

## INTERGENERATIONAL INFLUENCE AND QUALITY OF LIFE: A STUDY WITHIN FAMILIES WITH A CHILD WITH A DISABILITY

Femke Migerode\*, Ann Buysse, Bea Maes, Jan De Mol, & Lesley Verhofstadt

The aim of the present study was to investigate (a) how intergenerational influence takes form within families with a child with a disability, and (b) the extent to which positive and negative influence – as perceived by family members – within and across generations, is predictive of family members' subjective quality of life. The study involved 60 two-parent two-child families where one of the children had a disability. Within a round-robin design, family members completed self-report measures of felt influence within their family and subjective quality of life. The main findings suggest that interpersonal influence as perceived by parents and children (a) varies as a function of valence (positive vs. negative) and target (from whom the influence is felt); and (b) is related to subjective quality of life. However, there seem to be differential effects of the distinct dimensions of influence (positive vs. negative; intergenerational vs. intragenerational) depending on whose quality of life is examined.

### Introduction

The present study will focus on intergenerational transmission in one type of intergenerational family relationships, namely *parent-child relationships*. Within parent-child relationships we will focus on one specific dimension of the larger concept of intergenerational transmission, namely *intergenerational influence* – or the *interpersonal influence* between the individuals in different generations of a family. Interpersonal influence is defined as the continuous and reciprocal process by which relationship partners affect and change each other's thoughts, feelings, and behaviours (Huston, 2002; Hsiung & Bagozzi, 2003; Kelley, 1979). We were particularly interested in how this kind of intergenerational influence takes form within families with a *child with a disability*, and how it relates to the family members' quality of life. Below, we provide some background on these major features of the current investigation.

---

\* Femke Migerode, UPC KULeuven; Ann Buysse, & Lesley Verhofstadt, Ghent University; Bea Maes, Catholic University of Leuven; Jan De Mol, Catholic University of Louvain-la-Neuve.

Correspondence concerning this article should be addressed to Femke Migerode, Ph.D., UPC KULeuven, University Psychiatry Center, KULeuven.

E-mail: [femke.migerode@uc-kortenberg.be](mailto:femke.migerode@uc-kortenberg.be)

### ***Interpersonal Influence***

Interpersonal influence is widely accepted as the defining feature of close relationships, since a relationship could hardly be called “close” unless its partners influence one another over a relatively long period of time (Huston, 2002). The concept of interpersonal influence is therefore central to family relationships, both across and within family subsystems (De Mol & Buysse, 2008a&b; De Mol, Lemmens, Verhofstadt, & Kuczynski, current issue). The study of intergenerational transmission within the family from an interpersonal influence perspective has several implications. First, it implies a focus on multigenerational transmission as a *bi-directional* process between children and their parents (Hsiung & Bagozzi, 2003; Kuczynski, 2003; Parke, 2002), as opposed to unidirectional approaches in which only the parents are seen as active agents, and the children are regarded as passive recipients of parental influence (see Maccoby, 2003). So, the present study will take into account, the co-occurrence of both directions of influence – from parents to children and from children to parents – when investigating intergenerational transmission.

Second, it implies the inclusion of both *positive and negative types of intergenerational influence*. Both theoretical and empirical arguments support the view that, over time, family members develop two basic but distinct “senses of influence” regarding each other (De Mol, 2007; Migerode, Buysse, Maes, De Mol, & Cook, 2012a) Migerode, Buysse, Maes, & De Mol, 2012b). On the one hand, a sense that a family member’s behaviour can have a pleasant effect on another family member, and on the other hand, a sense that effects can also be unpleasant for the other family member. In the current study, we will therefore make a conceptual and empirical distinction between family members’ “sense of being positively influenced” and family members’ “sense of being negatively influenced” within their family relationships.

### ***Bi-directional Intergenerational Influence, Families, and Disability***

As outlined above, interpersonal influence is central to family relationships and family functioning (Huston, 2002; De Mol & Buysse, 2008a&b). Families with a child with a disability constitute a specific family context prone to even more interdependence because the challenges (e.g., more stress, higher financial and caretaker burden) associated with a disability force family members to depend more on one another (Rolland, 1994). As processes of interpersonal influence might occur more intensively or might be more pronounced within families with a child with a disability, the concept of interpersonal influence has been extensively studied within this group of families (see Migerode, 2012).

However, existing research on influence processes in families with a child with a disability has been dominated by a *unidirectional conceptualisation* of interpersonal influence, thereby focusing principally on the impact children with a disability have on their parents, but not vice versa. Most research guided by this conceptual orientation suggests that children with a disability have indeed a profound impact on their parents' individual, marital and parental functioning. More specifically, these studies report higher levels of parental stress, financial and caretaker burden, lower levels of parental well-being, more negative feelings about parenting, and a negative impact on parents' social life (e.g., Baker, Blacher, & Olsson, 2005; Blacher & McIntyre, 2006; Eisenhower, Baker, & Blacher, 2005; Hatton & Emerson, 2003; Maes, Broekman, Dosen, & Nauts, 2003). So, although empirical data support the view that children with a disability have a strong impact on their parents' functioning, they provide little or no insight in how those children feel affected by their parents. Given the complex and interdependent nature of parent-child relationships, there is a need to study intergenerational transmission within families with a disability as a *bi-directional process*, that is, how both generations – parents and children – affect one another.

### ***Positive Intergenerational Influence, Families, and Disability***

Another limitation of previous studies on families of children with a disability is the strong emphasis on the *negative impact* of a disability on the lives of these families and their members (for an overview, see Hastings & Taunt, 2002; Kearney & Griffin, 2001). Research on the positive effects associated with disability in the family is scarce but it appears to be essential in this area of research. Indeed, a small number of studies that allowed also for the possible positive effects to be discussed provide a more nuanced view on these families and their functioning. More specifically, some studies describe a range of positive outcomes that are associated with a disability in the family, including better parent-child interactions (e.g., Glidden, Bamberger, Turek, & Hill, 2010), more family cohesion (e.g., Taanila, Jarvelin, & Kokkonen, 1999), and a stronger life purpose (e.g., Seligman & Darling, 2007). Taken together, these findings directly challenge the idea that children with a disability only influence their family members in a negative way. Accordingly, the inconsistency between the findings from studies measuring positive versus negative effects is currently an important topic for research in this area. In sum, there are both theoretical and empirical arguments that point to the need to study *both positive and negative intergenerational influence* in families with a child with a disability.

### ***Intergenerational Influence and Quality of Life***

Interpersonal influence is theoretically assumed to play a cardinal role in both personal and relational well-being. It has been argued that these complex processes of interpersonal influence affect the personal and psychological development of the relationship partners (Bandura, 1997; Bateson, 1979; Huston, 2002; Seligman, 1975) and play a crucial part in the formation and functioning of relationships and family systems (Cook, 2001; De Mol & Buysse, 2008; Street, 1994). Although interpersonal influence is theoretically assumed to play an essential role in human well-being, the exact relationship between processes of interpersonal influence within families and family members' well-being has rarely been studied.

