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Associations Among Respite Care, Uplifts, Stress, and Marital Quality of Parents of Children with Autism Spectrum Disorder and Down Syndrome

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Associations Among Respite Care, Uplifts, Stress, and
Marital Quality of Parents of Children with Autism
Spectrum Disorder and Down Syndrome

Jamie Kaye Easler

A thesis submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of

Master of Science

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ABSTRACT

Associations Among Respite Care, Uplifts, Stress, and Marital Quality of Parents of Children with Autism Spectrum Disorder and Down Syndrome

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Master of Science

This study compared the relationships among respite care, uplifts, stress, and marital quality across two different groups of caregivers—102 heterosexual married couples with children with autism spectrum disorder (ASD) and 111 heterosexual married couples with children with Down syndrome (DS). This study also investigated if the effect of respite care on stress and marital quality varied as a function of the amount of uplifts these caregivers experienced. Participants completed self-report surveys. Three two-group Actor Partner Interdependence Models were estimated to calculate the direct, indirect, and partner-effects among these variables. Respite care was not related to stress for either groups of parents, but it was positively associated with husband and wife marital quality for parents of children with ASD. Uplifts were negatively associated with stress and positively associated with marital quality for both husbands and wives with children with ASD, but only for wives with children with DS. Furthermore, when husbands and wives with children with ASD reported more weekly respite hours and daily uplifts, wives tended to report more daily stress. However, as husbands and wives reported less weekly respite care and more daily uplifts, wives tended to report less daily stress. Implications for these findings are discussed.

Keywords: autism, Down syndrome, husband, wife, respite care, stress, uplifts, marital quality

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Associations Among Respite Care, Stress, Uplifts, and Marital Quality for Parents
of Children with Autism Spectrum Disorder and Down Syndrome

Taking care of a child with a disability is a 24/7 and 365-day taxing incessant job (Doig, McLennan, & Urichuk, 2009), leaving many caregivers fatigued and burnt out (Giallo, Wood, Jellett, & Porter, 2013). One foster mom relates her stressful experience:

[the 2-year-old]...[spit]...[in] my face...I slapped him...the kids were taken...It broke my heart...I wanted a break....1 day a week...couple hours in the afternoon...they never listened...‘till I...came to the breaking point...' (Doig et al., 2009, p. 236)

Parents who feel high levels of stress and have limited resources to cope may be more likely to engage in harsh forms of physical punishment (Tucker & Rodriguez, 2014) like the one portrayed in this narrative. However, despite high levels of stress, many parents who acquire appropriate resources can reduce strain on themselves and their family relationships (Samadi, McConkey, & Kelly, 2012), learn to positively cope (Minnes, Perry, & Weiss, 2015), and perceive their situation as rewarding (Hodapp, Ly, Fidler, & Ricci, 2001). In this study, I investigated how respite care and daily uplifts might help decrease stress and increase marital quality for parents of children with autism spectrum disorder (ASD) and Down syndrome (DS).

ABC-X Model of Stress

Family stress theory suggests that stress occurs as significant change disrupts the family's equilibrium and family members are no longer able to perform normal roles and tasks at optimal physical or psychological levels (McCubbin & Patterson, 1982). As families respond to stressors (A; events that cause change to family roles, boundaries, values, structures, or processes) with appropriate resources (B; characteristics or abilities that individuals, family, or community provide to protect the family from the impact of the stressor) and appraisal (C; how the family

defines the stressor), they may be more likely to adapt to stressful circumstances and reduce negative outcomes like family system breakdown. Resources like respite care and daily uplifts may contribute to lower levels of parental stress and higher levels of marital quality.

Marital Quality

Enhanced marital quality may have a greater influence on lowering parental stress and depression for parents of children with disabilities than even socio-economic status, child characteristics, and social support (Ekas, Lickenbrock, & Whitman, 2010; Kersh, Hedvat, Hauser-Cram, & Warfield, 2006). Perhaps, spouses act as emotional resources for their partners by understanding how the other partner feels about their caregiving responsibilities, worries, and concerns, or as informational resources relying on each other to creatively resolve issues in caregiving together (Ekas et al., 2010). While it is important to understand that marital quality is a resource that parents of children with disabilities can use to reduce caregiver strain, little research has examined specific resource variables that might contribute to improved marital quality for caregivers who experience high levels of stress and low levels of couple satisfaction.

Furthermore, of the little research that has explored marital quality among parents of children with disabilities, the majority has neglected to link mother and father data. Kersh et al. (2006) investigated marital quality and well-being among parents of children with developmental disabilities, but analyzed mother and father data separately rather than assuming non-independence of dyadic data (Kenny & Cook, 1999). Assuming independence of data when investigating interdependent relationships may paint an inaccurate story. Family systems theory suggests that in interpersonal relationships one person's emotional state could influence their partner's emotional state (Cook & Kenny, 2005). For instance, a husband's feelings of stress might influence his wife's perception of marital quality because his emotional state will

influence hers; their scores are linked, not separate. To capture a more complete picture of how specific resources may be related to marital quality, research should account for these partner-effects.

Respite Care

A highly needed and desired external resource (Lund, Utz, Caserta, & Wright, 2009) for caregivers who experience overwhelming responsibilities and demands (Harper, Dyches, Harper, Roper, & South, 2013) is respite care. Respite care is a direct service for families to take time away from daily caregiving responsibilities and is available through various sources, including professional services and extended family (Langer et al., 2010). Respite care may help improve marital quality by reducing rates of burnout, increasing parental well-being (Cowen & Reed, 2002), and allowing caregivers to take time for their own needs as well as their spouse's needs (Resch et al., 2010). Although research has linked respite care to a variety of positive caregiver and family outcomes including improvements in life satisfaction and relationship quality among family members (Cowen & Reed, 2002), few studies have specifically examined the direct association between respite care and marital quality. Harper et al. (2013) found that an extra hour of weekly respite for couples with children with ASD was associated with a six to seven point increase in perceived marital quality, a possible difference between being distressed or non-distressed as a couple. These findings suggest that respite care plays an important part in helping couples perceive their relationships in a more positive way.

Daily Uplifts

Other external resources that may counterbalance daily stress are daily uplifts, or pleasant positive experiences associated with caregiving (DeLongis, Folkman, & Lazarus, 1988). Uplifts for caregivers with children with disabilities might include celebrating milestones, feeling a

connection with the child, or seeing the child happily engaging in enjoyable activities (Corman, 2009). These little moments can be richly rewarding and may make caregiving a satisfying experience.

Uplifts with the child with a disability may promote positive appraisal of caregiving demands, the capacity to engage positively in caregiving responsibilities, and improved caregiver well-being (Larson, 2010). In research with parents of children with cerebral palsy, those who experienced more uplifts and less stress reported the highest levels of quality of life, while those who experienced the lowest amounts of uplifts and highest levels of stress had the lowest quality of life (Carona, Pereira, Moreira, Silva, & Canavarro, 2013). Parents who experienced large amounts of stress and large amounts of uplifts still reported better quality of life than parents who experienced low amounts of stress and low amounts of uplifts. For parents of children with ASD, an increase in uplifts was associated with improved marital quality (Harper et al., 2013).

The intensity and amount of uplifts that caregivers experience may vary across different disabilities. Mothers of children with DS tend to report more positive social interactions with their children compared to parents of children with other developmental disabilities (Mitchell, Hauser-Cram, & Crossman, 2015). No research has compared the associations among respite care, daily uplifts, and marital quality across parents of children with two different disabilities. As research recognizes possible differences that exist in resources across disabilities, professionals may be better able to assist parents who experience less of one resource (e.g., uplifts) by increasing the amount of another resource (e.g., respite care). Doing so may reduce stress and improve individual and family outcomes. For this reason, this study explored possible differences in levels of respite care, uplifts, and their association with marital quality using data from both parents of children with ASD and parents of children with DS.

Furthermore, there may be more than only a direct association among these variables and marital quality. Certainly providing breaks can give caregivers more time to communicate with their spouse and focus on the needs of their relationship. However, what if respite care is not used for these purposes, but rather is used to take care of other errands like grocery shopping, going to the doctor, or catching up on sleep? Taking care of these other responsibilities may help reduce stress for caregivers. If this is the case, then respite may not be directly related to marital quality. Rather, it may be indirectly related to marital quality through a mediating variable such as stress. Few studies have addressed these implications specifically. However, research has suggested that as external stress (e.g., caregiver stress) persists, it may spill over into other areas of a person's life (e.g., marital relationship) and negatively influence their perception of that area (Neff & Karney, 2004). Coping effectively with external stress (Brock & Lawrence, 2008) may help to reduce stress spill-over and increase marital quality. For these reasons, this study included stress as a mediating variable between respite, uplifts, and marital quality for parents of children with ASD and parents of children with DS.

