Chapter 5
The Stress of Parenting Children with Developmental Disabilities

Cameron L. Neece and Neilson Chan

The Stress of Parenting Children with Developmental Disabilities

Parenting stress is one family-level attribute that has consistently been implicated in the creation of risk for families of children with intellectual and developmental disabilities (IDD; Baker et al., 2003; Woodman, Mawdsley, & Hauser-Cram, 2015), and may be the catalyst for many of the other risks that these families and children experience. Parents of children with IDD generally report higher levels of stress than do parents of typically developing children (Baker et al., 2003; Hauser-Cram, Warfield, Shonkoff, & Kraus, 2001). Stress processes, however, are mutable and interventions for parenting stress may be especially beneficial for these families given the noted adverse correlates of their obstacles and challenges.

Stress has long played an integral role in understanding parenting processes. Yet, despite the volume of work on parenting stress, no single, clear, conceptualization of parenting stress has emerged (see Chap. 11 by Crnic and Ross for an overview of conceptualizations of parenting stress). In general, research on stress among parents of children with IDD has focused on three types of stress: general distress, stress specific to the child's condition, and daily parenting hassles. General parenting distress is defined as the extent to which the parent perceives stress in his/her role as a parent (Abidin, 1990). Stress specific to the child with IDD has been assessed using measures that ask about the child's impact on the family compared to the impact other children his/her age have on their families (e.g., Family Impact Questionnaire; Donenberg & Baker, 1993). Studies have also examined parents'

C.L. Neece (✉) · N. Chan
Department of Psychology, Loma Linda University, Loma Linda, CA, USA
e-mail: cneece@llu.edu

N. Chan
e-mail: nechan@llu.edu

K. Deater-Deckard and R. Panneton (eds.), *Parental Stress and Early Child Development*, DOI 10.1007/978-3-319-55376-4_5

daily stressors and everyday challenges and caregiving demands that characterize their routine childrearing responsibilities (Crnic & Greenberg, 1990). Research indicates that the degree of stress experienced by parents of children with developmental disabilities may vary by type of stress, with some studies indicating parents of young children with developmental delays experience similar levels of parenting daily hassles to parents of typically developing children (Crnic, Arbona, Baker, & Blacher, 2009), but greater parenting stress related to the impact of the child on the family (Baker et al., 2003). Thus, disability-specific stresses may well be at play and should be further differentiated from more general stress contexts experienced by all families. Parents of children with IDD may experience stress associated with increased caregiving demands and coordination of care (Crnic, Greenberg, Ragozin, Robinson, & Basham, 1983) as well as the presence of co-occurring behavioral or medical conditions (e.g., Baker et al., 2003). These stressors, coupled with additional financial strain (e.g., Parish, Seltzer, Greenberg, & Floyd, 2004) and feelings of isolation and lack of social support (e.g., Weiss, 2002), may place parents of children with IDD at risk for psychological distress.

Although studies consistently find heightened levels of various stressors among parents of children with IDD, such findings are not universal, and there can be marked individual variation in the trajectory of experienced stress over the developmental period being considered (Glidden & Schoolcraft, 2003; Pai et al., 2007). For parents of children with IDD, average levels of stress are higher across all developmental periods from infancy through adolescence (Baker et al., 2003; Lopez, Clifford, Minnes, & Ouellette-Kuntz, 2008), and there is some evidence to suggest that parenting stress increases over time (Gerstein, Crnic, Blacher, & Baker, 2009; Hauser-Cram & Warfield, 2001; Neece, Green, & Baker, 2012). Other studies indicate parental stress generally appears to peak around the preschool period and decreases over time as a function of reductions in child behavior problems, although stresses not accounted for by the child actually increase over time (Crnic et al., 2009; Neece et al., 2012). Parents of children with IDD may be more likely to have recurrent and new stressors that maintain and even increase stress levels across time. Transitions, including school entry and reintegrations (Canter & Roberts, 2012; DuPaul, Weyandt, O'Dell, & Varejao, 2009; Madan-Swain, Katz, & LaGory, 2004), may be particularly difficult times for parents of children with IDD as these are often when parents make peer comparisons and realize how far their children are behind other children, or have to help their children to cope with challenging social situations. It is clear that parents of children with IDD are faced with multiple challenges across their children's lives, including overcoming the disappointments and fears associated with the original diagnoses, securing appropriate medical interventions and school placements, and learning to navigate the complex health and educational systems (DuPaul et al., 2009). Effects may vary depending on the type of parental stress and be different for fathers and mothers, and highlight the necessity for multidimensional longitudinal studies addressing the experience of these families.

Among parents of children with disabilities, those who have children with autism spectrum disorders (ASD) typically report the highest levels of stress

(Blacher & McIntyre, 2006; Dabrowska & Pisula, 2010; Eisenhower, Baker, & Blacher, 2005; Estes et al., 2009; Pisula, 2007; Sanders & Morgan, 1997), whereas those with genetic syndromes of intellectual disability (e.g., Down syndrome) typically reporting lower levels of parenting stress (Dabrowska & Pisula, 2010; Smith, Romski, Sevcik, Adamson, & Barker, 2014). In fact, in studies examining the clinical profiles of these parents, approximately one-third to two-thirds of both mothers and fathers reported clinical levels of parental stress (greater than 85th percentile on the Parenting Stress Index; Abidin, 1990) indicating they should be referred for professional consultation (Davis & Carter, 2008; Tomanik, Harris, & Hawkins, 2004). Furthermore, while parents of children with ADHD report higher levels of child-related stress compared to parents of children with IDD, no significant difference exists in stress derived from the parenting role between parents of children with ADHD or IDD (Theule, Wiener, Tannock, & Jenkins, 2013). Parents of children with IDD also report higher levels of parenting stress than those of children with medical disabilities (e.g., HIV and asthma) but no IDD (Gupta, 2007).

Predictors and Consequences of Parenting Stress Among Families of Children with IDD

High levels of parental stress are concerning given their association with numerous undesirable outcomes including parent depression (Anastopoulos & Guevremont, 1992; Deater-Deckard, 1998; Hastings, Daley, Burns, & Beck, 2006), marital conflict (Kersh, Hedvat, Warfield, Hauser-Cram, & Warfield, 2006; Suárez & Baker, 1997), poorer physical health (Eisenhower, Baker, & Blacher, 2009; Oelofsen & Richardson, 2006), and less effective parenting (Coldwell, Pike, & Dunn, 2006; Crnic, Gaze, & Hoffman, 2005). Further, families of children with IDD, who experienced high levels of stress on average, reported more family problems, lower parental satisfaction and well-being, and less parental competence and social support (Pisula, 2007; Rodrigue, Morgan, & Geffken, 1990; Sanders & Morgan, 1997). See Chap. 11 by Crnic and Ross (2016) for further discussion on how parenting stress impacts parental efficacy and competence. These studies highlight the salience of parental stress as an environmental risk factor for the development of children with IDD.

