship, and better perceived quality of marital relationships than non-adoptive couples (Pace, Santona, Zavattini, & Di Folco, 2015). This suggests that couple seeking to adopt placed a high value in attachment relationships. That is a protective factor for positive outcomes of adoption. The parental model that adoptees observed from very early on (since they were adopted at a very young age) and on which they could draw for their own parenting predisposed them to have a suitable parenting style.

Mediating role of dyadic coping among adoptees

The second objective of the present study was to test the mediating effect of the dyadic coping variable on the link between psychological characteristics (attachment, mental health and resilience) and parental stress for adoptees and for nonadoptees. We hypothesized a mediating effect of dyadic coping on the link maintained between the psychological characteristics of adoptees and their parental stress. The mediation effects revealed by the analysis showed that psychological characteristics predicted the experience of parenthood, partly because of their impact on the dyadic (parental) relationship. In line with our hypothesis, these effects were observed only for adoptees. Thus, although adoptees and nonadoptees do not differ in terms of parental stress scores, there is a difference in functioning between the two groups. Indeed, although the two groups present the same potential risk or protective factors (attachment, mental health, resilience and dyadic coping significantly predict parental stress for the two groups) we observe that these act through different mechanisms. Among adoptees, the possible effects of psychological characteristics on parental stress stem in part from their effects on the marital relationship, which will influence parental stress. Among nonadoptees, the link between psychological characteristics and parental stress is not mediated by dyadic coping, it is therefore more direct or mediated by other variables. It would therefore seem that the variables linked to the conjugal bond are important risk or protective factors for adoptees. Not only did adoptees in our study have a lower dyadic coping score than nonadoptees but this variable also seems to have an intermediary role in predicting parental stress. The behavior and communications related to dyadic coping that adoptees experience with their partners could be particularly important factors for their relationships, their well-being and their parenthood. The interdependence between partners, an inherent aspect of dyadic coping, seems to have a higher influence among adoptees. This increased sensitivity to relational stressors had previously been

observed by Feeney et al. (2007) in a population of adopted adults that was comparable to ours in terms of age (mean age = 37 years, mean age at adoption = 5 weeks). Thus, our study suggests that this increased sensitivity could have consequences for the exercise of parenthood. The partner and the couple's dyadic coping abilities may therefore have a decisive role to play, especially when one of the parents was adopted as a child. A study carried out on this subject in a population of ex-foster children reinforced this hypothesis, by showing that, depending on their life course, their spouses can be factors for either protection or vulnerability (Frechon & Dumaret, 2008).

Strengths and limitations

The results of our study indicate that the question of the *specificity* of adoptees' experience of parenthood is debatable. The inclusion of a control group allowed us to show that adoptees are quite similar to nonadoptees, in terms of their motivation to have children, parental stress and coparenting. They also presented psychological and relational scores that were within the normality thresholds. Thus, despite their potentially painful past, adoptees appear to be resilient. This encouraging result portrays adoptees from a different angle from that of vulnerability, which is how they are mostly represented in the scientific literature. Then, this study highlights a reflection on the transmission of parenting styles between adoptive parents and adopted children. It would be relevant to study the parenting styles of these two populations to see if adoptees model their parenting style on the style of their adoptive parents. This idea therefore opens a broader reflection on the question of the transmission of the parenting style in cases of non-biological parenthood (adoption and foster care for example). Our study also confirms the importance of relational variables amongst adoptees in the context of their experience of parenthood. This finding underlines the fact that relational variables like dyadic coping may not have the same importance between different populations. This idea could be further explored through studies on other populations that

have suffered early family disruptions. In addition, this study provides information about adoptees' experience of parenthood after the birth of their child, which has received little attention up to now. Several qualitative studies have identified features of adoptees that are thought influence their parental stress in ways that we did not observe in this study. The efforts we made to ensure that the samples were as representative as possible (adoptees not only recruited via charities, inclusion of men, larger number of participants, etc.) allowed us to carry out our research with greater methodological rigor than previous studies. Finally, our results open up new perspectives for prevention or therapy among adopted adults. Our work contributes to the destigmatization of adoptees by showing the absence of differences between adoptees and nonadoptees regarding the variables related to their experience of parenthood. Furthermore, our results regarding the importance of relational variables highlight the interest of psychological care for adoptees and their partners, for example within the framework of couple therapies. This type of care would encourage dyadic coping and would then prevent possible difficulties related to their relationships or parenting. Parenthood is often presented as a public health issue, owing to its important effects on parents' wellbeing and the development of their children. Our study enhances current knowledge of the protective and vulnerability factors for adoptees, particularly in their role as parents.