Stress as a Mediating Variable among Respite, Uplifts, and Marital Quality

Research suggests that parents of children with disabilities generally report higher levels of stress compared to parents of typically developing children (Perry, Harris, & Minnes, 2004). High levels of caregiver stress may lead to negative perceptions of couple relationship (Neff & Karney, 2004), a decrease in partner communication, and less time spent together (Berge, Patterson, & Reuter, 2006). These factors may contribute to lower levels of marital satisfaction for these parents (Neff & Karney, 2004; Berge et al., 2006). Just as caregivers may experience different amounts of uplifts, caregivers also experience different amounts of stress. Parents of

children with ASD report higher levels of stress compared to parents of children with DS (Dabrowska & Pisula, 2010). Below are some possible reasons that these differences may exist.

Ambiguous Nature and Cause of ASD

While scientists know that DS is a result of a genetic chromosomal disorder, science has yet to identify a specific cause for ASD (e.g., genetics or environment; Rosenblatt & Carbone, 2013), which may cause parents to feel excessive guilt for their child's diagnosis. ASD symptoms typically are not apparent until three years old, making it difficult to detect ASD at an early age, whereas screening tests for DS may begin prenatally (Pennings et al., 2015). Knowing the diagnosis of a child prenatally can give parents options to abort the fetus or provide moderate time to prepare emotionally and temporally to raise a child with a disability. In contrast, parents of children with ASD may be uncertain how to best care or respond to their child until later than four years old (Dabrowska & Pisula, 2010).

Deficits in Social Communication and Behavioral Problems

Deficits in social communication and responsiveness in children with ASD (Griffith, Hastings, Nash, & Hill, 2010), as well as the increased likelihood of aggression and self-destructive behaviors (Povee, Roberts, Bourke, & Leonard, 2012), may lead parents to feel overwhelmed, burnt out, and desperate. On the other hand, where children with DS tend to exhibit more social awareness and social motivation than even some neurotypically developing children (Way & Rojahn, 2012), these social connections may act as a motivator for parents (Smith, Ronski, Sevcik, Adamson, & Barker, 2014) to overlook factors limiting their child.

Sense of Isolation

Parents of children with ASD may also feel isolated due to higher levels of dependency and management associated with caring for a child with ASD compared to a child with DS

(Dabrowska & Pisula, 2010). The need for constant supervision may limit family opportunities or time with their spouse for these caregivers (Myers, Mackintosh, & Goin-Kochel, 2009). Additionally, there is an increased likelihood for parents to have multiple children with ASD because of the high risk of recurrence in siblings (Grenborg, Schendel, & Parner, 2013). These couples may have even less opportunity to take breaks or spend time with each other, which may add to feelings of isolation, caregiver burden, and lower levels of couple adjustment.

Hypotheses

This study aimed to bridge the gaps in research concerning parents of children with disabilities by investigating the specific resource variables (uplifts and respite) that are associated with positive marital quality, as well as a mediating variable (stress) associated with these variables and marital quality, using an actor-interdependence model. I tested the following hypotheses:

1. Levels of respite care, uplifts, and marital quality will be lower, while stress levels will be greater for parents of children with ASD than parents of children with DS.
2. Level of respite care and daily uplifts will be negatively associated with daily stress and positively associated with perceived marital quality for both groups of parents. Husband and wife daily stress will be negatively related to both husband and wife marital quality and their uplifts will be positively related to their marital quality (actor and partner effects).
3. The relationship between respite care and marital quality, as well as the relationship between daily uplifts and marital quality, will be significantly mediated by daily stress for both groups of parents.

4. Respite care and uplifts will have a greater influence on stress and marital quality for parents of children with DS than for parents of children with ASD.
5. Finally, when respite care and uplift levels are high then stress levels will be low and perceived marital quality will be greater. When respite care and uplift levels are low then stress levels will be high and perceived marital will be lower.

Methods

Participants

Participants were 112 heterosexual married couples—husbands and wives—with children with ASD and 112 heterosexual married couples with children with DS. On average, fathers of children with ASD were 39.21 years old ($SD = 6.89$); mothers were slightly younger ($M = 38.01$ years, $SD = 7.04$). Fathers of children with DS were also older ($M = 39.37$ years, $SD = 7.93$) than mothers ($M = 37.79$ years, $SD = 7.89$). On average, parents of children with ASD were married for 11.89 years ($SD = 3.12$); parents of children with DS were married for 10.89 years ($SD = 7.74$). Children with ASD ranged from 1 to 17 years old ($M = 7.47$; $SD = 3.56$), whereas children with DS ranged from 6 months to 39 years old ($M = 6.43$; $SD = 6.55$). Parents of children with ASD had more children ($M = 3.09$; $SD = 3.12$) than parents of children with DS ($M = 2.65$; $SD = 1.25$). The majority of all parents (over 82.2%) were white. Almost one-quarter (24.5%) of wives and 19.6% of husbands with children with ASD were considered to be distressed in their marriage. In contrast, only 1.8% of husbands and 9.0% of wives who were parents of children with DS were considered to be distressed in their marriages.

Procedure

After receiving approval from appropriate Institutional Review Boards, ASD organizations (e.g., Autism Speaks), DS organizations (e.g., National Association for Down

Syndrome, National Down Syndrome Congress), and local and regional ASD and DS schools/programs were contacted to recruit parents of children with ASD and DS using paper and electronic formats. Parents of children with ASD and DS were additionally recruited using autism-and-Down-syndrome-specific email list serves. Additionally, Facebook was used to recruit parents of children with ASD. Participants were notified that the survey was available online via Qualtrics. The two eligibility requirements for participation in the study were: (a) parents had a child with a medical diagnosis (or as evidenced by an IEP) of ASD or a medical diagnosis of DS, and (b) parents were in a heterosexual married relationship. Informed consent was obtained before husbands and wives each completed the survey independently. Couples received a \$25 gift card as compensation.

Measures

Marital quality. Marital quality was assessed using the Revised Dyadic Adjustment Scale (RDAS; Busby, Christensen, Clark, Crane, & Larson, 1995), a 14-item scale that evaluates the consensus (e.g., how often couple agreed on religious matters or major decisions), stability (e.g., how often couple discussed terminating their relationship), and cohesion (e.g., how often couple exchanged ideas or worked together) of a marital relationship. Participants rated items on a 6-point Likert scale; consensus anchors were 0 (*Always Disagree*) and 5 (*Always Agree*); stability anchors were 0 (*All of the Time*) and 5 (*Never*); and cohesion anchors were 0 (*Never*) and 5 (*More often than once a day*). Stability items were reverse-coded so that higher scores on all subscales indicated higher levels of consensus, stability, and cohesion between married partners. Items were summed to create an overall marital quality for both husbands and wives. Scores ranged from 0 to 70. Higher scores indicated higher levels of perceived marital quality; scores below 48 suggested that couples were distressed, while scores above 48 suggested that

couples were non-distressed. The RDAS showed good reliability for parents of children with ASD (husbands was $\alpha = .95$; wives was $\alpha = .96$) and DS (husbands was $\alpha = .85$; wives was $\alpha = .83$).

Daily hassles and uplifts. Daily hassles and uplifts were assessed using the Hassles and Uplifts Scale (HUS; Lazarus & Folkman, 1984). Hassles are daily events, activities, or tasks that are perceived as routine nuisances, while uplifts are events that make individuals feel good, happy, or satisfied. Parents rated 53 items on a 4-point Likert scale (0 = *Not at all* to 3 = *Extreme*) in regards to how much each item was considered to be a daily hassle or uplift. Sample items included, “Your children,” “Your spouse,” and “Family-related obligations.” An intensity score for hassles and uplifts that identified how much each item bothered or satisfied participants was calculated by summing all items from the hassles and uplifts measure. Scores ranged from 0 to 212. Cronbach’s alpha for daily hassles for parents of children with ASD was $\alpha = .97$, while it was $\alpha = .95$ for husbands and $\alpha = .95$ for wives with children with DS. Reliability for daily uplifts for parents of children with ASD was good (husbands was $\alpha = .96$; wives was $\alpha = .95$). Reliability for daily uplifts was $\alpha = .95$ for parents of children with DS.

Respite care. Respite care was assessed using the Respite Care Instrument (Harper et al., 2013) as “planned care for the child with ASD and DS to provide relief to the permanent caregiver” and was offered through various sources such as extended family, babysitters, community agencies, or other means the parents identified. Parents reported the amount of weekly respite care they received in hours and minutes during a typical week (Sunday through Saturday). The amount of respite care was converted into hours, rounded up, and summed for all children in the family with ASD or DS. If parents had more than one child who received respite services at the same time, the amount of respite care was only counted once for that couple.

Husbands' and wives' reports of received respite care were summed and averaged together to create one manifest variable called respite.

Demographic variables. Participants completed a questionnaire that assessed demographic variables and the medical diagnoses of the child and/or children.

