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Parenting stress among parents of children with Neurodevelopmental Disorders

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ABSTRACT

In recent years, studies have shown that parents of children with Neurodevelopmental Disorders (NDDs) experience more parenting stress than parents of typically developing children, but the relation between the type of disorders and parenting stress is far from clear. The purpose of this study was to compare the parenting stress experienced by parents of 239 children with Specific Learning Disorders (SpLD), Language Disorders (LD), Autism Spectrum Disorder (ASD), Attention Deficit Hyperactivity Disorder (ADHD), and typical development (TD). Parents of children with NDDs experience more parenting stress than those of children who have TD. Although, parents of children with ASD or ADHD report the most high scores of parenting stress, also the parents of children with SpLD or LD report higher parental stress compared with parent of children without NDDs. Another interesting finding was that IQ level or emotional and behavioral problems are associated with the higher levels of parenting stress. This study suggest that parent, both mothers and fathers, of children with different type of NDDs should be provided with interventions and resources to empower them with the knowledge and skills to reduce their stress and to enhance their quality of life.

1. Introduction

Neurodevelopmental Disorders (NDDs) are a group of conditions with onset in the developmental period, often before the child enters grade school, and are characterized by developmental deficits that produce impairments of personal, social, academic, or occupational functioning (American Psychiatric Association, 2013). Raising a child with a NDDs puts a greater strain on parenting skills than that of raising typically developing children. In fact, in parents of children with NDDs, high levels of parenting stress have been detected clear (Baker et al., 2002; Hauser-Cram et al., 2001; Johnston et al., 2003; Ricci and Hodapp, 2003), but the relation between the type of disability and parenting stress is far from. Parenting stress is defined as the aversive psychological reaction to the demands of being a parent (Liles et al., 2012), typically when the demands of being a parent are not matched with the perceived resources available to the parent. While all parents may experience a low degree of parenting stress, high levels of parenting stress may have serious negative effects on the family and the parent's psychological health and overall well-being. Several theories suggests that parenting stress is multiply determined by child, parent, family, and ecological characteristics reciprocally influencing one another and contributing to outcomes (McCubbin and McCubbin, 1989; Lazarus and Folkman, 1984).

Abidin developed the transactional model of parenting behaviors that describes the interplay between psychological, sociological, and environmental factors (Abidin, 1995). The author proposed three major domains of parental stress: parent characteristics, child characteristics, and situational/life demographics. These domains are reflected in Abidin's Parenting Stress Index (PSI), which is designed to measure the various sources and aspects of parental stress (Abidin, 1995). The theoretical framework used for this study was Abidin's Parenting Stress Theory, focusing mostly on child characteristics.

Recent developments in the field of parenting stress have led to a renewed interest in the bidirectional relationship between parental stress and NDDs. The presence of maternal stress during pregnancy may explain 10–15% of childhood disorders of the neuro-development (Glover, 2014) and similarly stressful parenting patterns are found in families with children with NDDs.

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Research suggests that offspring of mothers who experience high levels of stress during pregnancy are more likely to have problems in neurobehavioral development and intellectual disabilities (Bergman et al., 2007; Ronald et al., 2010). Ramchandani et al. (2010) investigated the influence of prenatal maternal stress on subsequent behavioral problems of children (four years of life) and found that the transmission of stress to their offspring is mediated by high levels of maternal hormones secreted by hypothalamic-pituitary-adrenal (HPA) axis involved in the response to stress, hormones that can affect fetal brain development (Ramchandani et al., 2010). According to this study, fetal neural development would depend essentially on the duration of exposure to stress rather than by the specific type of stressful event, the timing of the stress, the time in which the fetus is exposed to prenatal stress, is an element critic could lead to a dysregulation the sense neuro-fetal development (Dipietro, 2012). On the other hand, child behavior problems consistently have been shown to predict parental stress (Baker et al., 2005), particularly autism (Abbeduto et al., 2004; Estes et al., 2009) and Attention Deficit Hyperactivity Disorder (ADHD) (Theule et al., 2013) have been reported as important correlates. Parents of children with autism experience a condition of elevated stress and are more vulnerable to potential negative outcomes compared to parents of children who have other disability forms (Dunn et al., 2001), and the severity of Autism Spectrum Disorder (ASD) symptoms is an important predictor of mother's parenting stress (Mahoney, 2009). In the same way, parents of children with ADHD very often experience considerable stress in their parenting roles. A review study confirmed that parents of children with ADHD experience more parenting stress than parents of nonclinical controls and that severity of ADHD symptoms was associated with parenting stress (Theule et al., 2013).

