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Parent stress and adaptive functioning of individuals with developmental disabilities

Jonathan A. Weiss, April Sullivan, and Terry Diamond

Abstract

Research consistently indicates that parents of individuals with a developmental disability report considerably more stress associated with child characteristics than parents with typically developing children. It is commonly believed that the adaptive functioning of a child with a developmental disability plays a significant role in the stress a parent experiences. The present study examines adaptive functioning of individuals with a developmental disability, in an attempt to establish child characteristics that are predictors of parental stress. Participants consisted of a randomly selected group of 97 individuals (64 males, 33 females) with developmental disabilities, and their parents (90 mothers and 56 fathers) from across Ontario, Canada. Individuals with developmental disabilities ranged in age from 9.3 to 42.5 years, with an average age of 24.9 years ($SD=8.6$). The Full Scale IQ scores for participants with a developmental disability, ranged from 40 to 92, with a mean score of 53.9 ($SD=12.7$). Adaptive and Maladaptive Behaviour were assessed using the Adaptive Behavior Scales - Residential and Community Edition, Second Edition (Nihira, Leland & Lambert, 1993). The Parenting Stress Index, Third Edition (Abidin, 1995) was used as a measure of parental stress. The results established a relation between parental stress and adaptive behaviour of the child. Specifically, lower levels of adaptive functioning were predictive of higher levels of parental stress. The specific components of adaptive functioning that relate to parental stress are discussed.

Individuals with developmental disabilities have, by definition, a marked deficiency in adaptive behaviour (Sattler, 2002). The adverse effect of adaptive behaviour problems on family dynamics, particularly parental stress, has been well documented. In fact, the literature often reports that parents of children with developmental disabilities usually experience higher levels of parental stress compared to parents of typically developing children. The increased levels of parental stress are often associated with their child's behavioural characteristics (i.e., child-related stress), and their access to resources and coping skills (i.e., parent-related stress) (Hauser-Cram, Warfield, Shonkoff & Krauss, 2001).

Hauser-Cram and colleagues (2001) conducted a longitudinal investigation of predictor variables of child development and parental well-being in children with developmental disabilities between 3 and 10 years of age. Of particular interest to the present study are the predictors of parental stress that emerged. The child's behavioural problems were found to be a significant predictor of maternal and paternal child-related stress. In addition, higher levels of behavioural problems were associated with parent-related stress for mothers, but not for fathers.

Similar results have been reported across other studies, with some variability in predictors of maternal versus paternal stress. For instance, Roach, Orsmond and Barrett (1999) found that maternal stress was associated with the caretaking difficulties of children with developmental disabilities, while paternal stress was associated with the group status of the child (Down Syndrome, typically developing). Cameron and Orr (1989) also conducted a study of parental stress in families of children with developmental delays. They reported that up to 50% of the variance could be accounted for by behavioural problems and the number of handicapping conditions.

Previous studies have established a link between parental stress and adaptive behaviour of children with developmental disabilities. The present study attempts to replicate these findings for a group of children and adults with developmental disabilities and their parents.

Method

Participants

Ninety-seven (64 males, 33 females) participants from Ontario Special Olympics and their parents (90 mothers and 56 fathers) were involved in the

study. The 97 participants were derived from a randomly selected sample of 150 members of Ontario Special Olympics, resulting in a 65% participation rate. These individuals with developmental disabilities ranged in age from 9.3 to 42.5 years, with an average age of 24.9 years ($SD = 8.6$). Participants' IQ scores ranged from 40 to 90, with a mean score of 53.9 ($SD = 12.7$).

Measures

IQ. Participants' cognitive abilities were assessed using the Kaufman Brief Intelligence Test (K-BIT; Kaufman & Kaufman, 1990). The K-BIT is a motor-free individually administered screener of verbal and nonverbal intelligence.

Adaptive Behaviour. Adaptive Behaviour was assessed by the Adaptive Behaviour Scales- Residential and Community Edition, Second Edition (ABS-RC2); (Nihira, Leland & Lambert, 1993). This measure of adaptive functioning, by parental report, examines nine skill domains and seven maladaptive behaviour domains, and is one of the most commonly used measures of adaptive functioning in individuals with developmental disabilities. The 16 domains load onto one of 5 main factors, three adaptive (Personal Self-Sufficiency, Community Self-Sufficiency, Personal-Social Responsibility) and two maladaptive (Social Adjustment, and Personal Adjustment).