Analysis Plan

Descriptive statistics including means, standard deviations, and correlations were calculated for all study variables. Analyses of variance investigated differences in mean levels of respite care, stress, uplifts, and marital quality for parents of ASD children and parents of DS children. Three two-group Actor Partner Interdependence Models (APIMs; Kenny, Kashy, & Cook, 2006) were estimated to calculate the effect the amount of husband and wife respite care and uplifts had on husband and wife stress and marital quality for parents of children with ASD and parents of children with DS. In order to estimate direct and indirect effects in Amos 23.0 (Arbuckle, 2014), missing data was removed from the datasets which reduced sample sizes from 112 to 102 couples with children with ASD and 112 to 111 couples with children with DS.

The baseline model included respite care and husband and wife uplifts as exogenous variables to measure their direct and indirect effects on husband and wife stress and perceived marital quality. I also measured partner effects from wife daily uplifts to husband marital quality; husband daily uplifts to wife marital quality; wife daily stress to husband marital quality; and husband daily stress to wife marital quality (Figure 1). In the second model, I created an interaction effect for husband uplifts and respite care as an exogenous variable to measure its direct and indirect effect with husband and wife stress and perceived marital quality. To avoid multicollinearity among the interaction effect and the respite and husband uplift variables, respite care and husband uplifts were centered, and the interaction was created using the centered

husband uplifts and respite care variables (Figure 2). In the third model, I included an interaction effect among wife uplifts and respite care as an exogenous variable. Respite care and wife daily uplifts also were centered in this model, and these variables were used to create the interaction (Figure 3). Using these interaction effects, the purpose was to investigate the effect of respite care on husband and wife stress and husband and wife perceived marital quality varied as a function of the amount of uplifts these caregivers experienced. Unstandardized and standardized beta coefficients were calculated to determine the strength of the direct and indirect paths for the three structural models. Lastly, I compared the direct and indirect paths of all three models across parents of children with ASD and parents of children with DS to determine if paths differed for these two groups of parents. In all models I controlled for length of marriage, as well as the age of the child with ASD or DS, because past research indicates they may be associated with marital quality (Knoke, Burau, & Roehrle, 2010; Rivard, Terroux, Parent-Boursier, & Mercier, 2014).

Results

Mean Differences

To test the first hypothesis, four mixed between-within subjects analyses of variance (ANOVAs) were calculated. In each ANOVA, the between subjects factor was type of disability (ASD, DS) and the within subjects factor was partner (husband, wife). The dependent variables were levels of respite care, uplifts, stress, and marital quality.

When weekly respite hours was the dependent variable, there was no significant interaction between partner and type of disability, Wilks' Lambda = 1.0, $F(1, 211) = .29, p = .59$ (Table 1). The main effects for disability, $F(1, 211) = .20, p = .65$, and couple, Wilks' Lambda = 1.0, $F(1, 211) = .001, p = .97$, also were not significant.

There was no significant interaction between partner and type of disability, Wilks' Lambda = 1.0, $F(1, 211) = .97$, $p = .33$, when daily uplifts was the dependent variable. The main effect for disability was significant, $F(1, 211) = 8.02$, $p = .005$. Parents of children with ASD reported fewer daily uplifts ($M = 101.47$) than parents of children with DS ($M = 110.81$). The main effect for couple was not significant, Wilk's Lambda = 1.0, $F(1, 211) = .27$, $p = .61$.

When daily stress was the dependent variable, there was no significant interaction between partner and type of disability, Wilks' Lambda = .98, $F(1, 211) = 3.78$, $p = .053$. The main effect for disability was significant, $F(1, 211) = 23.18$, $p < .001$. Parents of children with ASD reported higher levels of daily stress ($M = 115.33$) than parents of children with DS ($M = 96.19$). The main effect for couple was also significant, Wilk's Lambda = .97, $F(1, 211) = 6.25$, $p = .01$. Husbands reported lower levels of daily stress ($M = 103.91$) than wives ($M = 107.61$).

There was no significant interaction between partner and type of disability, Wilks' Lambda = .99, $F(1, 211) = 3.02$, $p = .08$, when marital quality was the dependent variable. The main effect for disability was significant, $F(1, 211) = 13.00$, $p < .001$. Parents of children with ASD reported lower marital quality ($M = 55.75$) than parents of children with DS ($M = 61.72$). The main effect for couple was also significant, Wilk's Lambda = .98, $F(1, 211) = 5.32$, $p = .02$. Husbands ($M = 59.31$) reported higher levels of marital quality than wives ($M = 58.16$). These findings partially supported the first hypothesis.

Relationships Among Variables

Bivariate correlations indicated that for parents of children with ASD, all study variables were associated with each other, except for husbands and wives' respite care with husbands and wives' daily stress (Table 2). For parents of children with DS, husbands' respite care was not associated with any other study variable. However, wives' respite care was positively associated

with husbands' respite and negatively associated with wives' stress (Table 2). All other study variables were associated with each other for both husbands and wives of children with DS.

Structural Equation Models

Using multiple group comparisons in Amos 23.0 (Arbuckle, 2014), I tested an unconstrained structural model (the baseline model, Table 3) that included respite care and husband and wife uplifts as exogenous variables, husband and wife stress as mediating variables, and husband and wife perceived marital quality as dependent variables. I also tested partner effects. Length of marriage (reported in years) and the child with a disability's age were controlled for in the model. The unconstrained model was considered to have acceptable model fit, $\chi^2 (2) = 2.97, p = .23$; CFI = .999; TLI = .963; RMSEA = .048.

To test the fourth hypothesis, I tested a fully constrained model, where all the structural paths were constrained to be equal for parents of children with ASD and parents of children with DS. Model fit for this model was unacceptable, $\chi^2 (18) = 48.78, p < .001$; CFI = .90; TLI = .87; RMSEA = .09. Additionally, chi-square difference tests showed that the fully-constrained model significantly worsened model fit when compared to the unconstrained model (difference in chi-square absolute fit between the two models was 45.81; difference between the degrees of freedom was 16; the chi-square difference value needed at the .05 p-level was 26.30). Thus, the structural paths for parents of children with ASD significantly differed from the structural paths for parents of children with DS. To determine which specific structural paths were different in these two groups, I constrained each structural path one at a time.

Chi-square difference tests showed that constraining the following structural paths by themselves significantly worsened model fit when compared to the unconstrained model: respite care to wife marital quality (difference in chi-square absolute fit was 5.21; difference between

the degrees of freedom was 1; the chi-square difference value needed at the .05 p-level was 3.84); respite care to husband marital quality (difference in chi-square absolute fit was 4.18; difference between the degrees of freedom was 1); and husband daily uplifts to husband daily stress (difference in chi-square absolute fit was 5.42; difference between the degrees of freedom was 1). These findings suggest that these three structural paths were significantly different for parents of children with ASD and parents of children with DS. Overall, the unconstrained model had the best model fit.

The second hypothesis was partially supported. In the unconstrained model, for parents of children with ASD, respite care was not directly related to husbands or wives' daily stress, but it was positively associated with husband and wife marital quality ($\beta = .14, p = .02$ and $\beta = .15, p = .006$, respectively). Husbands and wives' daily uplifts were negatively associated with their own daily stress ($\beta = -.38, p = .006$; $\beta = -.31, p = .02$), and positively associated with their marital quality ($\beta = .24, p = .006$; $\beta = .34, p < .001$). Furthermore, husbands and wives' daily stress was negatively related to their marital quality ($\beta = -.38, p < .001$; $\beta = -.35, p < .001$). Partner effects were only significant regarding the associations among husbands' daily stress and wives' marital quality ($\beta = -.21, p = .02$) and wives' daily uplifts and husbands' marital quality ($\beta = .18, p = .04$).

For parents of children with DS, respite care was not directly related to husbands or wives' daily stress or marital quality. Only wives' daily uplifts were negatively associated with their own daily stress ($\beta = -.31, p = .006$) and positively associated with their own marital quality ($\beta = .34, p = .003$). Furthermore, husbands and wives' daily stress were negatively related to their marital quality ($\beta = -.37, p < .001$; $\beta = -.27, p = .02$). Partner effects were only significant

regarding the associations among wives' daily uplifts and husbands' daily stress ($\beta = -.25, p = .04$), as well as wives' daily uplifts and husbands' marital quality ($\beta = .23, p = .03$).

Results indicated the third hypothesis was partially supported. For parents of children with ASD, significant standardized indirect effects were found among husbands' daily uplifts and marital quality through their daily stress ($\beta = .18, p = .01$); husbands' daily uplifts and wives' marital quality through wives' daily stress ($\beta = .17, p = .02$); and among wives' daily uplifts and marital quality through their daily stress ($\beta = .15, p = .02$). For parents of children with DS, standardized indirect effects were found among respite care and husbands' marital quality through husbands' daily stress ($\beta = .06, p = .03$); respite care and wives' marital quality through wives' daily stress ($\beta = .06, p = .03$); wives' daily uplifts and husbands' marital quality through husbands' daily stress ($\beta = .10, p = .04$); and wives' daily uplifts and wives' marital quality through wives' daily stress ($\beta = .11, p = .01$).