Child behavior problems have been found to be the most consistent predictor of parenting stress among families of children with IDD. Persons with IDD are at high risk for behavior problems, and studies have found heightened externalizing and internalizing behavior problems relative to typically developing children (Baker, Blacher, Crnic, & Edelbrock, 2002; Emerson & Einfeld, 2010; Merrell & Holland, 1997). These elevated levels of behavior problems are associated with heightened risk for developing comorbid mental disorders later in life (Baker, Neece, Fenning, Crnic, & Blacher, 2010). Further, studies have shown that both the frequency and severity of externalizing and internalizing child behavior problems have been found to predict elevated levels of parenting stress above and beyond the influence of

other child and parent factors, such as child's adaptive behavior (Hodapp, Fidler, & Smith, 1998; Woodman, 2014), autism symptoms (Osborne & Reed, 2009), family socioeconomic status, and parent social support (Quine & Pahl, 1991; Sloper, Knussen, Turner, & Cunningham, 1991; Woodman, 2014). Interestingly, the relationship between child developmental status and parenting stress appears to be mediated by child behavior problems such that once behavior problems are accounted for, there is no longer a significant relationship between child cognitive delay and parenting stress (Baker et al., 2002; Hauser-Cram & Warfield, 2001; Herring et al., 2006). In other words, these studies indicate that the child's behavioral functioning, rather than his or her cognitive functioning, is a more salient predictor of parent stress.

Importantly, research has indicated that the relationship between parenting stress and child behavior problems is bidirectional and transactional over time. Thus, while child behavior problems are a robust and consistent predictor of parenting stress, parenting stress has also been found to predict increases in child behavior problems over time (Baker et al., 2003; Donenberg & Baker, 1993; Neece et al., 2012). Further, early elevations in parenting stress have been associated with poorer social skills in children later in development (Neece & Baker, 2008) and a subsequent ADHD diagnosis (Baker et al., 2010). Thus, increasing parental stress acts as a predictor of multiple negative outcomes for children with IDD. Moreover, the literature on typically developing children provides additional evidence of negative child outcomes associated with elevated parenting stress to which children with IDD may also be susceptible, including higher levels of emotion dysregulation (Anthony et al., 2005; Mathis & Bierman, 2015), more depressive symptoms (Anthony, Bromberg, Gil, & Schanberg, 2011), poorer peer competence (Guralnick, Neville, Connor, & Hammond, 2003), and an overall poorer quality of life (Moreira, Gouveia, Carona, Silva, & Canavarro, 2014).

As mentioned above, research indicates that the relationship between parental stress and behavior problems in children is reciprocal such that child behavior problems lead to increases in parental stress, which further exacerbate the development of child behavior problems. Longitudinal studies indicate that high behavior problems lead to increases in parenting stress over time, and high parenting stress leads to increases in behavior problems in children (Baker et al., 2003; Neece et al., 2012) as well as adults (Orsmond, Seltzer, Krauss, & Hong, 2003). We conducted a study investigating the relationship between parenting stress and child behavior problems at seven time points from child ages 3 to 9 using a sample of 237 children, 144 who were typically developing and 93 who were identified as developmentally delayed (Neece et al., 2012). Results indicated that behavior problems and parenting stress covaried significantly across development, and that child developmental status in general did not moderate the relationship between behavior problems and stress over time. These findings are congruent with past studies showing cognitive functioning has an indirect effect on parenting stress that is accounted for by child behavior problems (e.g., Baker et al., 2003). We investigated the *direction* of the relationship between child behavior problems and parenting stress across early and middle childhood (ages 3–9), using cross-lagged

panel analyses. These analyses supported a bidirectional relationship between parenting stress and child behavior problems for both mothers and fathers, after controlling for the child's developmental status.

Recently, Woodman, Mawdsley, and Hauser-Cram (2015) expanded these findings by investigating the transactional relationship between parenting stress and child behavior problems among families of children with IDD at five time points from early childhood (age 3) through late adolescence (age 18), examining the unique contributions of internalizing and externalizing child behavior problems to parental stress. Consistent with earlier findings (e.g., Neece et al., 2012), cross-lagged panel analyses supported a bidirectional relationship between parenting stress and internalizing child behavior problems in early childhood (ages 3–5), but not between parenting stress and externalizing behavior problems.

Interestingly, the Neece et al. (2012) study found the effect of early parental stress on later child behavior problems was more consistent over time than the effect of early behavior problems on later parental stress. This is consistent with studies investigating families of children with ASD which indicate that parenting stress is associated with child behavior problems over time, even after controlling for prior child behavior problems, severity of child ASD symptoms, intellectual functioning, and adaptive behavior (Osborne & Reed, 2009; Lecavalier, Leone, & Wiltz, 2006). Further, parenting stress appears to predict future child behavior problems more strongly than child behavior problems predict subsequent parenting stress (Lecavalier et al., 2006; Osborne & Reed, 2009).

Intervention studies provide a more controlled test of the transactional relationship between parenting stress and child behavior problems (see also Chap. 12 by Havighurst & Kehoe). When participants are randomly assigned to an intervention group, and the intervention successfully reduces child behavior problems (or parenting stress), researchers can examine the collateral effects on parenting stress (or child behavior problems). For example, some studies have found that parent stress-reduction interventions have led to improvements in child behavior problems with no child-specific intervention (Neece, 2013; Singh et al., 2007), whereas other studies have found that behavioral parent training interventions aimed at reducing child behavior problems also resulted in reductions in parenting stress (Feldman & Werner, 2002; Nieter, Thornberry, & Brestan-Knight, 2013; Painter, Cook, & Silverman, 1999; Singh et al., 2014; Wainberg, 1999). However, behavioral parent training approaches do not consistently result in reductions of parenting stress (Singer, Ethridge, & Aldana, 2007), and stress-reduction interventions for parents of children with IDD do not always lead to reductions in child behavior problems (Dykens, Fisher, & Taylor, 2014). Thus, an integrated intervention model that directly targets parenting stress within the context of building parenting skills that promote more positive parent-child interactions and reduce behavior problems may be optimally effective.

Nevertheless, findings generally provide converging evidence of a transactional relationship between parenting stress and child behavior problems among families of children with IDD. In general, results indicate that parenting stress is both an antecedent and consequence of child behavior problems. Simultaneously, child

behavior problems are an antecedent and consequence of parenting stress, and both appear to have a mutually escalating, or de-escalating, effect on each other over time. As such, both appear critical targets for intervention.