Parental Stress. Parental stress levels were assessed using the Parenting Stress Index, Third Edition (PSI:3) (Abidin, 1986). The PSI is a 120-item questionnaire commonly used to measure stress within families of children with developmental disabilities. Given that the majority of children in this study were of adolescent and adult age, the PSI was modified to be age appropriate. The PSI may be divided into a Parent-Related Domain and a Child-Related Domain. Questions are answered by the parent on a Likert-type scale ranging from "strongly agree" to "strongly disagree" with reference to current life stress.

Procedures

Participants with disabilities met individually with a researcher and were assessed using the Kaufman Brief Intelligence Test (Kaufman & Kaufman, 1990). Prior to meeting with these individuals and their parents were mailed a package that included the ABS-RC2 and two PSI:3s (for both parents to complete separately).

Results

Participants' five adaptive behaviour factors were examined as predictors of mothers' and fathers' Child-Related and Parent-Related stress levels using multiple regression analyses. For all analyses, Age and IQ were entered together as a 1st block, and the five factors were entered as a 2nd block, in a stepwise fashion. Table 1 presents the results of the four separate analyses.

Table 1: Multiple regression analyses of participants' adaptive behaviours on parents' stress levels

<i>Stress Domain</i>	<i>Predictor variables</i>	<i>B</i>	<i>t</i>	<i>p</i>	<i>r²</i>
Mothers' Child-Related Stress	IQ	.05	.454	ns	.34
	Age	-.02	-.126	ns	
	Personal Adjustment	-.61	-5.177	<.001	
Mothers' Parent-Related Stress	IQ	.16	1.170	ns	.20
	Age	-.04	-.301	ns	
	Personal Adjustment	-.48	-3.461	<.001	
Fathers' Child-Related Stress	IQ	.37	2.997	.005	.12
	Age	-.18	-1.437	ns	
	Personal Adjustment	-.63	-4.983	<.001	
Fathers' Parent-Related Stress	IQ	.29	2.026	.05	.07
	Age	-.12	.852	ns	
	Personal Adjustment	-.67	-4.471	<.001	

Mothers' Child-Related Stress

Only participants' Personal Adjustment emerged as a significant predictor, accounting for 34% of mothers' child-related stress, $F(3,49)=9.70, p<.001$.

Mothers' Parent-Related Stress

Only participants' Personal-Social Responsibility scores emerged as a significant predictor of mothers' parent-related stress, accounting for 20% of the variance, $F(3,46)=4.35, p<.01$.

Fathers' Child-Related Stress

For fathers' child-related stress, both IQ and Personal-Social Responsibility were found to be significant predictors, accounting for 12% and 34% of the variance, respectively, $F(3,35)=12.45, p<.001$.

Fathers' Parent-Related Stress

Participants' IQ and Personal-Social Responsibility scores predicted 7% and 36% of fathers' parent-related stress, respectively, $F(3,35)=6.89, p<.001$.

Discussion

Consistent with previous research in developmental disabilities, this study found a relationship between parental stress and some focus of adaptive behaviour of the child. Specifically, Personal Adjustment and Personal-Social Responsibility emerged as significant predictors of parental stress. Personal Adjustment reflects behaviours that are autistic, stereotyped, and maladaptive, but not antisocial or aggressive towards others. Individuals who score low on this factor demonstrate more inappropriate interpersonal manners such as excessive hugging, or hyperactive, and self-injurious behaviour (Nihira et al., 1993). This factor only emerged as a significant predictor of maternal child-related stress, but adds credence to past research which has established a relation between children's problem behaviours and parental stress (Hauser-Cram et al., 2001).

An examination of mothers' parent-related stress revealed that Personal-Social Responsibility was a significant predictor. Personal-Social Responsibility represents participants' competence in maintaining healthy interpersonal relationships, such as caring for others and participating in group activities (Nihira et al., 1993). It is conceivable that the ability of an individual with a developmental disability to conform to societal demands and maintain interpersonal relationships influences aspects of parenting, such as perceived competence or sense of isolation. However, it is beyond the scope of this study to pinpoint exact aspects of parent-related stress that are affected by the adaptive behaviour of the child.