I next tested two unconstrained models that included an interaction among weekly respite hours and husbands' daily uplifts for both groups of parents. For parents of children with ASD, model fit indices did not change from the unconstrained baseline model when we added the interaction term. The interaction among weekly respite hours and husbands' daily uplifts was positively associated with wives' daily stress ($\beta = .26, p = .006$). Standardized indirect effects were found among the interaction effect (respite and husband uplifts) and wives and husbands' marital quality through wives' daily stress ($\beta = -.11, p = .05$ and $\beta = -.13, p = .03$). In order to interpret this interaction effect, low and high levels of respite and low and high levels of husband uplifts were calculated by using one standard deviation below and one standard deviation above the means of these variables (Figure 4). Findings did not support the fifth hypothesis.

Adding the interaction effect slightly changed some of the structural paths. Respite care and wife marital quality were still positively related with each other, but their relationship became less significantly related to each other. Husband daily uplifts and husband daily stress were still negatively related to each other, but the relationship among them became slightly stronger. The relationship among wife daily uplifts and wife daily stress became non-significant, while the relationship among husband daily uplifts and wife daily stress became significant when we added the interaction effect among respite care and husbands' daily uplifts. All other structural paths remained the same as the unconstrained baseline model (Table 3).

For parents of children with DS, model fit indices did not change from the baseline model when we added the interaction term. The interaction among weekly respite hours and husbands' daily uplifts was not significant (Table 3).

Lastly, I tested a third unconstrained model that included an interaction among weekly respite hours and wives' daily uplifts for both groups of parents. Again, model fit indices did not change when we added the interaction term to the model. For parents of children with ASD, the interaction among weekly respite hours and wives' daily uplifts was positively associated with wives' levels of daily stress ($\beta = .25, p = .005$), but not marital quality. Standardized indirect effects were found among the interaction effect (respite care and wives' daily uplifts) and wives' marital quality through wives' daily stress ($\beta = -.13; p = .04$). Again, low and high levels of respite and low and high levels of wife uplifts were calculated by using one standard deviation below and one standard deviation above the means of these variables (Figure 5). Findings did not support the fifth hypothesis.

Adding the interaction effect, respite care and wife marital quality became less significantly positively related to each other. Husbands' daily uplifts and husbands' daily stress

were still negatively related to each other, but the relationship among them became weaker as well. Furthermore, while the association among husbands' daily uplifts and husbands' daily stress remained significant, the association among husbands' daily uplifts and wives' daily stress became non-significant in this model (Table 3).

For parents of children with DS, model fit indices did not change from the baseline model when we added the interaction term to the model. The interaction term among weekly respite hours and wives' daily uplifts was not significant (Table 3).

Discussion

This study aimed to bridge the gaps in research concerning parents of children with disabilities by investigating the relationship among respite care, daily uplifts, daily stress, and marital quality for parents raising children with ASD and DS using an actor-interdependence model. The first hypothesis was partially supported. There were no differences in levels of weekly respite care received for parents of children with ASD and parents of children with DS. However, parents of children with ASD did report fewer daily uplifts, more daily stress, and lower levels of marital quality compared to parents of children with DS. As husbands and wives experience more daily stressors and fewer daily uplifts, they may be more likely to view their relationship negatively (Stoneman & Gavidia-Payne, 2006). This may explain why parents of children with ASD tend to report lower levels of couple satisfaction compared to parents of children with DS (Santamaria, Cuzzocrea, Gugliandolo, & Larcan, 2012). As previously suggested, parents of children with ASD may report more stressors and fewer uplifts because their children may struggle with challenging aggressive and self-destructive behaviors (Povee et al., 2012), difficulties in forming reciprocal relationships with their caregivers (Falk, Norris, & Quinn, 2014), and have higher levels of dependency compared to children with DS (Way &

Rojahn, 2012; Dabrowska & Pisula, 2010). Again, the need for constant supervision of a child with ASD compared to a child with DS may also explain differences in couple satisfaction (Myers et al., 2009). If parents are constantly worried about having to manage and supervise their child, they may have less time for their own and their spouse's needs.

Furthermore, wives in this study reported higher levels of stress and lower levels of marital quality compared to husbands. Research has suggested that mothers of children with ASD tend to report higher levels of stress compared to fathers (Tehee, Honan, & Hevey, 2009), while other research has found that mothers and fathers of children with DS tend to report similar levels of stress (Dabrowska & Pisula, 2010). Some research suggests that there may be some bias in the way that studies typically measure stress. This may explain why studies show mothers reporting higher levels of stress regarding their child with ASD. For instance, one study found that mothers of children with ASD reported more caregiving responsibility, anxiety, and depression compared to fathers; however, both parents had low levels of cortisol in the morning suggesting that stress was affecting both mothers' and fathers' health (Foody, James, & Leader, 2015), and that fathers still struggle with physiological aspects of caregiving stress. Little research has investigated gender differences in marital satisfaction among parents of children with disabilities. However, some marriage research shows that men tend to report higher levels of marital satisfaction compared to women (Jackson, Miller, Oka, & Henry, 2014).

The second hypothesis was also partially supported. Respite care was not related to stress for either group of parents, but it was positively associated with husband and wife marital quality for parents of children with ASD. As husbands and wives with children with ASD received more respite care, they reported higher levels of marital quality. Because some children

with ASD may need constant child supervision, caregivers may take advantage of respite care as a resource to spend time together as others provide relief from their caregiving responsibilities.

Additionally, this study found that for parents of children with ASD, as husbands and wives reported more daily positive experiences, they tended to report less daily stress and higher levels of perceived marital quality. When mothers of children with DS reported more daily positive experiences, they tended to report less daily stress and higher levels of perceived marital quality. Research has shown the importance that uplifts can play in positive psychological outcomes for parents of children with severe disabilities (Carona et al., 2013), but few studies have specifically investigated the impact that daily uplifts might have on daily stress itself. The ABC-X Model of Stress postulates that as individuals and families respond to changes to family structure by positively appraising the situation, they may be more likely to adapt and reduce negative outcomes. Because uplifts are pleasant positive experiences perceived by the caregiver, they may act as a buffer against negative outcomes like stress and poor marital quality. As caregivers with children with ASD or DS are able to recognize positive experiences in their daily caregiving responsibilities (e.g., connecting with their child or seeing their child happy), they may be more likely to reduce the impact of stress associated with caregiving responsibilities on their own life, as well as their couple relationship.

Some partner effects were found for both parents of children with ASD and parents of children with DS. For parents of children with ASD, as husbands reported higher levels of daily stress, their wives reported lower levels of marital quality. As wives reported more daily uplifts, their husbands reported higher levels of marital quality. For parents of children with DS, as wives reported more daily uplifts, their husbands reported less daily stress and higher levels of marital quality. These findings support research that suggests that one spouse's emotional state

can influence the emotional state of the other spouse (Stoneman & Gavidia-Payne, 2006).

Professionals should consider this as they make recommendations for services to include both husbands and wives so that they may take time for their own needs in order to be a source of emotional support for their spouse.

Findings partially supported the third hypothesis, which suggested that stress would significantly mediate the relationship among uplifts and marital quality and respite care and marital quality. For parents of children with ASD, the relationship between respite care and marital quality was not significantly mediated by stress; however, it was for husbands and wives with children with DS. The relationship between respite care and husband marital quality was significantly mediated by their daily stress; the relationship among respite and wives' marital quality by wives' daily stress. It seems that as husbands and wives with children with DS receive more weekly respite care, it may help to improve their marital quality by reducing their own levels of daily stress. More respite care has been found to be associated with a decreased level of stress in caregivers of children with ASD (Harper et al., 2013).

Results suggest that as husbands with children with ASD experience more daily uplifts, it may help to improve marital quality for them and their wife by reducing their own levels of daily stress. However, as wives with children with ASD experience more daily uplifts, it may help to improve their own marital quality, not their spouse, by reducing their own levels of daily stress. Additionally, as wives with children with DS experience more daily uplifts, it may help to improve their own and their husband's marital quality by helping to reduce their own and their spouse's levels of daily stress. Although past research has shown direct associations among uplifts and marital quality, no research has investigated the mediating relationship of stress among uplifts and marital quality. These findings show the importance of how positive daily

experiences help improve marital quality for caregivers and their spouses by reducing daily levels of stress.