Intervention Implications and Mindfulness-Based Strategies

Given the negative consequences associated with parenting stress for both the parent and the child with IDD, parenting stress is a clear target for intervention. Interventions that target parental stress offer the opportunity to ameliorate and ideally prevent the development of psychopathology among youth with IDD. Surprisingly, parenting stress is rarely directly addressed in interventions targeting child problems. Most of these interventions are child-focused, teaching parents skills to manage their children's behavior problems and assume that by reducing behavior problems parenting stress will decline. However, in light of findings showing that parenting stress has an impact on the development of children's behavior problems, it seems logical that parenting stress should be a target for interventions aiming to reduce child behavior problems. This is reasonable not only because parental stress has been shown to affect the development of children's emotional and behavior problems over time, but also because parenting stress has been associated with poor outcomes for interventions focused on children with IDD and other developmental disabilities. More specifically, high parental stress predicts less beneficial outcomes for children in early intervention programs (Brinker, Seifer, & Sameroff, 1994; Osborne, McHugh, Saunders, & Reed, 2008; Robbins, Dunlap, & Plienis, 1991; Strauss et al., 2012) and fewer gains in parenting skills in behavioral parenting training interventions (e.g., Baker, Landen, & Kashima, 1991).

Consistent with transactional models of family process in which ongoing parental stress can serve to promote later child behavior problems (Neece et al., 2012; see also Chap. 4 by McQuillan & Bates), emerging research indicates that interventions focused on reducing parental stress in families of young children with IDD benefits not only parents (e.g., significant reduction in stress and depression as well as improved life satisfaction) but also children with IDD who showed a reduction in behavior problems following intervention (Neece, 2013). While behavioral parent training focuses on the acquisition of specific parenting skills that promote positive child behavior, mindfulness-based strategies directly target stressors that may be associated with the presence of problematic child behavior (Bazzano et al., 2015; Neece, 2013). Mindfulness is the awareness that emerges through paying attention on purpose and nonjudgmentally to the unfolding of experience moment by moment (Kabat-Zinn, 2003). Mindfulness training involves teaching individuals to use strategies to disengage attention from internal thoughts and feelings that elicit distress and to focus on their present experience directly without appraisals or interpretations (Singh et al., 2014)

Although still in its infancy, research examining mindfulness-based interventions for parents of children with intellectual and developmental disabilities is

growing rapidly. During the past decade, the feasibility and preliminary efficacy of mindfulness-based interventions have been tested in pilot studies (Bazzano et al., 2015; Minor, Carlson, Mackenzie, Zernicke, & Jones, 2006; Roberts & Neece, 2015) and in larger, well-controlled studies that consisted of methodologically rigorous, single-case designs (Singh et al., 2006, 2007, 2014); waitlist-control randomized trials (Neece, 2013); and large-scale randomized, controlled trials with an active comparison group (Dykens et al., 2014). Currently, the majority of the literature about mindfulness interventions for parents consists of studies of parents with children who have developmental disabilities. This indicates that researchers are increasingly recognizing the need for stress-reduction and parenting interventions among this population.

Two types of mindfulness-based interventions have been used primarily with parents of children with IDD. First is mindfulness-based stress reduction (MBSR), which is an evidence-based stress-reduction intervention program supported by more than two decades of extensive research that has revealed its effectiveness for reducing stress, anxiety, and depression and for promoting overall well-being (Chiesa & Serretti, 2009). However, only recently has MBSR been used to address parenting stress specifically (Bazzano et al., 2015; Dykens et al., 2014; Minor et al., 2006; Neece, 2013). Again, mindfulness interventions like MBSR train individuals to use strategies to disengage attention from internal thoughts and feelings that elicit distress and to focus on their present experience directly without appraisals or interpretations (Singh et al., 2014). By focusing on the immediate experience, individuals are able to become more aware of which aspects of the experience are worth responding to, ignoring, or simply observing. It is thought that mindfulness training improves participants' emotion regulation skills through enhancing their attention monitoring abilities and facilitating nonjudgmental awareness of emotions, allowing people to genuinely experience and express their emotions without underengagement (e.g., avoidance) or overengagement (e.g., rumination; Chambers, Gullone, & Allen, 2009). In the MBSR program, parents learn to cope more effectively with both short- and long-term stressful situations. These coping skills are critical for parents of children with IDD. MBSR may also help improve one's parenting experience in that mindfulness may help parents slow down, notice impulses before they act, truly listen to their children, and come to a more relaxed and peaceful state of mind, which in turn may have a positive effect on their children with IDD.

The second kind of mindfulness-based parenting intervention, mindful parenting, has also been used with parents of children with IDD and other developmental disabilities, and initial findings are promising (Singh et al., 2006, 2014). Mindful parenting differs from MBSR in that the focus of mindful parenting is on using mindfulness specifically in the context of parent–child interactions and identifying interactions that result in relational disconnectedness (Altmaier & Maloney, 2007), rather than on applying mindfulness techniques to parental stress more broadly, regardless of the source of stress. These interventions incorporate mindfulness, self-awareness, and intentionality into the parent–child relationship. As a result, parent–child interactions are less reactive and are characterized by more relaxed communication and problem solving, which are ultimately thought to result in the

reduction of children's challenging behavior (Singh et al., 2014). Findings indicate that mindful parenting interventions are effective for reducing children's externalizing behavior and attention problems and for improving children's self-control, compliance, and attunement to others (Bögels, Hoogstad, van Dun, de Schutter, & Restifo, 2008; Singh et al., 2009; Singh, Singh, & Lancioni, 2010).

Other Stress-Reduction Interventions

Other interventions aimed at reducing stress of parents of children with IDD range from respite interventions, to peer support interventions, to more structured psycho-educational group interventions (Hastings & Beck, 2004). Respite care generally involves short-term care of an individual with disabilities in order to bring relief to the primary caregiver or family of the individual (Warren & Cohen, 1985). Cowen and Reed (2002) describe different types of respite services that typically range between either primary or secondary sources of relief. Primary respite care services generally provide relief to the primary caregiver from the intense care demands of the child with disabilities. Secondary respite care services more specifically target the needs of those with developmental disabilities and may provide educational training programs in addition to services such as speech-, occupational-, and physical-therapy.

Not surprisingly, among families of children with IDD, parents who report greater psychological distress and lower levels of optimism about their coping abilities are more likely to use respite care services (Hoare, Harris, Jackson, & Kerley, 1998). Researchers have found that families that used respite care services generally reported lower levels of parenting stress as well as a greater ability to cope with stressors of having a child with IDD. These parents also reported lower levels of psychological distress, including lower levels of anxiety, depression, and a higher overall quality of life (Chan & Sigafoos, 2001; Cowen & Reed, 2002; Rimmerman, Kramer, Levy, & Levy, 1989). In a longitudinal study examining whether the effects of respite care services persisted six months after services ceased, Mullins, Aniol, Boyd, Page, and Chaney (2002) found that while lowered levels of general psychological distress were maintained in the long-term, reduced levels of parenting stress returned back to baseline levels at the six-month follow-up. These studies demonstrate that while respite care services may diminish the general distress parents of IDD experience, the specific stress related to parenting a child with IDD may only be temporarily ameliorated.