Multiple comorbid conditions such as emotional and behavioral problems are profound contributor to parental stress and family instability, because these can compounded functional impairments such as life skill, school performances, ability to work, and ability to independent. Previous studies have reported that parents of children with ASD experience higher stress levels than parents of typically developing children (TD) and that children with ASD show more behavioral and emotional problems than controls suggesting that behavioral and emotional problems are strong predictors of parental stress (Davis and Carter, 2008; Giovagnoli et al., 2015; Hastings, 2002; Huang Chien-Yu et al., 2014; Lounds et al., 2007). In a meta-analyses study, examining the association between parenting stress and ADHD, some authors reported that child co-occurring externalizing behaviors, in particular conduct problems, predicted parenting stress (Theule et al., 2013). Another potential child characteristic that may contribute to increased parent stress is cognitive dysfunction. Parents of children with lower intelligence quotient (IQ), may face increased child-rearing responsibilities. For example, children with lower IQ need greater assistance with a range of basic activities, from dressing, to bathing, to toileting. These increased demands may lead to increased parenting stress or psychological distress (Kennedy, 2012). Recently, some authors reported that in children with ASD, child's verbal and performance IQ were a significant predictor of parental stress (Pastor-Cerezuela et al., 2015), on the contrary others authors showed that in children with ADHD, IQ does not have an impact on parental stress but the severity of ADHD symptoms is an important predictor of parenting stress (Grizenko et al., 2015). Studies that have investigated the parental stress in children with SpLD or LD which also presented emotional and behavioral problems and/or intellectual disability are lacking.

The elevated parental stress emanates directly from the presence of NDDs, given the increased caretaking demands that children with NDDs impose on their parents. Parents of these children often find themselves involved in resolving various school, peer, and sibling difficulties. Although, research on parenting stress in parents of children diagnosed with ASD or ADHD has indicated that the characteristics of these two disorders make child raising especially stressful, study that has compared the stress experienced by parents of children with other NDDs, such as Specific Learning Disorders (SpLD), Language Disorders (LD) and intellectual and developmental disabilities are lacking. Understanding what contributes to stress will then lead to more targeted interventions to support families and facilitate family functioning. Therefore, the main objective of the present study was to compare the parenting stress of children and adolescents affected by different NDDs and TD. A strong point of the study is that we conducted a comparison between mothers and fathers. Higher levels of parenting stress and psychological distress were mainly reported in mothers of children with ASD (Dabrowska and Pisula, 2010; Tehee et al., 2009) or ADHD (Margari et al., 2013; Theule et al., 2013) or SpLD (Brock and Shute, 2001; Karande et al., 2009) or LD (Chaffee et al., 1991), moreover fathers of children with NDDs experience higher levels of parenting stress than fathers of TD children (Davis and Carter, 2008; Lach et al., 2009; Podolski and Nigg, 2001). However, very few studies have been conducted to compare parenting stress in mothers and fathers of children with different NDDs. An additional purpose of the study was to examine the association of parental stress with levels of emotional and behavioral problems and intellectual disability to have a better understanding of the parental stress. It was hypothesized that the level of parental stress is linked with emotional and behavioral problems or intellectual disability in these children.

2. Method

The clinical sample consisted of 186 children/adolescents, aged from 3 to 12 years old, consecutively referred to Child Neuropsychiatry Unit-University-Hospital of Bari during the period from December 2014 to December 2015. Participants were divided into four groups: SpLD group, LD group, ASD group and ADHD group. The SpLD group comprised 60 children/adolescents, the LD group comprised 34 children/adolescents, the ASD group comprised 45 children/adolescents, the ADHD group comprised 47 children/adolescents. The diagnoses were made by clinical experts according to DSM-5. The diagnoses were based on the developmental histories of the children, taken from clinical interviews with the parents, observations and extended neuropsychological testing of the children themselves. The control group consisted of 53 TD children/adolescents, that was randomly recruited, based on the availability of parents or subjects to participate in the study, from schools located in Puglia and Campagnia.

Exclusion criteria were the presence of other medical condition or mental disorders and medical/psychiatric illness of parents. Written informed consent was obtained for all participants after providing all the details of the study procedure.

2.1. Assessment

The assessment included the administration of IQ test and clinical standardized scales such as the Parenting Stress Index (PSI) and Child Behavior Checklist (CBCL).

2.2. IQ test

The IQ was assessed according to the age through Wechsler Intelligence Scale for Children (WISC-III) (Wechsler, 1991), Wechsler Preschool and Primary, Scale of Intelligence (WPPSI) (Wechsler, 2002), and Leiter International Performances Scale