The fourth hypothesis was not supported. Although structural paths for parents of children with ASD were different compared to the structural paths for parents of children with DS, respite care and uplifts did not have a greater influence on stress and marital quality for parents of children with DS. Rather, respite care was only directly related to husband and wife marital quality for parents of children with ASD, and was not related to husband and wife stress for either groups of parents. Uplifts also had a greater influence on both husbands and wives' daily stress and marital quality for parents of children with ASD. For parents of children with DS, only wife daily uplifts were related to their own daily stress and marital quality. There may be more significant associations among respite and marital quality, as well as uplifts and marital quality for parents of children with ASD compared to parents of children with DS because raising a child with ASD may be more challenging and stressful (Dabrowska & Pisula, 2010). Respite and uplifts may play a greater role for caregivers who experience greater levels of stress.

I hypothesized that when respite care and uplift levels were high then stress levels would be low and perceived marital quality would be greater and that when respite care and uplift levels were low then stress levels would be high and perceived marital would be lower. This was not supported. I found that when husbands reported more weekly respite hours and daily uplifts, their wives tended to report more daily stress. However, as husbands reported less weekly respite care and more daily uplifts, their wives tended to report less daily stress (Figure 4). The same was found for wives. As wives reported more weekly respite care and daily uplifts, they also reported more daily stress. However, as wives reported less weekly respite care and more daily uplifts they reported less daily stress (Figure 5). Indirect effects were found among respite

and husband uplifts and wives' and husbands' marital quality through wives' daily stress. This suggests that as husbands with children with ASD experience more daily uplifts and lower levels of respite, it may help to improve husband and wife marital quality by reducing their own levels of daily stress. Indirect effects were also found between respite care and wives' daily uplifts and wives' perceived marital quality through wives' daily stress. Thus, in families of children with ASD, as wives experience more daily uplifts and lower levels of respite, it may help to improve their marital quality by reducing their own levels of daily stress. No significant interaction effects were found for parents of children with DS.

One explanation for these surprising findings may be that husbands and wives who experience high levels of stress may be more likely to seek out respite services. This may be why higher amounts of respite were associated with higher amounts of stress in wives of children with ASD. Since this study was cross-sectional, there is no way to test directionality of these findings. A longitudinal design is necessary to better understand if this hypothesis is correct.

These findings may also suggest that respite is a source of stress, rather than relief, for parents of children with ASD. Parents of children with ASD have expressed their concern that respite care is inadequate in meeting their needs as a caregiver (Higgins et al., 2005). Unique challenges like elopement (i.e., tendency of wandering off) that is typical in children with ASD (Solomon & Lawlor, 2013) may cause these parents to worry with whom they leave their child. Parents may worry that people who offer respite may not be qualified to manage aggressive behaviors or understand the need for constant supervision to prevent the child from wandering off into unsafe areas or situations (Langer et al., 2010). This study defined respite as any individual who gave parents breaks from their caregiving responsibilities, such as grandparents, extended family, babysitters, or sources that may have not been trained specifically to work with

children with ASD. Findings may suggest that parents of children with ASD need more professional respite workers who are educated and trained in understanding how to work with children with ASD to relieve parents' worries. This may help reduce stress in parents and allow them to take care of themselves and their spouse.

Limitations

Several limitations should be mentioned regarding this study. First, the majority of this sample were middle-aged and white. These factors may have influenced reports of marital quality and stress. Another limitation may be the way that stress is measured. Self-report measures may not always present a clear picture of how much stress caregivers experience. Husbands may not report as high of stress as wives, but they still may experience the effects of stress in other ways, as Foody et al. (2015) noted in their study. Another limitation was the smaller sample size. Our sample included only 102 heterosexual married couples with children with ASD and 111 heterosexual married couples with children with DS. Kline (2011) suggests that there should be a minimum of 10 participants for every one parameter that is estimated in the structural model. This study had a total number of 106 parameters. So according to Kline, this study should have at least 1,060 participants. A larger sample size may help to improve the accuracy of findings. Additionally, this is a cross-sectional study. In order to better understand and interpret some of the findings, especially the interaction effects, researchers would need to design a longitudinal study relating to the interaction among respite and uplifts and their association with stress. Doing so may make interpretations of these findings more clear.

Future Research Directions & Policy Implications

This study opens the door to understanding how respite may influence levels of stress and marital quality across caregivers of children with two different disabilities. Future research may

wish to investigate how these relationships vary for caregivers of children with other types of disabilities and chronic conditions. In doing so, respite services may be more adept to adapting to unique needs of the child and their families. This may increase the influence that respite has on negative caregiver outcomes, like stress.

Research may also wish to consider how other relationships could be positively affected by respite services by using similar models as in this study. These relationships may include same-sex couples, cohabitating couples, parent-child relationships (either relationship among parent and child with the disability, or parent and another child without the disability), and even sibling relationships with the child with a disability. Researchers should also consider using a more diverse sample of participants from varying socioeconomic and racial backgrounds. Results may vary depending on these factors. Research should also investigate variables like stress using not only self-report measures, but also other measures including physiological markers of stress (e.g., heart rate, blood pressure, cortisol levels) and even diary data. Providing data in different ways may give more insight into the associations among these variables.

Researchers may also wish to consider how professional respite compares to informal forms of respite (e.g., babysitters, extended family). Professional services may better meet the needs of the child and family because of specialized training and knowledge that these respite workers receive. If this is the case, policy makers should consider offering more hours of professional respite to caregivers, as well as to ensure that these services are adaptive towards the unique needs of the disability (e.g., ensuring all doors are locked so child will not wander or escape; Doig et al., 2009; Langer et al., 2009). This may help to reduce worry in caregivers who have children with more behavioral and challenging needs, like children with ASD, which in turn may help respite become a source of relief rather than a burden to caregivers.

Lastly, research should consider how uplifts play a vital role in stress and marital quality for these caregivers. Research suggests that the way one perceives (represented by the C in the ABC-X model) may be the most influential factor in how an individual or family responds to stressors (represented by the A in the ABC-X model; Boss, 2002). In this study, uplifts played a direct role in reducing stress for caregivers, while respite did not. It may be more important for professional services to focus on helping caregivers redefine their situation, rather than providing breaks, in order to help them reduce stress and improve family functioning.

Conclusion

This study aimed to compare the relationship among respite care, uplifts, stress, and marital quality for parents of children with ASD and parents of children with DS. By doing so, this study has helped researchers understand more in depth how respite, uplifts, stress, marital quality, and their relationships with each other vary across disability. This study has also investigated how husbands and wives' experiences with each of these variables may influence their partner's experience with these variables. Furthermore, this study sheds light on what specific resources contribute to positive marital relationships so that professionals are aware of what they can provide to these caregivers and their families.

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Table 1

Means, Standard Deviations, and Ranges for All Study Variables for Parents of Children with ASD and Parents of Children with DS

	Autism Spectrum Disorder						Down Syndrome					
	Wife			Husband			Wife			Husband		
	M	SD	Range	M	SD	Range	M	SD	Range	M	SD	Range
Respite	6.22	8.87	0-38	6.07	8.61	0-35	5.50	9.13	0-40	5.67	10.53	0-49
Stress	115.75	36.80	59-212	114.92	36.91	56-210	99.48	24.53	53-173	92.90	23.98	53-167
Uplifts	101.13	25.02	53-202	101.81	26.78	55-203	111.91	27.42	60-207	109.70	25.85	52-208
Marital Quality	56.61	15.80	14-83	55.89	15.02	14-83	60.71	9.93	30-77	62.73	8.66	38-83

Note. Descriptive statistics represented by the no-missing data sample size (i.e., $n = 102$ husbands and wives with children with ASD and $n = 111$ husbands and wives with children with DS). Respite is reported in the total number of hours per week child with ASD or DS receives. Higher means indicate higher levels of stress, uplifts, and marital quality that husbands and wives reported.

Table 2

Bivariate Correlations for Down syndrome and Autism Study Variables

	1	2	3	4	5	6	7	8
1. Wife Respite	--	1.0***	-.14	-.18	.33**	.35**	.21*	.33**
2. Husband Respite	.83***	--	-.14	-.18	.33**	.34***	.21*	.32**
3. Wife Stress Intensity	-.20*	-.14	--	.82***	-.74***	-.70***	-.50***	-.48***
4. Husband Stress Intensity	-.17	-.15	.62***	--	-.70***	-.73***	-.45***	-.50***
5. Wife Marital Quality	.04	-.02	-.42***	-.33***	--	.90***	.68***	.63***
6. Husband Marital Quality	.02	.07	-.33***	-.46***	.67***	--	.62***	.67***
7. Wife Uplift Intensity	.04	-.10	-.35***	-.23*	.40***	.39***	--	.74***
8. Husband Uplift Intensity	.13	.10	-.30**	-.18	.21*	.35***	.61***	--

Note. Down syndrome correlations are below the diagonal and autism correlations are above the diagonal. RDAS = Revised Dyadic Adjustment Scale. $n = 102$ husbands and wives with children with ASD and $n = 111$ husbands and wives with children with DS.