Peer support interventions, such as the Parent-to-Parent Movement (Davidson & Dosser Jr, 1982), have a growing research base supporting their effectiveness in reducing parenting stress among parents of children with IDD. The parent-to-parent model involves matching a parent with a parent supporter based on the following features: (1) the parent supporter with experience in caring for children with IDD must have had training in providing support techniques; (2) referrals to this service come from a range of sources, including both professional and informal contacts; (3) the

parent supporter is matched to the parent based on the parent's needs, typically based on the child's diagnosis; and (4) the parent and parent supporter self-manage the extent of contact between one another (Hastings & Beck, 2004). In a controlled study by Singer et al. (1999) examining the impact of the parent-to-parent support model, results suggested a decrease in parenting stress among parents involved in the parent-support model. Specifically, parents reported more positive perceptions of their child and their impact on the family, as well as a marked improvement in their progress toward the resolution of their primary needs. However, when the four criteria above were not met (e.g., children's needs were not comparable), the parent-to-parent model of support was less effective (Ainbinder et al., 1998).

The literature also supports the potential efficacy of group-based interventions focused on improving parental well-being. The majority of structured group interventions aimed at reducing parenting stress among families of children with IDD incorporate some aspects of cognitive behavioral therapy (CBT), including problem solving, cognitive restructuring, and monitoring thoughts and feelings (Gammon & Rose, 1991; Greaves, 1997; Kirkham & Schilling, 1990; Kirkham, 1993; Wong & Poon, 2010). While these studies examining interventions incorporating elements of CBT report optimistic results in reducing parenting stress, certain limitation should be considered. First, because these interventions operate in a group setting in which CBT elements are only a part of the intervention, we cannot isolate the CBT aspects as the sole active ingredient responsible for reducing parenting stress, especially in studies utilizing a waitlist-control design (Nixon & Singer, 1993; Singer, Irvin, & Hawkins, 1988). It is likely that other therapeutic aspects of simply being in a group, such as receiving support from others with a shared experience, may have contributed to reductions in stress (Hastings & Beck, 2004). Second, there were limited follow-up data collected in these studies, and limiting conclusions we can draw about the effectiveness of the interventions in the long-term.

Directions for Future Research

Although parenting stress has been a significant focus of research among families of children with IDD over the last few decades, there are still a number of avenues for future research. Perhaps most importantly, it is critical that future investigations examine the mechanisms through which parental stress may influence child behavior problems and other child outcomes. Parenting behavior is one possible mediating variable that may partially account for this relationship. Parenting stress has been linked to less responsive, more authoritarian, and more neglectful parenting (Belsky, Woodworth, & Crnic, 1996; Conger, Patterson, & Ge, 1995; Crnic et al., 2005; Deater-Deckard & Scarr, 1996), which, in turn, has been associated with poorer developmental outcomes for the child (NICHD Early Child Care Research Network, 2004; Rothbaum & Weisz, 1994). It is possible, and probably likely, that parenting behavior is also linked to parenting stress such that parents who exhibit less effective parenting experience more stress. However, very few studies have examined the

impact of parenting behavior on subsequent stress (Mackler et al., 2015). Additionally, these parents may not model good self-regulation for their children, which may lead to higher behavior problems. With regard to the opposite direction of effect (child behavior to parenting stress), child behavior problems may create more stress in the broader ecological environment (e.g., school and neighborhood) leading to augmented parental stress (Bronfenbrenner, 1979). However, despite multiple studies supporting the associations between parental stress, parenting behavior, and child outcomes, little research has explicitly tested bidirectional, meditational models based on theory that attempt to capture the complexity of these families processes across development (Deater-Deckard & Scarr, 1996), especially among families of children with IDD (Crnic & Neece, 2015).

Beyond identifying intermediate factors that account for the impact of parenting stress on child outcomes, moderators of the relationship between these variables must also be explored. Much of the research on the trajectories of these variables over time examines mean changes in child behavior problems and parent stress across development (Neece et al., 2012). However, it is likely that there are families for which these patterns diverge, and future research should identify moderators of changes in these variables over time. For example studies indicated that parents' coping styles may reduce or exacerbate the impact of various stressors on parent outcomes such that emotion-oriented coping styles may exacerbate the impact of child symptom severity and behavior problems on parenting stress (Lyons et al., 2010) while problem-focused coping may reduce the impact of child behavior concerns on parental distress (Woodman & Hauser-Cram, 2013). Further, social support may also reduce the impact of stressors on parent psychological outcomes (Dunn et al., 2001). Studies should continue ascertain the primary risk and protective factors that change the strength of this relationship over time. Further, little is known about the sources of stress among parents of children with IDD and the relative contribution of individual sources to overall parenting stress. The literature focuses on the child with IDD and his or her associated behavior problems as the primary source of stress. However, after spending many years interviewing families about their stress, it is clear that the child with IDD is one of many sources of stress that contribute to parents' overall well-being. Researchers need to identify these additional sources of stress and characterize how other related factors (e.g., financial stress, sibling stress, and family support stress) interact with the stress associated with the child with IDD in predicting parents' overall stress. McQuillian and Bates (Chap. 4) in this volume outline key moderators of parenting stress (e.g., parent gender, economic and cultural background, parent temperament, cognitive skills and capacities, and specific parenting knowledge and skills) that may be important to consider in future research. Finally, the parenting stress literature would benefit from a more refined definition of "parenting stress." We all use this term with the assumption that there is a shared understanding of the construct. However, there are many definitions of parenting stress, and there has been little differentiation between parenting stress and stressed parenting.

Turning to intervention research, given the rapidly growing literature supporting the efficacy of mindfulness-based interventions for adults in general and parents of children with IDD specifically, future research should continue to focus on these

interventions. Research examining the mechanisms by which mindfulness interventions operate indicates that mindfulness training leads to improvements in self-regulation, values clarification, cognitive, emotional, and behavioral flexibility, and exposure to anxiety stimuli, which account for a wide range of positive outcomes, including stress reduction.

However, it behooves future researchers investigating mindfulness interventions for parents and children with IDD to use common intervention protocols and measures in order to compare and perhaps collapse findings across studies. Broadly speaking, one of the most significant problems in mindfulness intervention research is that nearly every study uses a different interventions and a different set of outcome measures, making it difficult for readers to synthesize this literature and identify what treatment works best and for whom. When researchers choose to apply mindfulness interventions to a new population, it would be advantageous to first determine whether standard manualized intervention protocols (e.g., MBSR and MBCT) are effective before making adaptations for the group; if adaptations are made before the standard protocol is tested, one cannot determine whether the observed effects are a result of the mindfulness intervention or the adaptations made. In addition, the literature base for mindfulness interventions with parents of children with IDD would greatly benefit from systematic dismantling of studies to identify which aspects of the intervention are related to the observed benefits. Standard mindfulness interventions are quite intensive, requiring several hours of intervention each week and daily homework for several weeks. Preliminary data indicate that adaptations to interventions that are less time intensive may be worthwhile for people seeking to reduce psychological distress (Carmody & Baer, 2009). Studies to systematically examine each of these individual concerns identified above are needed.