Although it yielded encouraging results, the present study had potential biases. First, given the varied age of the participants, some of them had to answer the questionnaires measuring their experience of parenthood after their children had grown up (i.e. they had to remember their behavior when their children were in the age range specified by the questionnaire). The answers given by the participants may therefore have reflected a representation they had of themselves at a certain period. However, this seems a minor bias, as age was only weakly correlated with parenthood experience measures, if at all. Second, despite our efforts to reduce this bias, the samples had a rather poor sex ratio, probably

because men are less active and spend less time than women on social media (Alzahrani, 2016). Third, we have included little or no variables related to adoptees' adoption pathway. However, these variables are presented in the literature as particularly determining in predicting adoptees' outcomes. Fourth and last, in the present study, only self-reported questionnaires were used to assess our variables. It implies some biases (i.e., capture only participants' aware opinion, influenced by social desirability). These biases could be overcome by using different tools such as attachment interviews (Pace, 2014) or observational methods in evaluating couples (McHale, Favez, & Fivaz-Depeursinge, 2018).

Future directions

From a methodological point of view, future research could ensure a better distribution of men and women and include a greater number of participants, in order to allow the protective and vulnerability factors to be modelled. Future studies should also examine participants' adoption pathway, in order to identify elements likely to influence adoptees' experience of parenthood. Finally, future longitudinal research could help to clarify the reciprocal roles of individual and relational variables on adoptees' parenthood, for instance by assessing them from the first child's birth to next years.

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Table 1. Participants' Sociodemographic Characteristics (N = 536)

	Adoptees (n = 268)	**Nonadoptees (n = 268)**
	***n* (%)**	***n* (%)**
Women	230 (85.82)	230 (85.82)
Men	38 (14.18)	38 (14.18)
Marital status		
Single	62 (23.13)	53 (19.78)
In a relationship	33 (12.31)	33 (12.31)
Cohabitation	43 (16.04)	47 (17.54)
Civil partnership	23 (8.58)	25 (9.33)
Married	74 (27.61)	73 (27.24)
Divorced in a couple	13 (4.85)	11 (4.10)
Divorced and single	10 (3.73)	15 (5.60)
Separated	8 (2.95)	9 (3.36)
Widow(er)	2 (0.75)	2 (0.75)
Employment status		
Student	37 (13.81)	41 (15.30)
Unemployed	32 (11.94)	20 (7.46)
Employee	102 (38.06)	86 (32.10)
Farmer	2 (0.75)	1 (0.37)
Senior manager	65 (24.2)	85 (31.72)
Business owner	17 (6.34)	17 (6.34)
Retired	25 (9.33)	18 (6.72)
Parents	153 (57.84)	153 (57.84)
Nonparents	115 (42.16)	115 (42.16)
	Mean (*SD*)	**Mean (*SD*)**
Age in years	38.14 (10.50)	37.57 (10.44)
Number of children	1.08 (0.95)	1.13 (1.02)
Age of first child in years	14.50	13.95

Table 2. Characteristics of the Adopted Group (*n* = 268)

	***n* (%)**
Country of origin	
France	59 (22.01)
Other countries in Europe	17 (5.97)
Canada (Quebec)	45 (16.79)
Asia	64 (23.50)
South America	50 (18.28)
Africa	31 (11.57)
Middle East	2 (0.75)
Country of adoption	
France	197 (73.51)
Canada (Quebec)	60 (22.39)
Belgium	9 (3.36)
Switzerland	2 (0.75)
Age at adoption	
0-2 months	49 (18.28)
2-6 months	83 (30.97)
6 months-1 year	28 (10.45)
1-2 years	35 (13.06)
2-3 years	21 (7.83)
3-4 years	18 (6.71)
4-5 years	9 (3.36)
5-6 years	8 (2.98)
6-7 years	7 (2.61)
7-8 years	1 (0.37)
Above 8 years	9 (3.36)