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

Table 3

Unstandardized and Standardized Coefficients for the Unconstrained Structural Paths for the Three Two-Group Models

	Model 1		Model 2		Model 3	
	ASD	DS	ASD	DS	ASD	DS
1. Respite Care and Wife Stress	.03(.01)	-.42(-.16)	-.41(-.10)	-.41(-.16)	-.23(-.06)	-.44(-.17)
2. Respite Care and Husband Stress	-.03(-.01)	-.41(-.16)	-.34(-.08)	-.39(-.15)	-.21(-.05)	-.43(-.17)
3. Respite Care and Wife Marital Quality	.28(.15)**	-.04(-.04)	.27(.15)*	-.05(-.05)	.26(.14)*	-.03(-.03)
4. Respite Care and Husband Marital Quality	.24(.14)*	-.02(-.02)	.24(.14)*	-.02(-.03)	.24(.14)*	-.03(-.03)
5. Wife Uplifts and Wife Stress	-.45(-.31)*	-.28(-.31)**	-.29(-.20)	-.28(-.31)**	-.36(-.25)	-.28(-.32)**
6. Wife Uplifts and Wife Marital Quality	.21(.34)***	.12(.34)**	.21(.34)***	.12(.34)**	.22(.34)***	.13(.34)**
7. Husband Uplifts and Husband Stress	-.51(-.38)**	-.01(-.01)	-.57(-.42)**	-.01(-.01)	-.47(-.35)*	-.01(-.01)
8. Husband Uplifts and Husband Marital Quality	.14(.24)**	.05(.15)	.14(.24)**	.05(.15)	.14(.24)**	.05(.15)
9. Wife Stress and Wife Marital Quality	-.15(-.35)***	-.11(-.27)*	-.15(-.35)***	-.11(-.28)*	-.16(-.36)***	-.11(-.27)*
10. Husband Stress and Husband Marital Quality	-.15(-.38)***	-.13(-.37)***	-.15(-.37)***	-.13(-.37)***	-.15(-.37)***	-.14(-.37)***
11. Wife Uplifts and Husband Stress	-.26(-.18)	-.22(-.25)*	-.15(-.10)	-.22(-.25)*	-.20(-.13)	-.23(-.26)*
12. Wife Uplifts and Husband Marital Quality	.11(.18)*	.07(.23)*	.11(.18)*	.07(.23)*	.11(.18)*	.07(.23)*
13. Husband Uplifts and Wife Stress	-.34(-.25)	-.07(-.08)	-.42(-.31)*	-.07(-.10)	-.28(-.21)	-.07(-.08)
14. Husband Uplifts and Wife Marital Quality	.04(.07)	-.04(-.10)	.04(.07)	-.04(-.10)	.05(.08)	-.04(-.10)
15. Wife Stress and Husband Marital Quality	-.07(-.17)	-.00(-.00)	-.07(-.17)	-.00(-.00)	-.07(-.18)	-.00(-.00)
16. Husband Stress and Wife Marital Quality	-.10(-.21)*	-.04(-.10)	-.10(-.21)*	-.04(-.10)	-.10(-.21)*	-.04(-.10)
17. Centered Husband Uplifts X Centered Respite and Husband Stress			.03(.18)	-.01(-.05)		

18. Centered Husband Uplifts X Centered Respite and Husband Marital Quality	.00(.00)	.00(.02)		
19. Centered Husband Uplifts X Centered Respite and Wife Stress	.05(.26)**	-0.00(-.01)		
20. Centered Husband Uplifts X Centered Respite and Wife Marital Quality	.00(.00)	.00(.07)		
21. Centered Wife Uplifts X Centered Respite and Wife Stress			.06(.25)**	-0.01(-.05)
22. Centered Wife Uplifts X Centered Respite and Wife Marital Quality			.00(.04)	.00(.04)
23. Centered Wife Uplifts X Centered Respite and Husband Stress			.04(.17)	-0.00(-.04)
24. Centered Wife Uplifts X Centered Respite and Husband Marital Quality			.00(.01)	-0.00(-.06)

Note. Unstandardized coefficients outside parentheses; standardized coefficients inside parentheses. Significant paths in boldface. Model 1 was the baseline model. Model 2 included centered respite, centered husband uplift, and centered respite and husband uplift interaction variables in the model (wife uplift was also included in the model but was not centered). Model 3 included centered respite, centered wife uplift, and centered respite and wife uplift interaction variables in the model (husband uplift was also included in the model but was not centered).

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

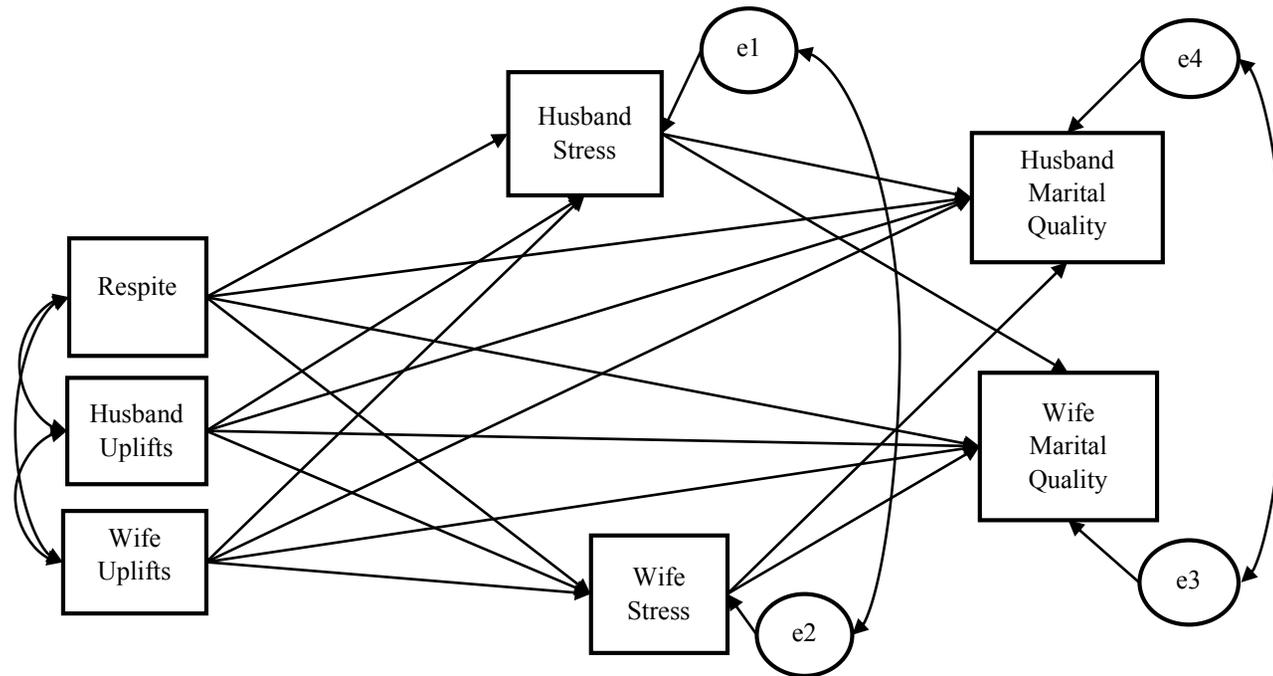


Figure 1. Hypothesized baseline model for both parents of children with ASD and parents of children with DS, with the total amount respite hours and wife and husband uplift intensity predicting husband and wife marital quality, and husband and wife stress intensity as potential mediating variables. Control variables included length of marriage reported in years using wife report, and age of child with ASD or DS. Covariances were drawn among control variables and all exogenous variables, except for respite care and the length of marriage. Theoretically, the number of years married should not be related to how much weekly respite care parents of children with ASD and DS received.