Examination of the possible benefits of integrating behavioral parent training and mindfulness-based interventions is a key area for future research on interventions for parents of children with IDD. Research indicates that parent emotion and cognitive control capacities (ECCCs) influence parenting practices (e.g., ability to be perceptive, responsive, and flexible), and that mindfulness training can improve ECCCs (Crandall, Deater-Deckard & Riley, 2015). Therefore, incorporating mindfulness training into parenting interventions may optimize outcomes. There is small but growing literature supporting the use of adding a mindfulness component to interventions or approaches (e.g., Kazdin & Whitley, 2003; Singh et al., 2006, 2014). Future investigation is needed to determine whether adding a parental stress reduction module that uses mindfulness-based techniques to existing evidence-based treatments for child behavioral issues (Bagner & Eyberg, 2007; McIntyre & Abbeduto, 2008) maximizes the efficacy of parent training and behavior interventions that target challenging behavior among children with IDD. Given that elevated parental stress has been associated with decreased efficacy of behavioral interventions for children (Baker et al., 1991; Brinker et al., 1994; Osborne et al., 2008; Robbins et al., 1991; Strauss et al., 2012), we predict that addressing parental stress would improve the impact of interventions commonly used with children with IDD. The challenge lies in identifying what aspects of mindfulness-based interventions for parents are most effective for reducing stress and the intensity of the intervention, so the desired

outcome is achieved, which further underscores the critical need for identifying the "active ingredients" of the interventions.

Nevertheless, parenting stress is a highly prevalent and deeply concerning problem among parents of children with IDD. Designing and implementing effective stress-reduction interventions for these families is critical in optimizing parent *and* child outcomes. We know from scientific studies as well as professional experience that families matter in determining outcomes for children, especially for children with IDD. Parent stress has a significant impact on children's development and, therefore, in any attempt to intervene and help children we must also consider and intervene with families.

References

Abidin, R. R. (1990). *Parenting stress index manual* (3rd ed.). Charlottesville, VA: Pediatric Psychology Press.

Ainbinder, J., Blanchard, L. W., Singer, G. H., Sullivan, M. E., Powers, L., K., Marquis, J. G., & Santelli, B. (1998). A qualitative study of parent to parent support for parents of children with special needs. *Journal of Pediatric Psychology*, *23*(2), 99–109.

Altmaier, E., & Maloney, R. (2007). An initial evaluation of a mindful parenting program. *Journal of Clinical Psychology, 63*(12), 1231–1238.

Anastopoulos, A., & Guevremont, D. (1992). Parenting stress among families of children with attention deficit hyperactivity disorder. *Journal of Abnormal Child Psychology, 20*(5), 503–520.

Anthony, K., Bromberg, M., Gil, K., & Schanberg, L. (2011). Parental perceptions of child vulnerability and parent stress as predictors of pain and adjustment in children with chronic arthritis. *Children's Health Care, 40*(1), 53–69.

Anthony, L., Anthony, B., Glanville, D., Naiman, D., Waanders, C., & Shaffer, S. (2005). The relationships between parenting stress, parenting behavior and preschoolers' social competence and behavior problems in the classroom. *Infant and Child Development, 14*(2), 133–154.

Bagner, D., & Eyberg, S. (2007). Parent–child interaction therapy for disruptive behavior in children with mental retardation: A randomized controlled trial. *Journal of Clinical Child and Adolescent Psychology, 36*(3), 418–429.

Baker, B. L., Blacher, J., Crnic, K. A., & Edelbrock, C. (2002). Behavior problems and parenting stress in families of three-year-old children with and without developmental delays. *American Journal of Mental Retardation, 107*(6), 433–444.

Baker, B. L., Landen, S., & Kashima, K. (1991). Effects of parent training on families of children with mental retardation: Increased burden or generalized benefit? *American Journal on Mental Retardation*.

Baker, B. L., McIntyre, L. L., Blacher, J., Crnic, K., Edelbrock, C., & Low, C. (2003). Pre-school children with and without developmental delay: Behaviour problems and parenting stress over time. *Journal of Intellectual Disability Research, 47*(4), 217–230.

Baker, B. L., Neece, C. L., Fenning, R. M., Crnic, K. A., & Blacher, J. (2010). Mental disorders in five-year-old children with or without developmental delay: Focus on ADHD. *Journal of Clinical Child & Adolescent Psychology, 39*(4), 492–505.

Bazzano, A., Wolfe, C., Zylowska, L., Wang, S., Schuster, E., Barrett, C., et al. (2015). Mindfulness based stress reduction (MBSR) for parents and caregivers of individuals with developmental disabilities: a community-based approach. *Journal of Child and Family Studies, 24*(2), 298–308.

Belsky, J., Woodworth, S., & Crnic, K. (1996). Trouble in the second year: Three questions about family interaction. *Child Development, 67*(2), 556–578.

Blacher, J., & McIntyre, L. L. (2006). Syndrome specificity and behavioural disorders in young adults with intellectual disability: Cultural differences in family impact. *Journal of Intellectual Disability Research, 50*(3), 184–198.

Bögels, S., Hoogstad, B., van Dun, L., de Schutter, S., & Restifo, K. (2008). Mindfulness training for adolescents with externalizing disorders and their parents. *Behavioural and Cognitive Psychotherapy, 36*(02), 193–209.

Brinker, R., Seifer, R., & Sameroff, A. (1994). Relations among maternal stress, cognitive development, and early intervention in middle-and low-SES infants with developmental disabilities. *American Journal on Mental Retardation*.

Bronfenbrenner, U. (1979). Contexts of child rearing: Problems and prospects. *American Psychologist, 34*(10), 844.

Canter, K. S., & Roberts, M. C. (2012). A systematic and quantitative review of interventions to facilitate school reentry for children with chronic health conditions. *Journal of Pediatric Psychology, 37*(10), 1065–1075.

Carmody, J., & Baer, R. (2009). How long does a mindfulness-based stress reduction program need to be? A review of class contact hours and effect sizes for psychological distress. *Journal of Clinical Psychology, 65*(6), 627–638.

Chambers, R., Gullone, E., & Allen, N. B. (2009). Mindful emotion regulation: An integrative review. *Clinical Psychology Review, 29*(6), 560–572.

Chan, J. B., & Sigafoos, J. (2001). Does respite care reduce parental stress in families with developmentally disabled children? *Child & Youth Care Forum, 30*(5), 253–263.