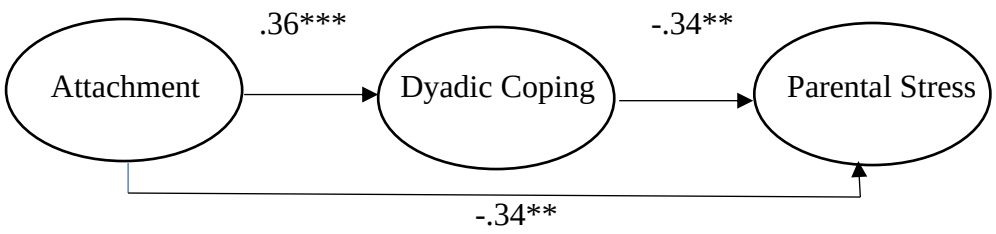
Table 3. Comparisons Between Adoptees and Nonadoptees

	Adoptees		Nonadoptees					
	Mean	*SD*	Mean	*SD*	t	*df*	*p*	Cohen's *d*
Attachment security	-0.75	0.946	-0.30	0.956	5.56	534	< .001***	0.48
Attachment detachment	0.24	1.24	0.47	1.07	2.36	534	0.414	
Mental health	61.10	13.60	55.00	13.80	-5.07	533	<.001***	-0.43
Resilience	130.00	21.60	135.00	18.10	2.56	533	0.235	
Intrinsic motivation	6.04	1.20	6.22	0.943	1.82	456	1.000	
Identified motivation	4.94	1.53	4.64	1.56	-2.10	455	0.792	
External motivation	1.88	1.31	1.63	1.07	-2.30	431	0.488	
Introjected motivation	3.24	1.61	2.60	1.36	-4.57	436	<.001***	-0.43
Amotivation	1.92	1.19	1.78	1.05	-1.32	444	1.000	
Parental stress	73.30	23.1	69.90	20.4	-1.39	305	1.000	
Coparental integrity	18.80	4.12	19.20	3.66	0.81	248	1.000	
Coparental affectivity	11.10	1.88	11.50	1.69	1.70	238	1.000	
Coparental conflict	12.30	7.49	10.90	10.4	-1.27	244	1.000	
Coparental denigration	4.20	1.93	3.79	1.65	-1.82	250	1.000	
Dyadic coping	111.00	22.30	120.00	19.8	3.54	254	0.011*	0.43

Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

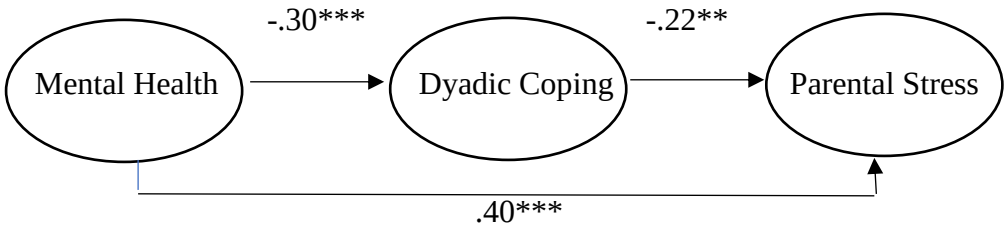
Figure 1. Mediation Analyses Testing Extent to Which Relations Between Psychological Characteristics and Parental Stress is Mediated by Dyadic Coping (N = 128 adoptees).

A. Mediating role of dyadic coping: attachment predicting parental stress



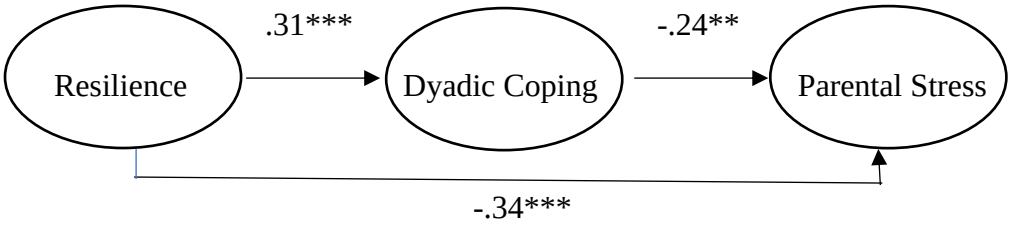
Sobel test: -2.44 ($p < .05$)*

B. Mediating role of dyadic coping: mental health predicting parental stress



Sobel test: 2.21 ($p < .05$)*

C. Mediating role of dyadic coping: resilience predicting parental stress



Sobel test: -2.30 ($p < .05$)*