In contrast to previous studies, an individual's ability to establish and function independently in relationships was a more consistent predictor of stress than was an individual's problem behaviours. First, there are strong theoretical and empirical relations between Personal-Social Responsibility and Personal Adjustment, respectively reflecting positive and negative

behaviours. The fact that our results related more positive behaviours to parental stress highlights the importance of social competence. As well, to our knowledge this is the first study to date to examine such relations in a predominantly adult-aged population of individuals with developmental disabilities. It may be that healthy interpersonal skills are more of a focus for parents of adult children with developmental disabilities than for parents with preschool and school aged children, whose focus is more on managing problem behaviours. In fact, adults with developmental disabilities attribute greater life satisfaction to the presence of healthy interpersonal relationships (Edgerton, Bollinger & Herr, 1984; Landesman-Dwyer & Berkson, 1984). Finally, it is possible that such a finding is an artefact of our sample, taken from the general Ontario Special Olympics population, in that one of the only reasons to exclude participants is if they are a danger to themselves or others. Our sample may not reflect individuals with severe and predominant aggressive antisocial behaviour to the same extent as past studies.

Paternal child-related stress and parent-related stress had the same predictive factors, IQ and Personal-Social Responsibility. The relation between paternal child-related stress and IQ may be similar to the association between paternal stress and group status (i.e., disabled vs. typically developing) that was reported by Roach and colleagues (1999). Since individuals with developmental disabilities have diminished cognitive capacities compared to typically developing individuals, it is possible that IQ and not group status, is responsible for reported paternal stress in previous studies. However, without a comparison group of typically developing individuals, this study cannot rule out the possibility that simply having a child with a developmental disability is responsible for paternal stress. In addition, small group size prohibited an analysis of group membership in this study. It is important to consider that all participants were athletes with Special Olympics and may not be representative of all adults with developmental disabilities.

In summary, this research confirms earlier reports in the developmental disabilities literature of a relation between parental stress and adaptive behaviour of the child. In addition to replicating previous research, this study also demonstrates the importance of considering parental stress factors among parents caring for adults with developmental disabilities.

References

- Abidin, R. R. (1995). *The Parenting Stress Index (3rd ed.)*. Professional manual. Odessa, FL: Psychological Assessment Resources, Inc.
- Cameron, S. J., & Orr, R. R. (1989). Stress in families of school-aged children with delayed mental development. *Canadian Journal of Rehabilitation*, 2, 137-144.
- Edgerton, R. B., Bollinger, M., & Herr, B. (1984). The cloak of competence: After two decades. *American Journal on Mental Deficiency*, 88, 345-351.
- Hauser-Cram, P., Warfield, M. E., Shonkoff, J. P., & Krauss, M. W. (2001). A longitudinal study of child development and parent well-being. *Monographs of the Society of Child Development*, 66 (3, Serial No. 266).
- Kaufman, A. S., & Kaufman, N. L. (1990). *Kaufman Brief Intelligence Test manual*. Circle Pines, MN: American Guidance Service.
- Landesman-Dwyer, S., & Berkson, G. (1984). Friendships and social behavior. In J. Wortis (Ed.), *Mental retardation and developmental disabilities: An annual review*, Vol. 13 (pp. 6-17). New York: Plenum Press.
- Nihira, K., Leland, H., & Lambert, N. (1993). *Adaptive Behavior Scales- Residential and Community Edition, Second Edition: Examiner's manual*. Austin, TX: Pro-Ed.
- Roach, M. A., Orsmond, G. I., & Barrett, M. S. (1999). Mother's and fathers of children with Down syndrome: Parental stress and involvement in childcare. *American Journal on Mental Retardation*, 104(5), 422-436.
- Sattler, J. M. (2002). *Assessment of children: Behavioural and clinical applications* (4th ed.). San Diego, CA: Jerome M. Sattler, Inc.

Correspondence

Jonathan Weiss
 Department of Psychology
 York University
 4700 Keele Street
 North York, Ontario
 M3J 1P3
 jweiss1@yorku.ca