Chiesa, A., & Serretti, A. (2009). Mindfulness-based stress reduction for stress management in healthy people: A review and meta-analysis. *The Journal of Alternative and Complementary Medicine, 15*(5), 593–600.

Coldwell, J., Pike, A., & Dunn, J. (2006). Household chaos—Links with parenting and child behaviour. *Journal of Child Psychology and Psychiatry and Allied Disciplines, 47*(11), 1116–1122.

Conger, R. D., Patterson, G. R., & Ge, X. (1995). It takes two to replicate: A mediational model for the impact of parents' stress on adolescent adjustment. *Child Development, 66*(1), 80–97.

Cowen, P. S., & Reed, D. A. (2002). Effects of respite care for children with developmental disabilities: Evaluation of an intervention for at risk families. *Public Health Nursing, 19*(4), 272–83.

Crandall, A., Deater-Deckard, K., & Riley, A. W. (2015). Maternal emotion and cognitive control capacities and parenting: A conceptual framework. *Developmental Review, 36,* 105–126.

Crnic, K., Arbona, A. P., Baker, B., & Blacher, J. (2009). Mothers and fathers together: Contrasts in parenting across preschool to early school age in children with developmental delays. *International Review of Research in Mental Retardation, 37,* 3–30.

Crnic, K., Gaze, C., & Hoffman, C. (2005). Cumulative parenting stress across the preschool period: Relations to maternal parenting and child behaviour at age 5. *Infant and Child Development, 14*(2), 117–132.

Crnic, K. A., & Greenberg, M. T. (1990). Minor parenting stresses with young children. *Child Development, 61*(5), 1628–1637.

Crnic, K. A., Greenberg, M. T., Ragozin, A. S., Robinson, N. M., & Basham, R. B. (1983). Effects of stress and social support on mothers and premature and full-term infants. *Child development*, 209–217.

Crnic, K., & Neece, C. (2015). Socioemotional consequences of illness and disability. *Handbook of Child Psychology and Developmental Science, 3*(8), 1–37.

Dabrowska, A., & Pisula, E. (2010). Parenting stress and coping styles in mothers and fathers of pre-school children with autism and Down syndrome. *Journal of Intellectual Disability Research, 54*(3), 266–280.

Davidson, B., & Dosser Jr, D. A. (1982). A support system for families with developmentally disabled infants. *Family Relations*, 295–299.

Davis, N. O., & Carter, A. S. (2008). Parenting stress in mothers and fathers of toddlers with autism spectrum disorders: Associations with child characteristics. *Journal of Autism and Developmental Disorders, 38*(7), 1278–1291.

Deater-Deckard, K. (1998). Parenting stress and child adjustment: Some old hypotheses and new questions. *Clinical Psychology: Science and Practice, 5*(3), 314–332.

Deater-Deckard, K., & Scarr, S. (1996). Parenting stress among dual-earner mothers and fathers: Are there gender differences? *Journal of Family Psychology, 10*(1), 45–59.

Donenberg, G., & Baker, B. L. (1993). The impact of young children with externalizing behaviours on their families. *Journal of Abnormal Child Psychology, 21*(2), 179–198.

Dunn, M. E., Burbine, T., Bowers, C. A., & Tantleff-Dunn, S. (2001). Moderators of stress in parents of children with autism. *Community Mental Health Journal, 37*(1), 39–52.

DuPaul, G. J., Weyandt, L. L., O'Dell, S. M., & Varejao, M. (2009). College students with ADHD. *Journal of Attention Disorders, 13*(3), 234–250.

Dykens, E., Fisher, M., & Taylor, J. (2014). Reducing distress in mothers of children with autism and other disabilities: A randomized trial. *Pediatrics, 134*(2), 454–463.

Eisenhower, A., Baker, B., & Blacher, J. (2005). Preschool children with intellectual disability: Syndrome specificity, behaviour problems, and maternal well-being. *Journal of Intellectual Disability Research, 49*(9), 657–671.

Eisenhower, A. S., Baker, B. L., & Blacher, J. (2009). Children's delayed development and behavior problems: Impact on mothers' perceived physical health across early childhood. *Social Science and Medicine, 68*(1), 89–99.

Emerson, E., & Einfeld, S. (2010). Emotional and behavioural difficulties in young children with and without developmental delay: A bi-national perspective. *Journal of Child Psychology and Psychiatry and Allied Disciplines, 51*(5), 583–593.

Estes, A., Munson, J., Dawson, G., Koehler, E., Zhou, X.-H., & Abbott, R. (2009). Parenting stress and psychological functioning among mothers of preschool children with autism and developmental delay. *Autism: The International Journal of Research and Practice*, *13*(4), 375–87.

Feldman, M. A., & Werner, S. E. (2002). Collateral effects of behavioral parent training on families of children with developmental disabilities and severe behavior disorders. *Behavioral Interventions, 17*(2), 75–83.

Gammon, E., & Rose, S. (1991). The coping skills training program for parents of children with developmental disabilities: An experimental evaluation. *Research on Social Work Practice, 1* (3), 244–256.

Gerstein, E. D., Crnic, K. A., Blacher, J., & Baker, B. L. (2009). Resilience and the course of daily parenting stress in families of young children with intellectual disabilities. *Journal of Intellectual Disability Research, 53*(12), 981–997.

Glidden, L. M., & Schoolcraft, S. A. (2003). Depression: Its trajectory and correlates in mothers rearing children with intellectual disability. *Journal of Intellectual Disability Research, 47*(4–5), 250–263.

Greaves, D. (1997). The effect of rational-emotive parent education on the stress of mothers of young children with Down syndrome. *Journal of Rational-Emotive and Cognitive-Behavior, 15*(4), 249–267.

Gupta, V. B. (2007). Comparison of parenting stress in different developmental disabilities. *Journal of Developmental and Physical Disabilities, 19*(4), 417–425.

Guralnick, M. J., Neville, B., Connor, R. T., & Hammond, M. A. (2003). Family factors associated with the peer social competence of young children with mild delays. *American Journal of Mental Retardation, 108*(4), 272–287.

Hastings, R. P., & Beck, A. (2004). Practitioner review: Stress intervention for parents of children with intellectual disabilities. *Journal of Child Psychology and Psychiatry and Allied Disciplines, 45*(8), 1338–1349.

Hastings, R. P., Daley, D., Burns, C., & Beck, A. (2006). Maternal distress and expressed emotion: Cross-sectional and longitudinal relationships with behavior problems of children with intellectual disabilities. *American Journal of Mental Retardation, 111*(1), 48–61.

Hauser-Cram, P., Warfield, M. E., Shonkoff, J. P., & Krauss, M. W. (2001). Children with disabilities: A longitudinal study of child development and parent well-being. *Monographs of the Society for Research in Child Development, 66*(3), 1–131. doi:10.1111/1540-5834.00151.