Moreover, family members' well-being in families with a child with a disability has been predominantly measured in terms of the absence of stress or in terms of the amount of psychosomatic symptoms (mostly in mothers) (Saloviita, Italinna, & Leinonen, 2003), thereby providing a somewhat limited picture of how disability might affect the life of families and their members. Indeed, within the broader psychological literature there is consensus that the well-being of family members is more than the absence of negative aspects such as stress. In our view, a more comprehensive measure of the family members' well-being could be offered by an assessment of their overall *quality of life* (Green, 2007; Jozefiak, Larsson, Wichstrom, & Mattejat, 2010; Turnbull, Poston, Minnes, & Summers, 2007). Quality of life is a universal, multidimensional concept (Cummins, 1997; Schalock et al., 2002; Schalock & Felce, 2004) including a person's material well-being, health, productivity, intimacy, safety, community, and emotional well-being. In line with previous research within families with a disability (see Migerode, Buysse, Maes, & Brondeel, 2012c), family members' subjective reports about their satisfaction with each of these life-domains will be used as an index of their subjective quality of life.

### ***Measurement of Interpersonal Influence***

From the theoretical perspective on interpersonal influence that is taken in the current study, both parents and children are considered as full agents in the parent-child relationship (De Mol et al., this issue). In other words, parents and children are both considered as autonomous subjects that have the capacity for initiation of purposeful behaviour to influence the other, and the ability to interpret and construct meaning out of these relational experiences (Kuczynski, 2003). This implies that parents as well as children have their own *perspective* on how influence takes place between them (Kuczynski, 2003). Although there is a growing body of research on children's influence in the

parent-child relationship (Ambert, 2001; De Mol & Buysse, 2008a&b; Dillon, 2002; Knafo & Galansky, 2008; Palkovitz, Marks, Appleby, & Holmes, 2003) most studies still focus on the perspectives of the parents (mostly the mother) and not of children. Acknowledging the full agency of children in intergenerational family relationships, the current study will include the perspectives of both children and both of their parents when assessing intergenerational influence within their family.

In the literature on interpersonal influence, a conceptual and empirical distinction is made between so-called “intentional influence” and “unintentional influence” (Huston, 2002).

Purposeful efforts to attain a particular outcome (e.g., control, power) are considered as “intentional influence”, whereas influence that reflects an incidental consequence in the absence of any direct request is considered to be “unintentional” (Huston, 2002; Levy, Collins, & Nail, 1998). Taking into account the existence of unintentional influence, where people affect one another without goal-directed intentions, a discordance might exist between the intention of a person’s behaviour and the consequences of that person’s behaviour for others (Watzlawick, Beavin, & Jackson, 1967). In other words, regardless of their intentions, people depend on the interpretations by others with respect to their effects. Within research on interpersonal influence, the research focus has therefore shifted from the intention of the influencer to the consequences for the person who is being influenced. This sense of consequences or interpersonal influence, irrespective of the dimensions of (un)intentionality, has since long been an important concept within family therapy and sociology (Giddens, 1984; Seikkula, Arnkil, & Eriksson, 2003). Consequently, at the measurement level, interpersonal influence is studied from the perspective of the perceiver, that is, how individuals (e.g., family members) *feel influenced by others* (Cook, 1993; 2001; De Mol, 2007). Previous research already demonstrated that this subjective perception of influence, more specifically the extent to which family members feel positively and negatively influenced within their family – by each of their family members respectively – can be reliably measured by means of family members’ self-reports (see Migerode et al., 2012a&b for more details on the development of measures to assess interpersonal influence).

### ***The Present Research***

The present research aimed to study intergenerational influence within families with a child with a disability by improving upon the previous research in at least four ways. First, we examined intergenerational influence in those families as a bi-directional process where children affect their parents and vice versa, rather than taking a uni-directional view on influence processes.

Second, we analysed positive as well as negative types of influence within those families. Third, we tested to see how both positive and negative intergenerational influence relate to family members' quality of life. Finally, we used subjective influence reports of parents (mother and father) as well as children (child with disability and child without disability) in our study.

As a point of theoretical interest we wanted to explore the specific processes of interpersonal influence – conceptualised and operationalised as described above – within families with a child with a disability. More specifically, we were interested in answering the research question if each family member perceived more positive than negative influence (i.e., valence), and if this was moderated by the person from whom influence was felt (i.e., target: mother, father, child with disability, child without disability).

Because the results of previous studies did not provide a basis for making empirically based predictions about what we should expect to find in our more detailed analyses, we made only the two general predictions that, overall, positive influence (as felt and reported by each of the family members participating in the current investigation) should have a positive association with family members' quality of life and negative perceived influence should have a negative association with family members' quality of life. We did not attempt to make more fine-grained predictions and left it up to the data to educate us about the relations that are found when these more detailed analyses are conducted.

## **Method**

### ***Participants***

The sample included 60 two-parent two-child families with a child with a disability.

Each of the four family members (two parent figures, a child with a disability, and a sibling) were asked to participate in the study. The participating families were recruited using one of two methods. Part of the sample was recruited through the special education schools that serve children with a disability. The school directors received a letter explaining the study and asking their help in the recruitment process. When the directors consented, information letters and consent forms were distributed to the parents. Other families were recruited through a larger study commissioned by the Ministry of the Flemish Community (Department of Welfare, Public Health and Family). Families who agreed to participate were given a standard description of the project (aims and procedure) and were invited to complete questionnaires. All participating families lived in Flanders. Most of the parents were the biological parents, although seven stepparents (two mothers, five fathers), four fos-

ter parents (one mother and three fathers), and three adoption mothers and fathers also participated. Most siblings were full brothers or sisters, but one half-sibling, three adoption-siblings, and three foster-siblings participated.

The mean age of the mothers was 46.75 years ( $SD = 5.34$ ), and the fathers were 48.92 years old on average ( $SD = 5.88$ ). Twenty seven mothers (44.9%) and 21 fathers (35.7%) received higher education, information on education was missing for one of the fathers. Family size within our sample varied as follows: 34 families had two children, 20 families had three children, four families had four children and two families had five children ( $M = 2.52$ ,  $SD = 0.83$ ). In families with more than two children (more than one sibling of the child with a disability), parents and children chose which one of the siblings would participate. We don't have any information on the reasons underlying this selection. The mean age of the child with a disability was 17.47 ( $SD = 3.08$ ; Range = 11-23); 39 of them were male, 21 of them were female. Although their age ranged from 11 to 23 years, the term "child" will be used in the text in order to indicate the fact that those children/adolescents are part of the child subsystem within the family. The sample of children with a disability consisted of 31 children with an autism spectrum disorder, 11 children with a physical disability, 7 children with a learning disability, 3 children with behavioural or emotional disorders, and 8 children with a mild intellectual disability. The mean age of the siblings was 18.37 ( $SD = 4.71$ ; Range = 9-29); 25 male and 34 female siblings participated; information on the gender of one of the siblings was missing. The gender composition of the sibling pairs, respectively the gender of child with a disability and the sibling, was as follows: female-female = 13, female-male = 8, male-female = 21, male-male = 17.

