Multilevel approach to gender differences in adaptation in father-mother dyads parenting individuals with Autism Spectrum Disorder

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A R T I C L E   I N F O

A B S T R A C T

Background: Most studies of gender differences in the ASD literature present methodological limitations regarding the treatment of dyadic data. This work explored gender differences in the psychological adaptation of a sample of Spanish fathers and mothers of individuals with Autism Spectrum Disorder (ASD) using a multilevel modeling approach (MLM) that accounts for nested data.
Method: Questionnaires including different adaptation measures were completed by 120 father-mother dyads raising individuals with ASD. We designed a two-level model (parents nested in dyads) with three predictor variables at level 1 (parent gender, parent age, and perception of child's behavior problems) and four predictor variables at level 2 (child age, family income, ASD severity, and time since diagnosis) to examine the influence of these variables on negative and positive psychological outcomes (stress, anxiety, depression, and psychological well-being).
Results: Mothers experienced higher levels of stress and anxiety than fathers, even after controlling for interdependence and sociodemographic factors. ASD severity was a significant predictor of both progenitors' stress and well-being, and family income was also related to psychological well-being, although no gender differences were observed in the way these variables are related to parental outcomes.
Conclusions: Professionals should offer parents support to adjust expectations according to their child's ASD severity given its relationship to parental stress and well-being. Considering that mothers experience higher levels of stress and anxiety than fathers, clinicians should encourage maternal protective factors. Finally, governments should consider new policies aiming to support ASD families' treatment expenses.

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1. Introduction

Autism Spectrum Disorder (ASD) is a pervasive neurodevelopmental impairment characterized by social communication deficits along with stereotyped behavior, interests and activities (American Psychiatric Association [APA], 2013). Given these difficulties, parenthood is expected to be a challenging experience for mothers and fathers of individuals with ASD. In fact,

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studies have consistently demonstrated that parents of individuals with ASD manifest more psychological problems than parents of typically developing children and parents of children with other disabilities (Dabrowska & Pisula, 2010; Eisenhower, Baker, & Blacher, 2005; Hayes & Watson, 2013; Totsika, Hastings, Emerson, Berridge, & Lancaster, 2011). With regard to gender, past research has suggested that mothers and fathers raising individuals with ASD report different patterns of both negative and positive psychological adaptation.

Traditionally, stress has been one of the more widely studied variables in the literature on negative parental outcomes. Most researchers have found that mothers of individuals with ASD are more likely to experience higher levels of stress than fathers (Dabrowska & Pisula, 2010; Hastings, 2003; Little, 2002). Similarly, research indicates that both depression and anxiety levels are higher in mothers than in fathers (Gau et al., 2012; Hastings, 2003; Hastings & Brown, 2002; Hastings et al., 2005; Lee, 2009). This discrepancy has been linked to the fact that mothers are usually the primary care-givers (Tehee, Honan, & Hevey, 2009). However, some studies of families of individuals with ASD have not observed gender differences in the levels of parental stress, anxiety or depression (Davis & Carter, 2008; Epstein, Saltzman-Benaiah, O'Hare, Goll, & Tuck, 2008; Pozo & Sarriá, 2014a; Rimmerman, Turkel, & Crossman, 2003). In fact, Rivard, Terroux, Parent-Boursier, and Mercier (2014) recently found that fathers report significantly higher stress levels than mothers do.

Beyond the many studies that focus on negative adaptation, there is evidence that some ASD families experience positive outcomes (Bayat, 2007; Hastings & Taunt, 2002; Pakenham, Sofronoff, & Samios, 2011). The results of various studies indicate that mothers present higher levels of positive perceptions as a result of raising their children with ASD than fathers do (Hastings et al., 2005; Kayfitz, Gragg, & Orr, 2010; Sarriá & Pozo, 2015).

1.1. Predictors of parental outcomes

Research suggests that some factors associated with raising an individual with ASD can explain the different patterns observed in these families when compared with other clinical and control groups. To determine these factors, researchers have examined a number of predictors of negative and positive adaptation, among which sociodemographic and child factors have been found to be relevant.

Some of the sociodemographic variables that have been proposed as predictors of parental adaptation include parent and child age, family income, the presence of other family members with a disability, and the size of the social network (Hartley, Seltzer, Head, & Abbeduto, 2012; Jones, Totsika, Hastings, & Petalas, 2013; Smith, Greenberg, & Seltzer, 2012). Child variables that have been associated with parental adaptation measures include child age, the severity of social-communication deficits, behavior problems, cognitive impairment, eating and sleeping problems, and emotional deregulation (Bebko, Konstantareas, & Springer, 1987; Davis & Carter, 2008; Pozo, Sarriá, & Brioso, 2014). In this category, the positive association between both behavior problems and disorder severity with parental stress has been one of the most widely documented findings in families of children with ASD and developmental disabilities (Estes et al., 2013; Hastings & Brown, 2002; Pozo & Sarriá, 2015; Rezendes & Scarpa, 2011; Tomanik, Harris, & Hawkins, 2004; Zaidman-Zait et al., 2010).

As for gender differences, fathers' and mothers' levels of psychological adaptation seem to be affected by different child variables. For instance, Allen, Bowles, and Weber (2013) determined that a child's social skills predicted stress in mothers, whereas fathers' stress was predicted by problems in the child's sensory and cognitive skills. In a sample of parents of individuals with Asperger Syndrome, Epstein et al., 2008 showed that a child's executive dysfunction and sensory sensitivities were significantly and positively correlated to the mother's stress but not to the father's stress. Herring et al. (2006) also found that children's emotional and behavioral problems contributed significantly more to mothers' stress than to fathers' stress. However, support for hypotheses for gender differences is difficult to test because neither fathers' representation nor interdependence within couples has been appropriately addressed in the autism research field so far (Jones et al., 2013). In most ASD research, fathers tend to be underrepresented, and thus, the findings yield partial conclusions (Braunstein, Peniston, Perelman, & Cassano, 2013; Flippin & Crais, 2011). In addition, most studies about predictors of psychological adaptation do not use statistical methods that take into account that couples mutually influence each other and tend to share beliefs and feelings, which could explain similarities in the experience of parenting an individual with ASD. Pottie and Ingram (2008) are an exception to this trend, as they explored ASD parents' experiences and subsequent subjective well-being through a daily diary method using a multilevel modeling (MLM) approach that accounts for the interdependence of data. Their results show no gender differences in the use of effective coping responses. Another representative study that considered interdependence was conducted by Jones et al. (2013), who used an MLM approach to examine gender differences in 161 couples raising children with ASD. These authors showed that mothers experienced more emotional distress and higher levels of positive gain than fathers. When these researchers controlled for demographic characteristics and child factors, all outcome measures remained statistically significant, except for positive gain, for which gender differences disappeared. However, the researchers found little support for gender patterns in predictors of adaptation: Compared with fathers, mothers' anxiety was significantly more affected by more severe behavior problems and less adaptive skills in the child.

In view of the methodological limitations that characterize most studies addressing gender differences in the ASD literature and the inconsistency of the findings, we considered it relevant to conduct a new study on the predictors of mothers' and fathers' psychological adaptation in order to better understand the specific needs of parents of individuals with ASD. We adopted an MLM approach on a sample with a wide range of parental and child ages. Moreover, following the methodological suggestions of Jones et al. (2013), to improve the research approach, our ratings of child characteristics were