Herring, S., Gray, K. M., Taffe, J., Tonge, B., Sweeney, D., & Einfeld, S. (2006). Behaviour and emotional problems in toddlers with pervasive developmental disorders and developmental delay: Associations with parental mental health and family functioning. *Journal of Intellectual Disability Research, 50*(12), 874–882.

Hoare, P., Harris, M., Jackson, P., & Kerley, S. (1998). A community survey of children with severe intellectual disability and their families: Psychological adjustment, carer distress and the effect of respite care. *Journal of Intellectual Disability Research, 42*(3), 218–227.

Hodapp, R. M., Fidler, D. J., & Smith, A. C. M. (1998). Families of children with Prader-Willi syndrome: Stress-support and relations to child characteristics. *Journal of Intellectual Disability Research, 42*(5), 331–340.

Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: Past, present, and future. *Clinical Psychology: Science and Practice, 10*(2), 144–156.

Kazdin, A., & Whitley, M. (2003). Treatment of parental stress to enhance therapeutic change among children referred for aggressive and antisocial behavior. *Journal of Consulting and Clinical Psychology, 71*(3), 504.

Kersh, J., Hedvat, T. T., Warfield, M. E., Hauser-Cram, P., & Warfield, M. E. (2006). The contribution of marital quality to the well-being of parents of children with developmental disabilities. *Journal of Intellectual Disability Research, 50*(Pt 12), 883–93.

Kirkham, M. (1993). Two-year follow-up of skills training with mothers of children with disabilities. *American Journal on Mental Retardation*.

Kirkham, M., & Schilling, R. (1990). Life skills training with mothers of handicapped children. *Journal of Social Service Research, 13*(2), 67–87.

Lecavalier, L., Leone, S., & Wiltz, J. (2006). The impact of behaviour problems on caregiver stress in young people with autism spectrum disorders. *Journal of Intellectual Disability Research, 50*(3), 172–183.

Lopez, V., Clifford, T., Minnes, P., & Ouellette-Kuntz, H. (2008). Parental stress and coping in families of children with and without developmental delays. *Journal on Developmental Disabilities, 14*(2), 99–104.

Lyons, A. M., Leon, S. C., Phelps, C. E. R., & Dunleavy, A. M. (2010). The impact of child symptom severity on stress among parents of children with ASD: The moderating role of coping styles. *Journal of Child and Family Studies, 19*(4), 516–524.

Mackler, J. S., Kelleher, R. T., Shanahan, L., Calkins, S. D., Keane, S. P., & O'Brien, M. (2015). Parenting stress, parental reactions, and externalizing behavior from ages 4 to 10. *Journal of Marriage and Family, 77*(2), 388–406.

Madan-Swain, A., Katz, E., & LaGory, J. (2004). School and social reintegration after a serious illness or injury. *Handbook of Pediatric Psychology in School Settings*, 637–655.

Mathis, E. T., & Bierman, K. L. (2015). Dimensions of parenting associated with child prekindergarten emotion regulation and attention control in low income families. *Social Development, 24*(3), 601–620.

McIntyre, L., & Abbeduto, L. (2008). Parent training for young children with developmental disabilities: Randomized controlled trial. *American Journal on Mental Retardation, 113*(5), 356–368.

Merrell, K. W., & Holland, M. L. (1997). Social-emotional behavior of preschool-age children with and without developmental delays. *Research in Developmental Disabilities, 18*(6), 393–405.

Minor, H., Carlson, L., Mackenzie, M., Zernicke, K., & Jones, L. (2006). Mindfulness based stress reduction (MBSR) for parents and caregivers of individuals with developmental disabilities: A community-based approach. *Social Work in Health Care, 43*(1), 91–109.

Moreira, H., Gouveia, M. J., Carona, C., Silva, N., & Canavarro, M. C. (2014). Maternal attachment and children's quality of life: The mediating role of self-compassion and parenting stress. *Journal of Child and Family Studies, 24*(8), 2332–2344.

Mullins, L. L., Aniol, K., Boyd, M. L., Page, M. C., & Chaney, J. M. (2002). The influence of respite care on psychological distress in parents of children with developmental disabilities: A longitudinal study. *Children's Services: Social Policy, Research, and Practice*, *5*(2), 123–138.

Neece, C. L. (2013). Mindfulness-based stress reduction for parents of young children with developmental delays: Implications for parental mental health and child behavior problems. *Journal of Applied Research in Intellectual Disabilities, 27*(2), 174–186.

Neece, C. L., & Baker, B. L. (2008). Predicting maternal parenting stress in middle childhood: The roles of child intellectual status, behaviour problems and social skills. *Journal of Intellectual Disability Research, 52*(12), 1114–1128.

Neece, C. L., Green, S. A., & Baker, B. L. (2012). Parenting stress and child behavior problems: A transactional relationship across time. *American Journal on Intellectual and Developmental Disabilities, 117*(1), 48–66.

NICHD Early Child Care Research Network. (2004). Affect dysregulation in the mother-child relationship in the toddler years: Antecedents and consequences. *Development and Psychopathology, 16,* 43–68.

Nieter, L., Thornberry, T., & Brestan-Knight, E. (2013). The effectiveness of group parent–child interaction therapy with community families. *Journal of Child and Family Studies, 22*(4), 490–501.

Nixon, C., & Singer, G. (1993). Group cognitive behavioral treatment for excessive parental self-blame and guilt. *American Journal on Mental Retardation*.

Oelofsen, N., & Richardson, P. (2006). Sense of coherence and parenting stress in mothers and fathers of preschool children with developmental disability. *Journal of Intellectual and Developmental Disability, 31*(1), 1–12.

Orsmond, G. I., Seltzer, M. M., Krauss, M. W., & Hong, J. (2003). Behavior problems in adults with mental retardation and maternal well-being: Examination of the direction of effects. *American Journal of Mental Retardation, 108*(4), 257–271.

Osborne, L. A., McHugh, L., Saunders, J., & Reed, P. (2008). Parenting stress reduces the effectiveness of early teaching interventions for autistic spectrum disorders. *Journal of Autism and Developmental Disorders, 38*(6), 1092–1103.

Osborne, L., & Reed, P. (2009). The relationship between parenting stress and behavior problems of children with autistic spectrum disorders. *Exceptional Children, 76*(1), 54–73.

Pai, A. L., Greenley, R. N., Lewandowski, A., Drotar, D., Youngstrom, E., & Peterson, C. C. (2007). A meta-analytic review of the influence of pediatric cancer on parent and family functioning. *Journal of Family Psychology, 21*(3), 407.

Painter, L., Cook, J., & Silverman, P. (1999). The effects of therapeutic storytelling and behavioral parent training on noncompliant behavior in young boys. *Child & Family Behavior Therapy, 21*(2), 47–66.