This study was evaluated and approved by the Ethical Committee of the Faculty of Psychology and Educational Sciences of Ghent University.

## Measures

*Interpersonal influence.* The Influence in Families Questionnaire (IFQ, Migerode et al., 2012a) was used to assess interpersonal influence between family members. The IFQ is a 16-item self-report measure developed to assess "felt influence" (i.e., extent to which family members feel influenced by other family members). The *Positive Influence Subscale* consists of 8 items (e.g., "\_\_\_\_\_ makes me happy"; "\_\_\_\_\_ makes me feel better about myself"; "\_\_\_\_\_ makes me laugh"; "Because of \_\_\_\_\_ I feel a worthwhile person"); the *Negative Influence Subscale* also consists of 8 items (e.g., "\_\_\_\_\_ makes my life more difficult"; "\_\_\_\_\_ makes me insecure"; "\_\_\_\_\_ gives me stress"; "\_\_\_\_\_ makes me cry"; "\_\_\_\_\_ claims a lot of my time and energy"). The items are rated on a five-point Likert scale (ranging from 1 = strongly dis-

agree to 5 = strongly agree). The IFQ consists of directed-relationship items allowing the option of assessing each family relationship individually. In order to facilitate the use of the IFQ across the different relationships, the target of the rating was identified by a dotted line in each item. Family members were instructed to mentally insert the name of the target on the dotted line. Subscale scores were created separately for each family member and for each family relationship by computing the mean of their responses across all items in the scale. The Cronbach's alpha values in this study ranged from .85 to .95 for the positive influence subscale and .83 to .92 for the negative influence subscale, depending on the reported relationship. The IFQ has already been pretested and psychometrically evaluated within samples of children with a disability (see Migerode et al., 2012a).

### ***Quality of life***

Each family member's quality of life was assessed using the subjective subscale of the Comprehensive Quality of Life Scale (ComQoL, Cummins, 1997). The ComQoL measures people's satisfaction with their life on seven broad domains: *Material Well-being, Health, Productivity, Intimacy, Safety, Place in Community, and Emotional Well-being*. Participants were asked to indicate how satisfied they were with each of these seven life domains (e.g. How satisfied are you with your health? How satisfied are you with personal relationships?) by means of 10-point Likert scale (ranging from 1 = terrible to 10 = delighted). A global quality of life score was created separately for each family member by summing their responses across all items in the scale. Alpha coefficients in this study ranged from .84 to .90. The ComQoL has been previously used in other studies with a similar sample of children with a disability (Migerode et al., 2012c).

### ***Design***

The data on interpersonal influence were collected using a *round-robin design* (Griffin & Gonzalez, 2003; Paramjit & Swartz, 2001). Within a round-robin design, each family member reports on his/her relationship with each of the other family members. In the present study all family members reported on the positive influence and the negative influence each of the other family members has on them using equivalent measures for each relationship. Furthermore every family member completed a questionnaire pertaining to his/her own quality of life.

## Results

### *Influence Processes*

To address the question of whether family members' reports of influence would differ as a function of valence and target, a series of 2 (valence: positive vs. negative)  $\times$  3 (target: mother, father, child with disability, child without disability) repeated measures analyses of variance were conducted with valence and target entered as within-subjects factors. The means and standard deviations for felt influence as a function of valence and target are reported in Table 1.

**Table 1**  
*Descriptive Statistics for Family Members' Felt Influence*

| Target                   | Positive influence |      | Negative influence       |      |
|--------------------------|--------------------|------|--------------------------|------|
|                          | M                  | SD   | M                        | SD   |
|                          |                    |      | Perceiver                |      |
|                          |                    |      | Mother                   |      |
| Father                   | 3.84               | 0.90 | 2.16                     | 0.82 |
| Child with disability    | 3.70               | 0.79 | 2.87                     | 0.95 |
| Child without disability | 3.91               | 0.80 | 2.22                     | 0.74 |
|                          |                    |      | Father                   |      |
| Mother                   | 3.96               | 0.74 | 2.08                     | 0.83 |
| Child with disability    | 3.78               | 0.66 | 2.58                     | 0.71 |
| Child without disability | 3.97               | 0.57 | 2.16                     | 0.61 |
|                          |                    |      | Child with disability    |      |
| Mother                   | 3.97               | 0.80 | 2.02                     | 0.76 |
| Father                   | 3.94               | 0.72 | 2.07                     | 0.75 |
| Child without disability | 3.86               | 0.72 | 2.09                     | 0.74 |
|                          |                    |      | Child without disability |      |
| Mother                   | 4.00               | 0.74 | 2.06                     | 0.73 |
| Father                   | 3.87               | 0.71 | 2.12                     | 0.74 |
| Child with disability    | 3.73               | 0.81 | 2.34                     | 0.87 |

Across family relationships, the mean perceived influence scores circled around 3.90 (range 3.70-4.00) for positive influence and 2.30 (range 2.02-2.87) for negative influence, indicating that on average our respondents do have a sense of being positively and negatively influenced by their family members.

The analyses revealed significant main effects of *valence* for influence felt by mothers (Wilks's lambda = 0.44,  $F(1,59) = 74.76$ ,  $p < .001$ ), fathers (Wilks's lambda = 0.26,  $F(1,59) = 165.21$ ,  $p < .001$ ), children with disability

(Wilks's lambda = 0.31,  $F(1,59) = 130.67$ ,  $p < .001$ ), and children without disability (Wilks's lambda = 0.32,  $F(1,59) = 122.82$ ,  $p < .001$ ), indicating that on average family members experience significantly more positive than negative influence in each of their family relationships. Further univariate tests revealed a significant valence effect for each of the targets from which influence was perceived, with  $t$ -values ( $df = 59$ ) ranging between 4.27 ( $p < .001$ ) and 13.74 ( $p < .001$ ).

The analyses also revealed a significant main effect of *target* for influence felt by mothers (Wilks's lambda = 0.50,  $F(2,58) = 28.73$ ,  $p < .001$ ) and fathers (Wilks's lambda = 0.81,  $F(2,58) = 6.89$ ,  $p = .002$ ). Post hoc tests of differences among targets showed that, on average, mothers and fathers feel more influenced by their child with disability ( $\text{mean}_{\text{tot influence}} = 3.28$  for mothers; 3.18 for fathers) than by their child without disability ( $\text{mean}_{\text{tot influence}} = 3.07$  for mothers;  $t(59) = 5.17$ ,  $p < .001$ ; 3.06 for fathers;  $t(59) = 3.32$ ,  $p = .002$ ) or their partner ( $\text{mean}_{\text{tot influence}} = 2.99$  for mothers;  $t(59) = 7.50$ ,  $p < .001$ ;  $\text{mean}_{\text{tot influence}} = 3.02$  for fathers;  $t(59) = 3.20$ ,  $p = .002$ ).