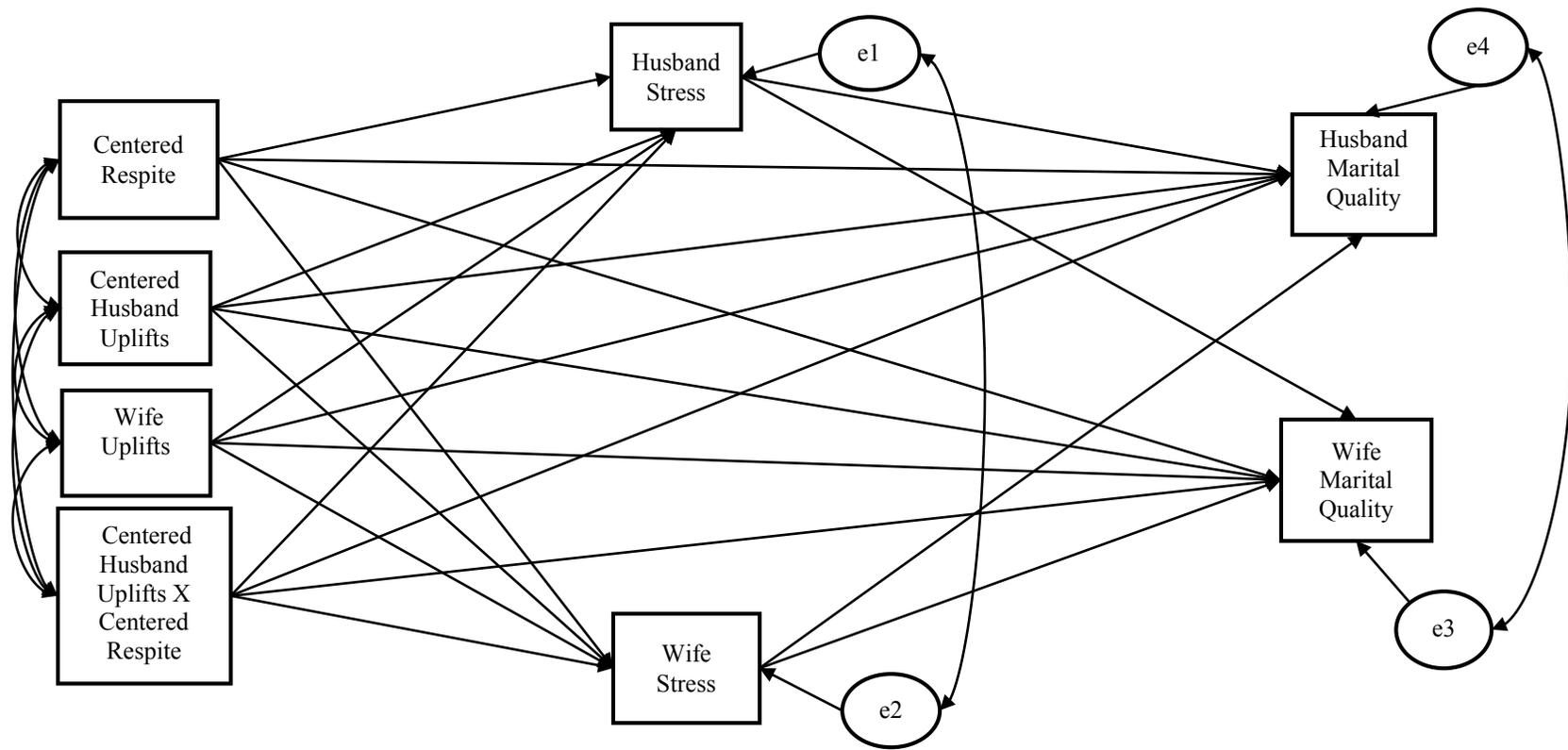


Figure 2. Hypothesized interaction model with an interaction effect among husband uplifts and respite care as an exogenous variable to measure its direct and indirect effect with husband and wife stress and husband and wife perceived marital quality for both parents of children with ASD and parents of children with DS. Control variables included length of marriage reported in years using wife report, and age of child with ASD or DS. Covariances were drawn among control variables and all exogenous variables, except for respite care and the length of marriage. Theoretically, the number of years married should not be related to how much weekly respite care parents of children with ASD and DS received.

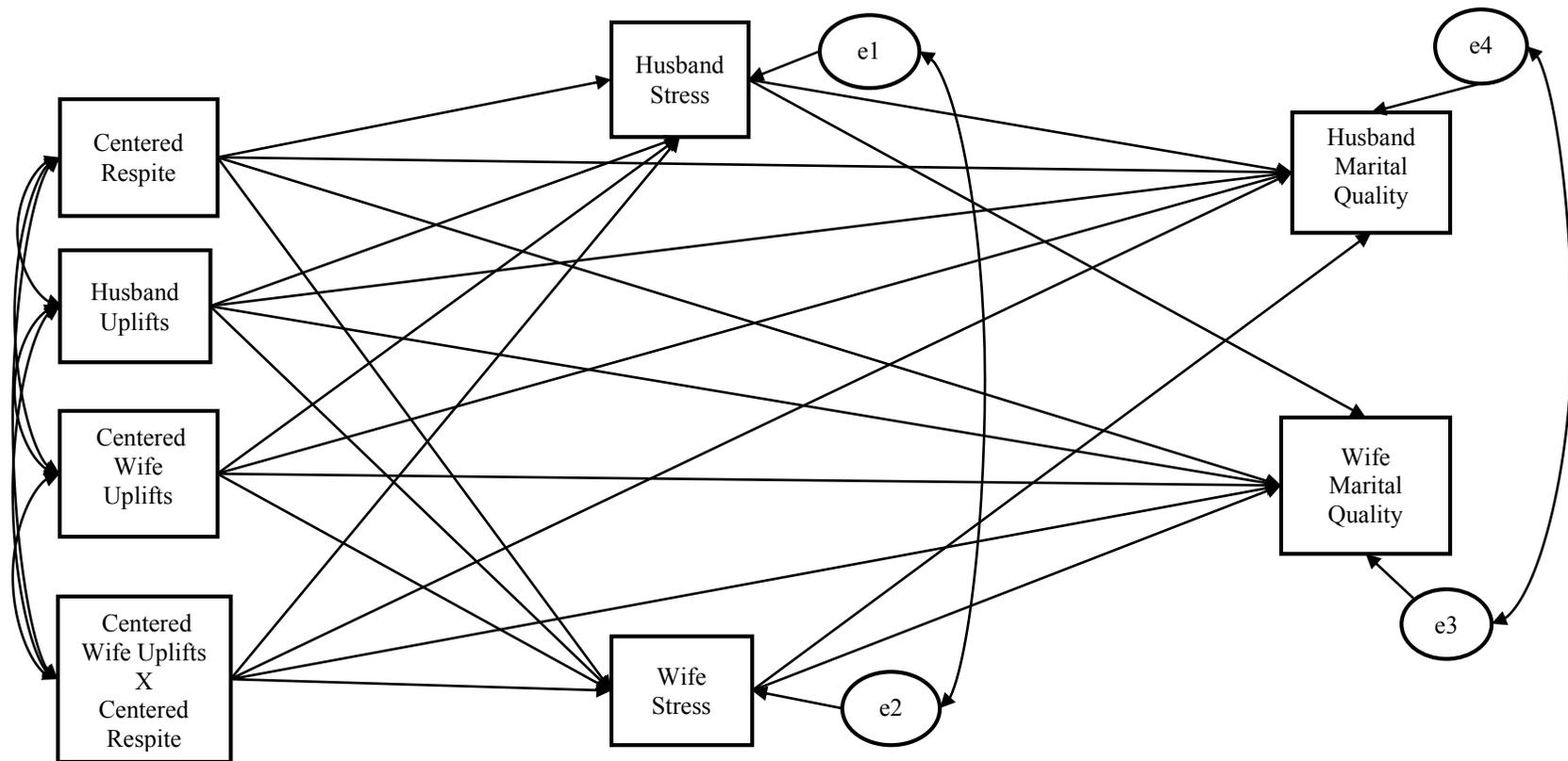


Figure 3. Hypothesized interaction model with an interaction effect among wife uplifts and respite care as an exogenous variable to measure its direct and indirect effect with husband and wife stress and husband and wife perceived marital quality for both parents of children with ASD and parents of children with DS. Covariances were drawn among control variables and all exogenous variables, except for respite care and the length of marriage. Theoretically, the number of years married should not be related to how much weekly respite care parents of children with ASD and DS received.

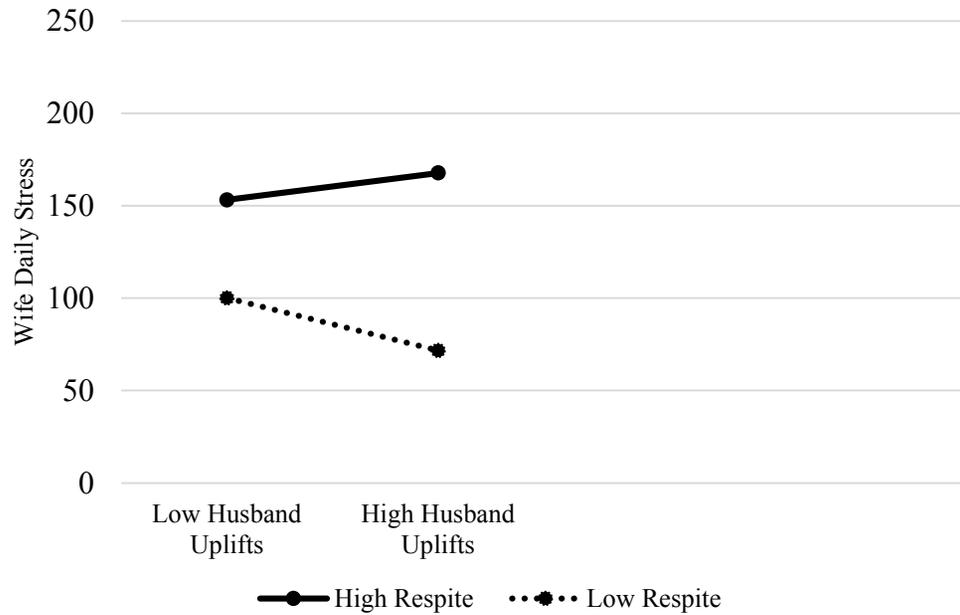


Figure 4. Interaction effect among respite and husband uplifts on wife stress who have children with ASD. Low levels of respite and husband uplifts were calculated by using one standard deviation below the mean of respite and one standard below the mean of husband uplifts. High levels of respite and husband uplifts were calculated by using one standard deviation above the mean of respite and one standard deviation above the mean of husband uplifts.