Parish, S. L., Seltzer, M. M., Greenberg, J. S., & Floyd, F. (2004). Economic implications of caregiving at midlife: Comparing parents with and without children who have developmental disabilities. *Mental Retardation, 42*(6), 413–426.

Pisula, E. (2007). A comparative study of stress profiles in mothers of children with autism and those of children with Down's syndrome. *Journal of Applied Research in Intellectual Disabilities, 20*(3), 274–278.

Quine, L., & Pahl, J. (1991). Stress and coping in mothers caring for a child with severe learning difficulties: A test of Lazarus' transactional model of coping. *Journal of Community & Applied Social Psychology, 1*(1), 57–70.

Rimmerman, A., Kramer, R., Levy, J. M., & Levy, P. H. (1989). Who benefits most from respite care? *International Journal of Rehabilitation Research, 12*(1), 41–48.

Robbins, F. R., Dunlap, G., & Plienis, A. J. (1991). Family characteristics, family training, and the progress of young children with autism. *Journal of Early Intervention, 15*(2), 173–184.

Roberts, L. R., & Neece, C. L. (2015). Feasibility of mindfulness-based stress reduction intervention for parents of children with developmental delays. *Issues in Mental Health Nursing, 36*(8), 592–602.

Rodrigue, J., Morgan, S., & Geffken, G. (1990). Families of autistic children: Psychological functioning of mothers. *Journal of Clinical Child Psychology, 19*(4), 371–379.

Rothbaum, F., & Weisz, J. R. (1994). Parental caregiving and child externalizing behavior in nonclinical samples: A meta-analysis. *Psychological Bulletin, 116*(1), 55.

Sanders, J., & Morgan, S. (1997). Family stress and adjustment as perceived by parents of children with autism or down syndrome: Implications for intervention. *Child & Family Behavior Therapy, 19*(4), 15–32.

Singer, G. H., Ethridge, B. L., & Aldana, S. I. (2007). Primary and secondary effects of parenting and stress management interventions for parents of children with developmental disabilities: A meta-analysis. *Mental Retardation and Developmental Disabilities Research Reviews, 13*(4), 357–369.

Singer, G. H., Irvin, L., & Hawkins, N. (1988). Stress management training for parents of children with severe handicaps. *Mental Retardation, 26*(3), 269–277.

Singer, G. H., Marquis, J., Powers, L. K., Blanchard, L., DiVenere, N., Santelli, B., … Sharp, M. (1999). A multi-site evaluation of parent to parent programs for parents of children with disabilities. *Journal of Early Intervention*, *22*(3), 217–229.

Singh, N. N., Lancioni, G. E., Winton, A. S., Fisher, B. C., Wahler, R. G., Mcaleavey, K., … & Sabaawi, M. (2006). Mindful parenting decreases aggression, noncompliance, and self-injury in children with autism. *Journal of Emotional and Behavioral Disorders*, *14*(3), 169–177.

Singh, N. N., Lancioni, G. E., Winton, A. S. W., Karazsia, B. T., Myers, R. E., Latham, L. L., et al. (2014). Mindfulness-based positive behavior support (MBPBS) for mothers of adolescents with autism spectrum disorder: Effects on adolescents' behavior and parental stress. *Mindfulness, 5*(6), 646–657.

Singh, N. N., Lancioni, G. E., Winton, A. S., Singh, A. N., Adkins, A. D., & Singh, J. (2009). Mindful staff can reduce the use of physical restraints when providing care to individuals with intellectual disabilities. *Journal of Applied Research in Intellectual Disabilities, 22*(2), 194–202.

Singh, N. N., Lancioni, G. E., Winton, A. S., Singh, J., Curtis, W. J., Wahler, R. G., et al. (2007). Mindful parenting decreases aggression and increases social behavior in children with developmental disabilities. *Behavior Modification, 31*(6), 749–771.

Singh, N. N., Singh, A., & Lancioni, G. (2010). Mindfulness training for parents and their children with ADHD increases the children's compliance. *Journal of Child and Family Studies, 19*(2), 157–166.

Sloper, P., Knussen, C., Turner, S., & Cunningham, C. (1991). Factors related to stress and satisfaction with life in families of children with down's syndrome. *Journal of Child Psychology and Psychiatry, 32*(4), 655–676.

Smith, A. L., Romski, M., Sevcik, R. A., Adamson, L. B., & Barker, R. M. (2014). Parent stress and perceptions of language development: Comparing down syndrome and other developmental disabilities. *Family Relations*, *63*(1), 71–84.

Strauss, K., Vicari, S., Valeri, G., D'Elia, L., Arima, S., & Fava, L. (2012). Parent inclusion in early intensive behavioral intervention: The influence of parental stress, parent treatment fidelity and parent-mediated generalization of behavior targets on child outcomes. *Research in Developmental Disabilities, 33*(2), 688–703.

Suárez, L. M., & Baker, B. L. (1997). Child externalizing behavior and parents' stress: The role of social support. *Family Relations, 46*(4), 373–381.

Theule, J., Wiener, J., Tannock, R., & Jenkins, J. M. (2013). Parenting stress in families of children with ADHD: A meta-analysis. *Journal of Emotional and Behavioral Disorders, 21*(1), 3–17.

Tomanik, S., Harris, G. E., & Hawkins, J. (2004). The relationship between behaviours exhibited by children with autism and maternal stress. *Journal of Intellectual and Developmental Disability, 29*(1), 16–26.

Wainberg, H. A. (1999). Parent training for attention-deficit hyperactivity disorder: Parental and child outcome. *Journal of Clinical Psychology, 55*(7), 907–913.

Warren, R., & Cohen, S. (1985). Respite care. *Rehabilitation Literature, 46,* 66–71.

Weiss, M. J. (2002). Hardiness and social support as predictors of stress in mothers of typical children, children with autism, and children with mental retardation. *Autism, 6*(1), 115–130.

Wong, F. K., & Poon, A. (2010). Cognitive behavioural group treatment for Chinese parents with children with developmental disabilities in Melbourne, Australia: An efficacy study. *The Australian and New Zealand Journal of Psychiatry, 44*(8), 742–9.

Woodman, A. C. (2014). Trajectories of stress among parents of children with disabilities: A dyadic analysis. *Family Relations, 63*(1), 39–54.

Woodman, A. C., & Hauser-Cram, P. (2013). The role of coping strategies in predicting change in parenting efficacy and depressive symptoms among mothers of adolescents with developmental disabilities. *Journal of Intellectual Disability Research, 57*(6), 513–530.

Woodman, A. C., Mawdsley, H. P., & Hauser-Cram, P. (2015). Parenting stress and child behavior problems within families of children with developmental disabilities: Transactional relations across 15 years. *Research in Developmental Disabilities, 36,* 246–276.