Finally, the analyses yielded a significant *two-way interaction between valence and target* for the influence reported by mothers (Wilks's lambda = 0.65,  $F(2,58) = 15.75$ ,  $p < .001$ ), fathers (Wilks's lambda = 0.72,  $F(2,58) = 11.29$ ,  $p < .001$ ), and children without disability (Wilks's lambda = .80,  $F(2,58) = 7.11$ ,  $p = .002$ ). Post hoc analyses revealed that mothers, fathers, and children without disability report significantly higher levels of negative influence from the child with disability as compared to what they feel from other family members, with  $t$ -values ( $df = 59$ ) ranging between 2.51 ( $p = .015$ ) and 6.06 ( $p < .001$ ). On the part of positive influence, a less pronounced pattern was found: lower levels of positive influence from the child with disability were reported by mothers and fathers (as compared to the positive influence they feel from their child without disability), and children without disability (as compared to the positive influence they feel from their mother), with  $t$ -values ( $df = 59$ ) ranging between 3.17 ( $p = .002$ ) and 3.88 ( $p < .001$ ). The  $t$ -values for the other comparisons were only marginally significant.

### ***Intergenerational Influence and Quality of Life***

The means and standard deviations for the quality of life measures and their intercorrelations with interpersonal influence are shown in Table 2.

Family members' scores for quality of life were compared with the "gold-standard" population averages in Western societies (Cummins, 1997; 1998). On average the quality of life of the fathers, children with a disability, and children without a disability was within the normal range (between 70 and 80). However, mothers' average quality of life fell below the "gold-standard" indicating that mothers of a child with a disability experienced lower levels

**Table 2**  
*Zero-order Correlations for Family Members' Felt Influence and Quality of Life*

| Relationship                                   | Positive influence   | Negative influence |
|--|--|--------------------|
|  | <u>QoL Mother (<math>M = 65.88</math>; <math>SD = 16.62</math>)</u>        |                    |
| Mother-Father                                  | .34**  | -.61***            |
| Mother-Child with disability                   | .27*   | -.44***            |
| Mother-Child without disability                | .29*   | -.51***            |
|  | <u>QoL Father (<math>M = 72.31</math>; <math>SD = 12.34</math>)</u>        |                    |
| Father-Mother                                  | .49***   | -.54***            |
| Father-Child with disability                   | .17  | -.16               |
| Father-Child without disability                | .29*   | -.35***            |
|  | <u>QoL Child with (<math>M = 71.94</math>; <math>SD = 17.77</math>)</u>    |                    |
| Child with disability-Mother                   | .38**  | -.24               |
| Child with disability-Father                   | .25  | -.18               |
| Child with disability-Child without disability | .32*   | -.20               |
|  | <u>QoL Child without (<math>M = 75.08</math>; <math>SD = 11.81</math>)</u> |                    |
| Child without disability-Mother                | .33**  | -.50***            |
| Child without disability-Father                | .48***   | -.59***            |
| Child without disability-Child with disability | .41***   | -.51***            |

Note. \*\*\*  $p < .001$ . \*\*  $p < .01$ . \*  $p < .05$ .

of quality of life than people in the general population. Mothers in our study also reported lower levels of quality of life as compared to their partners ( $t(59) = 3.17$ ,  $p = .002$ ), children with disability ( $t(59) = 2.48$ ,  $p = .016$ ), and children without disability ( $t(59) = 4.59$ ,  $p < .001$ ). No differences in terms of quality of life were found between the other family members.

In general the intercorrelations show that, as expected, quality of life is positively associated with feeling positively influenced by family members and is negatively associated with the negative influence family members experience from each other.

Hierarchical multiple regression analysis was used to test whether participants' self-reported quality of life could be predicted from the positive and negative influence they feel within their family. Separate regressions were carried out for each of the family members' quality of life: mother, father, child with disability, and child without disability. To test for possible effects of the participants' positive influence measures (i.e., the extent to which they feel positively influenced by each of their family members, reported for each family member separately), these variables were entered on the first step. In the second step, participants' negative influence measures (i.e., the extent to which they feel negatively influenced by each of their family members, reported for each family member separately) were entered. Prior to each regression analysis, collinearity diagnostics were performed using the vari-

ance inflation factors (VIF) as criteria. No multicollinearity was evident, because the VIF for the predictors were smaller than 10 (Cohen, Cohen, West, & Aiken, 2003). The results will be presented in a within generational system order (mother-father; child with-without disability).

**Table 3**

*Summary of Hierarchical Multiple Regression Analyses to Parents' Quality of Life from Positive and Negative Felt Influence by Family Members. Standardised betas from the last step in the analyses are displayed*

|  | Beta  | $\Delta R^2$ | Adj $R^2$ |
|--|-------|--------------|-----------|
| <b>Predicting mothers' quality of life</b> |       |              |           |
| Step 1: Positive influence                 |       | .12°         | .07       |
| by father                                  | -.07  |              |           |
| by child with disability                   | .21   |              |           |
| by child without disability                | .28   |              |           |
| Step 2: Negative influence                 |       | .32***       | .38       |
| by father                                  | -.51* |              |           |
| by child with disability                   | -.31° |              |           |
| by child without disability                | -.01  |              |           |
| <b>Predicting fathers' quality of life</b> |       |              |           |
| Step 1: Positive influence                 |       | .24**        | .19       |
| by mother                                  | .25   |              |           |
| by child with disability                   | .01   |              |           |
| by child without disability                | -.05  |              |           |
| Step 2: Negative influence                 |       | .10°         | .26       |
| by mother                                  | -.33* |              |           |
| by child with disability                   | .05   |              |           |
| by child without disability                | -.17  |              |           |

Note.  $p < .10$  \* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$

When predicting *mothers' quality of life*, the positive influence measures (i.e., positive influence received from her partner, child with disability, child without disability, respectively) accounted for 12% of the variance,  $F(3,56) = 2.57$ ,  $p = .06$  (see Table 3), and did only make a marginally significant contribution in the regression model. The variables entered on the second step of the model (i.e., mothers' negative influence reports) accounted for an additional 32% of the variance,  $F(3,53) = 10.25$ ,  $p < .001$ . Overall, the model was found to be significant,  $F(6,53) = 7.05$ ,  $p < .001$ . Only negative influence from her partner contributed significantly to the model, with higher levels of negative influence corresponding with lower levels of quality of life in mothers ( $\beta = -.51$ ;  $t = -1.97$ ;  $p = .05$ ). There was a trend towards significance for negative influence from child with disability ( $\beta = -.31$ ;  $t = -1.74$ ;  $p = .08$ ),

with more negative influence felt by the mother corresponding with lower levels of quality of life. None of the other influence measures, neither positive, nor negative contributed significantly to the model.