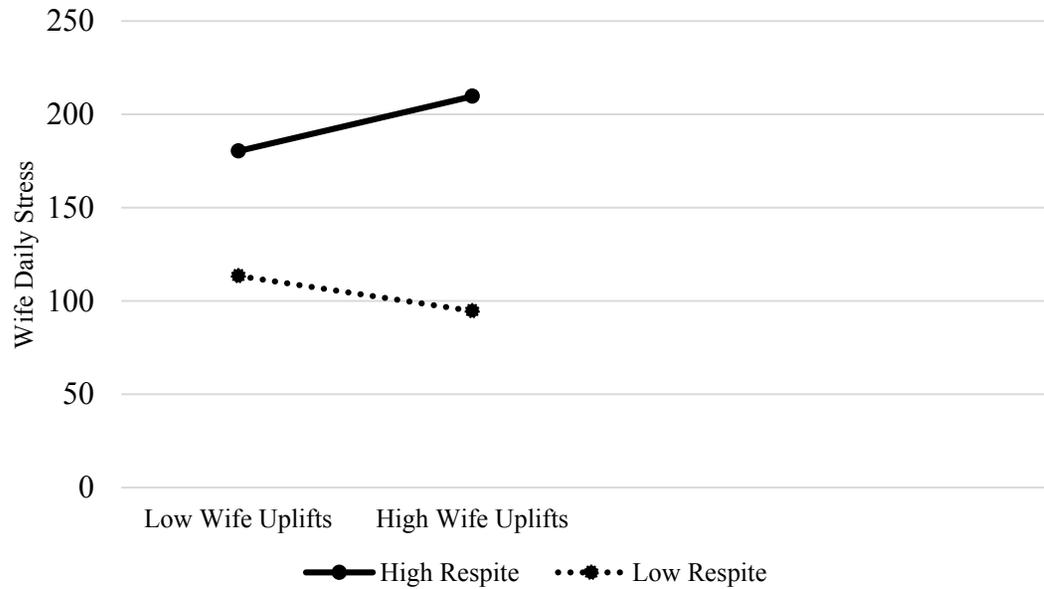


Figure 5. Interaction effect among respite and wife uplifts on wife stress who have children with ASD. Low levels of respite and wife uplifts were calculated by using one standard deviation below the mean of respite and one standard below the mean of wife uplifts. High levels of respite and wife uplifts were calculated by using one standard deviation above the mean of respite and one standard deviation above the mean of wife uplifts.

Appendix A: Measures

Revised Dyadic Adjustment Scale (RDAS)

Most people have disagreements in their relationships. Please indicate below the extent of agreement or disagreement between you and your partner for each item.

	Always Agree (5)	Almost Always Agree (4)	Occasionally Agree (3)	Frequently Disagree (2)	Almost Always Disagree (1)	Always Disagree (0)
1. Religious matters						
2. Demonstrations of affection						
3. Making major decisions						
4. Sex relations						
5. Conventionality (correct or proper behavior)						
6. Career decisions						

	All the Time (0)	Most of the time (1)	More often than not (2)	Occasionally (3)	Rarely (4)	Never (5)
7. How often do you discuss or have you considered divorce, separation, or terminating your relationship?						
8. How often do you and your partner quarrel?						
9. Do you ever regret that you married (or lived together)?						

10. How often do you and your mate "get on each other's nerves"?						
--	--	--	--	--	--	--

	Every Day (4)	Almost Every Day (3)	Occasionally (2)	Rarely (1)	Never (0)
11. Do you and your mate engage in outside interests together?					

How often would you say the following events occur between you and your mate?

	Never (0)	Less than once a month (1)	Once or twice a month (2)	Once or twice a week (3)	Once a day (4)	More often (5)
12. Have a stimulating exchange of ideas						
13. Work together on a project						
14. Calmly discuss something						

Hassles and Uplifts Scale

Instructions:

Hassles are things that annoy or bother you. They can make you upset or angry. Circle the number on the left that represents how much of a hassle that item has been for you during the last 6 months. Uplifts are things that make you feel good. They can make you glad or satisfied. Circle the number on the right that represents how much of an uplift that item has been for you during the last 6 months.

Each item should have a number circled on the left side and a number circled on the right side.

HASSLES					UPLIFTS			
How much of a hassle was this for you?					How much of an uplift was this for you?			
0	1	2	3	1. Your children	0	1	2	3
0	1	2	3	2. Your parents or parents in law	0	1	2	3
0	1	2	3	3. Your spouse	0	1	2	3
0	1	2	3	4. Other relatives	0	1	2	3
0	1	2	3	5. Time spent with family	0	1	2	3
0	1	2	3	6. Health or well being of a family member	0	1	2	3
0	1	2	3	7. Sex	0	1	2	3
0	1	2	3	8. Intimacy	0	1	2	3
0	1	2	3	9. Family related obligations	0	1	2	3
0	1	2	3	10. Your friends	0	1	2	3
0	1	2	3	11. Co-workers	0	1	2	3
0	1	2	3	12. Clients, customers, patients, etc.	0	1	2	3
0	1	2	3	13. Supervisor or employer	0	1	2	3
0	1	2	3	14. Nature of your work	0	1	2	3
0	1	2	3	15. Your work load	0	1	2	3
0	1	2	3	16. Your job security	0	1	2	3
0	1	2	3	17. Meeting deadlines or goals on the job	0	1	2	3
0	1	2	3	18. Enough money for necessities such as food, clothing, housing, health care, taxes, insurance.	0	1	2	3

HASSLES					UPLIFTS			
How much of a hassle was this for you?					How much of an uplift was this for you?			
0	1	2	3		0	1	2	3
0	1	2	3	19. Enough money for education	0	1	2	3
0	1	2	3	20. Enough money for emergencies	0	1	2	3
0	1	2	3	21. Enough money for extras such as entertainment, recreation, vacations, etc.	0	1	2	3
0	1	2	3	22. Financial care for someone who doesn't live with you	0	1	2	3
0	1	2	3	23. Investments	0	1	2	3
0	1	2	3	24. Your smoking	0	1	2	3
0	1	2	3	25. Your drinking	0	1	2	3
0	1	2	3	26. Effects of drugs and medications	0	1	2	3
0	1	2	3	27. Your physical experience	0	1	2	3
0	1	2	3	28. Time alone	0	1	2	3
0	1	2	3	29. Exercise(s)	0	1	2	3
0	1	2	3	30. Your medical care	0	1	2	3
0	1	2	3	31. Your health	0	1	2	3
0	1	2	3	32. Your physical abilities	0	1	2	3
0	1	2	3	33. The weather	0	1	2	3
0	1	2	3	34. New events	0	1	2	3
0	1	2	3	35. Your environment (quality of air, noise level, greenery, etc.)	0	1	2	3
0	1	2	3	36. Political or social issues	0	1	2	3
0	1	2	3	37. Your neighborhood	0	1	2	3
0	1	2	3	38. Conserving (gas, electricity, water, gasoline, etc.)	0	1	2	3
0	1	2	3	39. Pets	0	1	2	3
0	1	2	3	40. Cooking	0	1	2	3
0	1	2	3	41. Housework	0	1	2	3
0	1	2	3	42. Home repairs	0	1	2	3

HASSLES					UPLIFTS				
How much of a hassle was this for you?					How much of an uplift was this for you?				
0	1	2	3		0	1	2	3	
0	1	2	3	43. Yard work	0	1	2	3	
0	1	2	3	44. Car maintenance	0	1	2	3	
0	1	2	3	45. Taking care of paperwork (paying bills, filling out forms, etc.)	0	1	2	3	
0	1	2	3	46. Home entertainment (TV, music, reading, etc.)	0	1	2	3	
0	1	2	3	47. Amount of free time	0	1	2	3	
0	1	2	3	48. Recreation and entertainment outside the home (movies, sports, eating out, walking, etc.)	0	1	2	3	
0	1	2	3	49. Eating (at home)	0	1	2	3	
0	1	2	3	50. Church or community organizations	0	1	2	3	
0	1	2	3	51. Legal matters	0	1	2	3	
0	1	2	3	52. Being organized	0	1	2	3	
0	1	2	3	53. Social commitments	0	1	2	3	