When predicting *fathers' quality of life*, the positive influence measures (i.e., positive influence received from his partner, child with disability, child without disability, respectively) accounted for 24% of the variance,  $F(3,56) = 5.73$ ,  $p = .002$  (see Table 3). This was due entirely to the positive partner influence variable; higher levels of positive influence by his partner were associated with higher levels of quality of life ( $\beta = .48$ ;  $t = 3.33$ ;  $p = .002$ ). The variables entered on the second step of the model (i.e., fathers' negative influence reports) accounted for an additional 10% of the variance,  $F(3,53) = 2.59$ ,  $p = .06$ , which was marginally significant. Overall, the model was found to be significant,  $F(6,53) = 4.41$ ,  $p = .001$ . Only negative influence from his partner contributed significantly to the final model, with higher levels of negative influence felt from his partner corresponding with lower levels of quality of life, ( $\beta = -.33$ ;  $t = -1.96$ ;  $p = .05$ ). None of the other influence measures, neither positive, nor negative contributed significantly to the model.

**Table 4**

*Summary of Hierarchical Multiple Regression Analyses to Children's' Quality of Life from Positive and Negative Felt Influence by Family Members. Standardised betas from the last step in the analyses are displayed*

|  | Beta             | AR <sup>2</sup> | Adj R <sup>2</sup> |
|--|------------------|-----------------|--------------------|
| Predicting children with disability's quality of life    |                  |                 |                    |
| Step 1: Positive influence                               |                  | .15*            | .11                |
| by mother  | .65 <sup>o</sup> |                 |                    |
| by father  | -.32             |                 |                    |
| by child without disability                              | .21              |                 |                    |
| Step 2: Negative influence                               |                  | .03             | .09                |
| by mother  | .27              |                 |                    |
| by father  | -.30             |                 |                    |
| by child without disability                              | .21              |                 |                    |
| Predicting children without disability's quality of life |                  |                 |                    |
| Step 1: Positive influence                               |                  | .25**           | .21                |
| by mother  | -.20             |                 |                    |
| by father  | .31              |                 |                    |
| by child with disability                                 | .14              |                 |                    |
| Step 2: Negative influence                               |                  | .17**           | .36                |
| by mother  | -.23             |                 |                    |
| by father  | -.16             |                 |                    |
| by child with disability                                 | -.14             |                 |                    |

Note. <sup>o</sup> $p < .10$  \* $p < .05$  \*\* $p < .01$ .

When predicting *the quality of life of children with a disability*, the positive influence measures (i.e., positive influence received from their mother, father, brother/sister without disability, respectively) accounted for 15% of the variance,  $F(3,56) = 3.31, p = .02$  (see Table 4). There was a trend towards positive influence by the mother contributing significantly to children's quality of life; higher levels of positive influence felt by their mother were associated with higher levels of quality of life ( $\beta = .36; t = 1.75; p = .08$ ). The variables entered on the second step of the model (i.e., negative influence reports) accounted for no additional variance. Overall, the model was found to be marginally significant,  $F(6,53) = 1.95, p = .09$ . There was a trend towards significance for positive influence by mother ( $\beta = .65; t = 1.83; p = .07$ ). None of the other influence measures, neither positive, nor negative contributed significantly to the model.

When predicting *the quality of life of children without a disability*, the positive influence measures (i.e., positive influence received from their mother, father, brother/sister with disability) accounted for 25% of the variance,  $F(3,56) = 6.33, p = .001$  (see Table 4). This was due entirely to the positive father influence variable; higher levels of positive influence from their father were associated with higher levels of quality of life ( $\beta = .40; t = 2.46; p = .017$ ). Entering participants' negative influence scores on the second step of the model accounted for an additional 17% of the variance,  $F(3,53) = 5.27, p = .003$ . Overall, the model was found to be significant,  $F(6,53) = 6.53, p < .001$ . Within the final model, none of the influence measures contributed significant unique variance to quality of life of children without a disability.

Taken together, the succession of models predicting family members' quality of life from the more significant one to the less significant one was as follows: for mothers, children without a disability, fathers, and children with a disability.

## Discussion

The general aim of the present research was (a) to study how intergenerational influence takes form within families with a child with a disability and, (b) to assess the association between positive and negative intergenerational influence within families with a child with a disability and family members' subjective quality of life.

### *Intergenerational Influence*

The results of our study revealed that on average our study participants do have a sense of being positively and negatively influenced by their family

members, both across and within generations. Our analyses revealed three significant effects for the outcome measures of interpersonal influence.

First, a main effect of “valence” was found, suggesting that family members feel more positively than negatively influenced within their family. This pattern of results was *consistent within generations*: (a) within the parental subsystem, both mothers and fathers reported to feel more positively than negatively influenced by their partner; (b) within the child subsystem, children with a disability reported to receive more positive than negative influence from their brother or sister without a disability; and (c) the same was true for children without a disability reporting about the influence they felt from their brother/sister with a disability. When looking at *intergenerational influence*, the same pattern of results emerged from our data: (a) mothers as well as fathers experience more positive than negative influence from their children (both with and without a disability); and (b) children (with and without disability) report more positive than negative influence from each of their parents. Taken together, these findings suggest that more positive than negative influence is felt within these families and this appears to be so within as well as across family generations. This finding is in line with previous research on influence in families without children with a disability (De Mol & Buysse, 2008a&b)

Second, a significant main effect for “target” (i.e., the person from whom the influence comes from) was found for mothers’ and fathers’ influence reports. Both mothers and fathers reported to feel *more influence from their child with a disability*, than from one another or from their child without a disability. So, in terms of overall level of influence, children with a disability are perceived to have a *strong intergenerational, bottom-up influence on their parents*. These findings support the view that children with a disability have a strong impact on their parents’ functioning. For children, both with or without disability, the total amount of felt influence was equal within or across generations.

Third, the results also revealed a significant two-way interaction of valence and target in relation to interpersonal influence reported by mothers, fathers, and children without a disability. A closer examination of this interaction revealed that both mothers and fathers feel more negative influence from their child with a disability than from any other family member. A similar but less pronounced pattern of results was found for positive influence, with parents reporting lower levels of positive influence from their child with disability than from their child without disability. In other words, the amount of negative and positive *intergenerational* influence parents feel from their children is qualified by the child having a disability or not.

Similarly, children without a disability reported to feel significantly more negative (and significantly less positive) influence from their brother/sister with a disability than from their parents (mother, respectively). Taken

together, these findings suggest that children with a disability indeed place a stronger burden on their parents, brothers, and sisters, as compared to others family members.

For children with a disability no such interaction effect was found, suggesting that they feel more positively than negatively influenced within each of their family relationships.

Taken together, these findings suggest that children with a disability are indeed perceived as having a more negative influence on their family, as compared to other family members. However, our results also reveal that children with a disability are seen as having more positive than negative influence on their family members. As a whole, our data confirm the notion that a child with a disability needs to be viewed as a human being with some specific limitations alongside many abilities, also within the context of their family life (Rolland & Walsh, 2006).

### ***Interpersonal Influence and Quality of Life***

Our predictions were that higher levels of positive influence and negative influence would (respectively) be associated with higher (and lower) levels of quality of life. The association between the positivity versus negativity of interpersonal influence on the one hand and quality of life on the other hand were – when significant – indeed in line with this prediction.

More specifically, mothers' quality of life was significantly predicted by the amount of negative influence they felt within their family. The amount of positive influence made only a marginally significant contribution to the prediction of mothers' subjective quality of life. For mothers, the negative influence from their partner appeared to be the most important and negative predictor of their quality of life. To a lesser degree, the negative influence from their child with a disability also negatively influenced mothers' quality of life, but this association was only of borderline significance.

Fathers' quality of life was significantly predicted by the positive influence they felt from their family members, particularly their wives. The amount of negative influence they felt within their family made only a marginally significant contribution to the prediction of their quality of life. However, when taking into account both positive and negative influences, only the amount of negative influence fathers felt from their partner appeared to be the sole significant predictor of fathers' quality of life. Higher levels of negative influence felt from their partner were associated with lower levels of subjective quality of life within fathers.

In sum, for mothers and fathers the results revealed that the amount of *intragenerational negative influence* made the most significant and substantial contribution to the prediction of their quality of life. In other words, the

amount of negative influence husbands and wives feel from one another plays a prominent role in their well-being. These findings underscore the importance of the marital relationship (or partner subsystem) within the context of families (De Mol, 2007). As suggested by one of the reviewers, research shows that mothers and fathers of a child with a disability often differ in their expectations regarding family functioning, which is often a source of distress within the marital relationship (Johnson, Frenn, Feetham, & Simpson, 2011). The negative partner influence we measured in the current study may partially reflect the distress couples experience from those different family-life expectations. As indicated within the literature on marital functioning (e.g., Fincham, 2003) and the literature on disability (Resch, Benz, & Elliott, 2012), the couple's distress may affect their individual well-being and quality of life. Existing research shows that parenting a child with a disability takes a toll on the couple's relationship. For example, closeness in the mother-grown child with autism relationship can be a source of distress for the couple (Hartley, Barker, Baker, Seltzer, & Greenberg, 2012), resulting in multiple conflicts, more negativity, and lower well-being in the partners.

For children with a disability, only the amount of positive but not negative influence felt from their family members made a significant and substantial contribution to the prediction of their quality of life. For children without a disability, both the amount of positive and negative influence felt from their family members made a significant and substantial contribution to their quality of life. In the prediction of children's (with/without disability) quality of life, our results were less pronounced concerning the importance of the specific target the influence was felt from (as the effects were only marginally significant).

Taken together, the results revealed that both negative and positive influence make a significant and substantial contribution to the prediction of family members' quality of life.

Our results showed that on average fathers and both children with and without a disability perceive their quality of life as satisfactory. Mothers seem to experience, in general, lower levels of quality of life as compared to their family members and the general population. This is in line with previous research revealing that mothers in families with a child with a disability report more psychosomatic symptoms and more stress (Blacher & McIntyre, 2006; Hatton & Emerson, 2003).

### ***Strengths and Limitations of the Present Study***

The present study both complements and elaborates upon existing theory and research on interpersonal influence. Our aim was to take into account the *complexity* of interpersonal influence – as described above – allowing an

assessment of how each family member perceives the influence received within and across generations within his/her family as well as how these influence processes relate to family members' quality of life. The importance of this kind of bi-directional, multi-dimensional, and multi-perspective examination of interpersonal influence has recently been acknowledged and emphasised by family researchers, who have called for more research of this type (De Mol et al., this issue). Our findings also complement existing research on the uni-directional and negative effects of children with a disability on their families.

In addition to the various strengths of the present study, we should note some important limitations. The most important of these undoubtedly have to do with the sample used in the present study. A sample size of 60 families with a disability is small, and reflects the fact that the data presented here are time- and labor-intensive to collect. It should be emphasised that some of the results we have just presented are still somewhat tentative and that additional research will be needed to confirm them more definitively. A few of the *F*-values did only reach a marginal significance level because of our relatively small sample size. Overall, however, the pattern of findings reported here is intriguing, theoretically coherent, and deserving of further study. Furthermore, because we included only those families with a child with a disability that was able to report on the variables of interest in our study, the current sample may not represent the entire population of families with a child with a disability. Therefore, the findings reported here might not generalise to families with children with a severe disability. In addition, we used a sample of white, middle-class, Flemish families, thereby limiting somewhat the generalisability of the results. Replication of these findings with samples that are larger and more heterogeneous will be important (e.g., families from different socio-economic, racial and ethnic backgrounds).

Finally, our data can be used to identify suspected causal relationships but not to verify them, as this is a correlational study. The possibility exists that lower levels of quality of life lead to perceptions of less positive influence and more negative influence in family relationships, rather than the other way around. The usual recommended caution should therefore be exercised in inferring causality from our results, as the issue of causal ordering needs to be resolved in future longitudinal research.

## **Conclusions**

The recommendation by previous theorists and researchers to study intergenerational influence and quality of life within families with a disability provided the impetus for the present research. Following this recommendation resulted in at least three positive outcomes.

First, by studying interpersonal influence across family generations from a *bi-directional* point of view we furthered our understanding of top-down and bottom-up influence by documenting specific ways in which both types of influence within families are similar to and different from each other. Furthermore, our results underscore the importance of including reports from all family members to grasp intergenerational influence within families. Mother's perceptions, although relevant and interesting, cannot be equated to the perceptions of the entire family nor can it replace information provided by the other family members, as has been the case in previous family studies (e.g., Seligman & Darling, 2007).

Second, the results of the present study reinforce the claims of many previous writers that it is important to distinguish between *positive* and *negative* types of influence at both the theoretical and empirical levels. Their distinct importance in the prediction of quality of life of parents and of children illustrates that they each have unique relevance for understanding family members' well-being.

Third, the approach taken in the present study allowed us to explore influence processes both within and across family subsystems. What counts is the larger pattern of results that furthers our understanding of both the *inter- and intra-generational patterns* of influence within the families under study.

In sum, our findings lead us to the conclusion that interpersonal influence as felt by parents and children within families with a child with a disability is indeed related to parents' and children's subjective quality of life. However, there seem to be differential effects of the distinct dimensions of influence (positive vs. negative; intergenerational vs. intragenerational) depending on whose quality of life is examined. We therefore encourage other researchers to continue to investigate interpersonal influence with designs that can reveal the kinds of detailed findings that we have obtained.

## References

- Ambert, A.M. (2001) *The effect of children on parents*. New York: The Haworth Press.
- Baker, B.L., Blacher, J., & Olsson, M.B. (2005). Preschool children with and without developmental delay: behaviour problems, parents' optimism and well-being. *Journal of Intellectual Disability Research*, 49(8), 575-590.  
[doi: 10.1111/j.1365-2788.2005.00691.x](https://doi.org/10.1111/j.1365-2788.2005.00691.x)
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.
- Bateson, G. (1979). *Mind and nature: A necessary unit*. New York: Dutton.
- 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.  
[doi: 10.1111/j.1365-2788.2005.00768.x](https://doi.org/10.1111/j.1365-2788.2005.00768.x)

- Cohen, J., Cohen, P. West, S.G., & Aiken, L.S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences (3rd ed.)*. Mahwah, NJ: Erlbaum.
- Cook, W.L. (1993). Interdependence and the interpersonal sense of control: An analysis of family relationships. *Journal of Personality and Social Psychology*, 64(4), 587-601. doi: [10.1037//0022-3514.64.4.587](https://doi.org/10.1037//0022-3514.64.4.587)
- Cook, W.L. (2001). Interpersonal influence in family systems: A social relations model analysis. *Child Development*, 72(4), 1179-1197. doi: [10.1111/1467-8624.00341](https://doi.org/10.1111/1467-8624.00341)
- Cummins, R.A. (1997). *Comprehensive Quality of Life Scale. Manual, 5th edition*. School of Psychology, Deakin University. Melbourne.
- Cummins, R.A. (1998). The second approximation to an international standard for life satisfaction. *Social Indicators Research*, 43(3), 307-334. doi: [10.1023/A:1006831107052](https://doi.org/10.1023/A:1006831107052)
- De Mol, J. (2007). *Children's influence and processes of interpersonal influence in family systems*. Unpublished doctoral dissertation, Ghent University, Belgium.
- De Mol, J., & Buysse, A. (2008a). The phenomenology of children's influence on parents. *Journal of Family Therapy*, 30, 163-193. doi: [10.1111/j.1467-6427.2008.00424.x](https://doi.org/10.1111/j.1467-6427.2008.00424.x)
- De Mol, J., & Buysse, A. (2008b). Understandings of children's influence in parent-child relationships: A Q-methodological study. *Journal of Social and Personal Relationships*, 25, 359-379. doi: [10.1177/0265407507087963](https://doi.org/10.1177/0265407507087963)
- De Mol, J., Lemmens, G., Verhofstadt, L.L., & Kuczynski, L. (under revision). Intergenerational transmission in a bi-directional context. Article accepted pending minor revision in *Psychologica Belgica (special issue on intergenerational transmission within the family)*.
- Dillon, J.J. (2002) The role of the child in adult development. *Journal of Adult Development*, 9, 267-275. doi: [10.1023/A:1020286910678](https://doi.org/10.1023/A:1020286910678)
- Eisenhower, A.S., Baker, B.L., & Blacher, J. (2005). Preschool children with intellectual disability: Syndrome specificity, behaviour problems, and maternal well-being. *Journal of Intellectual Disability Research*, 49, 657-671. doi: [10.1111/j.1365-2788.2005.00699.x](https://doi.org/10.1111/j.1365-2788.2005.00699.x)
- Fincham, F.D. (2003). Marital conflict: Correlates, structure and context. *Current Directions in Psychological Science*, 12, 23-27.
- Giddens, A. (1984). *The constitution of society: Outline of the theory of structuration*. Cambridge: Polity.
- Glidden, L.M., Bamberger, K.T., Turek, K.C., & Hill, K.L. (2010). Predicting mother/father-child interactions: Parental personality and well-being, socioeconomic variables and child disability status. *Journal of Applied Research in Intellectual Disabilities*, 23(1), 3-13. doi: [10.1111/j.1468-3148.2009.00549.x](https://doi.org/10.1111/j.1468-3148.2009.00549.x)
- Green, S.E. (2007). "We're tired, not sad": Benefits and burdens of mothering a child with a disability. *Social Science & Medicine*, 64(1), 150-163. doi: [10.1016/j.socscimed.2006.08.025](https://doi.org/10.1016/j.socscimed.2006.08.025)
- Griffin, D., & Gonzalez, R. (2003). Models of dyadic social interaction. *Philosophical Transactions of the Royal Society of London*, 358, pp. 573-581. doi: [10.1098/rstb.2002.1263](https://doi.org/10.1098/rstb.2002.1263)

- Hartley, S.L.; Barker, E.T., Baker, J.K., Seltzer, M.M., & Greenberg, J.S. (2012). Marital satisfaction and life circumstances of grown children with autism across 7 years. *Journal of Family Psychology*, 25(5), 688-697.
- Hastings, R.P., & Taunt, H.M. (2002). Positive perceptions in families of children with developmental disabilities. *American Journal on Mental Retardation*, 107(2), 116-127. doi: [10.1352/0895-8017\(2002\)107<0116:PPIFOC>2.0.CO;2](https://doi.org/10.1352/0895-8017(2002)107<0116:PPIFOC>2.0.CO;2)
- Hatton, C., & Emerson, E. (2003). Families with a person with intellectual disabilities: Stress and impact. *Current Opinion in Psychiatry*, 16, 497-501. doi: [10.1097/00001504-200309000-00002](https://doi.org/10.1097/00001504-200309000-00002)
- Hsiung, R.O., & Bagozzi, R.P. (2003). Validating the relationship qualities of influence and persuasion with the family social relations model. *Human Communication Research*, 29(1), 81-110. doi: [10.1111/j.1468-2958.2003.tb00832.x](https://doi.org/10.1111/j.1468-2958.2003.tb00832.x)
- Huston, T.L. (2002). Power. In H.H. Kelly, E. Berscheid, A. Christensen, J. Harvey, T.L. Huston, G., Levinger, E. McClintock, L.A. Peplau & D.R. Peterson (Eds.), *Close relationships* (pp. 169-219). New York: Freeman.
- Johnson, N., Frenn, M., Feetham, S., & Simpson, P. (2011). Autism Spectrum disorder: Parenting stress, family functioning and health-related quality of life, *Families, Systems and Health*, 29(3), 232-252. doi: [10.1037/a0025341](https://doi.org/10.1037/a0025341)
- Jozefiak, T., Larsson, B., Wichstrom, L., & Matthejat, F. (2010). Quality of life as reported by children and parents: A comparison between students and child psychiatric outpatients. *Health and Quality of Life Outcomes*, 8(136). doi: [10.1186/1477-7525-8-136](https://doi.org/10.1186/1477-7525-8-136)
- Kearney, P.M., & Griffin, T. (2001). Between joy and sorrow: Being a parent of a child with developmental disability. *Journal of Advanced Nursing*, 34, 582-592. doi: [10.1046/j.1365-2648.2001.01787.x](https://doi.org/10.1046/j.1365-2648.2001.01787.x)
- Kelley, H.H. (1979). *Personal relationships*. Hillsdale, NJ: Erlbaum.
- Knafo, A., & Galansky, N. (2008). The influence of children on their parents' values. *Social and Personality Psychology Compass*, 2, 1143-1161. doi: [10.1111/j.1751-9004.2008.00097.x](https://doi.org/10.1111/j.1751-9004.2008.00097.x)
- Kuczynski, L. (2003). Beyond bidirectionality: Bilateral conceptual frameworks for understanding dynamics in parent-child relations. In L. Kuczynski (Ed.), *Handbook of dynamics in parent-child relations* (pp.1-24). Thousand Oaks CA: Sage.
- Levy, D.A., Collins, B.E., & Nail, P.R. (1998). A new model of interpersonal influence characteristics. *Journal of Social Behavior & Personality*, 13(4), 715-733.
- Maccoby, E.E. (2003). Dynamic viewpoints on parent-child relations – their implications for socialisation processes. In L. Kuczynski (Ed.), *Handbook of dynamics in parent-child relations* (pp. 439-452). Thousand Oaks: Sage Publications.
- Maes, B., Broekman, T.G., Dosen, A., & Nauts, J. (2003). Caregiving burden of families looking after persons with intellectual disability and behavioural or psychiatric problems. *Journal of Intellectual Disability Research*, 47, 447-455.
- Migerode, F. (2012). *Processes of interpersonal influence in families with a child with a disability*. Unpublished doctoral dissertation, Ghent University, Belgium.
- Migerode, F., Buysse, A., Maes, B., De Mol, J., & Cook, W.L. (2012a). Interpersonal influence in families with a child with a disability: A social relations model analysis. Manuscript submitted for publication.

- Migerode, F., Buysse, A., Maes, B., & De Mol, J. (2012b). Interpersonal influence in families: Development and psychometric evaluation of the Influence in Families Questionnaire. *Psychologica Belgica*, 52(1), 39-57.
- Migerode, F., Maes, B., Buysse, A., & Brondeel, R. (2012c). Quality of life in adolescents with a disability and their parents: The mediating role of social support and resilience. *Journal of Developmental and Physical Disabilities*. doi: [10.1007/s10882-012-9285-1](https://doi.org/10.1007/s10882-012-9285-1)
- Palkovitz, R., Marks, L.D., Appleby, D.W., & Holmes, E.K. (2003) Parenting and adult development: contexts, processes, and products of intergenerational relationships. In L. Kuczynski (Ed.) *Handbook of Dynamics in Parent-Child Relations* (pp. 307-323). Thousand Oaks, CA: Sage.
- Paramjit, S.G., & Swartz, T.B. (2001). Statistical analyses for round robin interaction data. *The Canadian Journal of Statistics*, 29, pp.1-11. doi: [10.2307/3316080](https://doi.org/10.2307/3316080)
- Parke, R.D. (2002). Parenting in the new millennium: Prospects, promises, and pitfalls. In J.P. McHale & W.S. Grolnick (Eds.), *Retrospect and prospect in the psychological study of families* (pp. 65-93). Mahwah, NJ: Lawrence Erlbaum Associates.
- Resch, J.A., Benz, M.R., & Elliott, T.R. (2012). Evaluating a dynamic process model of well-being for parents of children with disabilities: A Multi-Method Analysis. *Rehabilitation Psychology*, 57(1), 61-72. doi: [10.1037/a0027155](https://doi.org/10.1037/a0027155)
- Rolland, J.S. (1994). *Families, illness, and disability: An integrative treatment model*. New York: Basic Books.
- Rolland, J.S., & Walsh, F. (2006). Facilitating family resilience with childhood illness and disability. *Current Opinion in Pediatrics*, 18(5), 527-538. doi: [10.1097/01.mop.0000245354.83454.68](https://doi.org/10.1097/01.mop.0000245354.83454.68)
- Saloviita, T., Italinna, M., & Leinonen, E. (2003). Explaining the parental stress of fathers and mothers caring for a child with intellectual disability: A double ABCX model. *Journal of Intellectual Disability Research*, 47(4-5), 300-312. doi: [10.1046/j.1365-2788.2003.00492.x](https://doi.org/10.1046/j.1365-2788.2003.00492.x)
- Schalock, R.L., Brown, I., Brown, R., Cummins, R.A., Felce, D., & Matikka, L. (2002). Conceptualization, measurement, and application of quality of life for persons with intellectual disabilities: Report of an international panel of experts. *Mental Retardation*, 40(6), 457-470. doi: [10.1352/0047765\(2002\)040<0457:CMAAOQ>2.0.CO;2](https://doi.org/10.1352/0047765(2002)040<0457:CMAAOQ>2.0.CO;2)
- Schalock, R.L., & Felce, D. (2004). Quality of life and subjective well-being: Conceptual and measurement issues. In E. Emerson, C. Hatton, T. Thompson & T. Parmenter (Eds.), *The international handbook of applied research in intellectual disabilities* (pp. 261-279). Chichester, UK: Wiley.
- Seikkula, J., Arnkil, T.E., & Eriksson, E. (2003). Postmodern society and social networks: Open and anticipation dialogues in network meetings. *Family Process*, 42(2), 185-203. doi: [10.1111/j.1545-5300.2003.42201.x](https://doi.org/10.1111/j.1545-5300.2003.42201.x)
- Seligman, M.E.P. (1975). *Helplessness: On depression, development and death*. San Francisco: Freeman.
- Seligman, M., & Darling, R. (2007). *Ordinary families, special children: A systems approach to childhood disability*. New York: the Guilford press.

- Simmerman, S., Blacher, J., & Baker, B.L. (2001). Fathers' and mothers' perceptions of father involvement in families with young children with a disability. *Journal of Intellectual & Developmental Disability, 26*(4), 325-338.  
[doi:10.1080/13668250120087335](https://doi.org/10.1080/13668250120087335)
- Street, E. (1994). A family systems approach to child-parent separation: "Developmental closure". *Journal of Family Therapy, 16*(4), 347-365.  
[doi: 10.1111/j.1467-6427.1994.00802.x](https://doi.org/10.1111/j.1467-6427.1994.00802.x)
- Taanila, A., Jarvelin, M.R., & Kokkonen, J. (1999). Cohesion and parents' social relations in families with a child with disability or chronic illness. *International Journal of Rehabilitation Research, 22*(2), 101-110.  
[doi: 10.1097/00004356-199906000-00004](https://doi.org/10.1097/00004356-199906000-00004)
- Turnbull, A.P., Poston, D.J., Minnes, O., & Summers, J.A. (2007). Providing supports and services that enhance a family's quality of life. In I. Brown & M. Percy (Eds.), *A comprehensive guide to intellectual and developmental disabilities* (pp. 561-571). Baltimore: P.H. Brookes.
- Watzlawick, P., Beavin, J.H., & Jackson, D.D. (1967). *Pragmatics of human communication: A study of interactional patterns, pathologies, and paradoxes*. New York: W.W. Norton & Company.

Received: 20 February 2013

Revision Received: 2 April 2013

Accepted: 30 April 2013