Published in final edited form as:

J Intellect Disabil Res. 2017 July ; 61(7): 719–725. doi:10.1111/jir.12378.

Optimism and positive and negative feelings in parents of young children with developmental delay

Eva Kurtz-Nelson¹ and Laura Lee McIntyre

¹Department of Special Education and Clinical Sciences, University of Oregon, Eugene, OR USA

Abstract

Background—Parents' positive and negative feelings about their young children influence both parenting behaviour and child problem behaviour. Research has not previously examined factors that contribute to positive and negative feelings in parents of young children with developmental delay (DD).

Method—The present study sought to examine whether optimism, a known protective factor for parents of children with DD, was predictive of positive and negative feelings for these parents. Data were collected from 119 parents of preschool-aged children with developmental delay. Two separate hierarchical linear regression analyses were conducted to determine if optimism significantly predicted positive feelings and negative feelings and whether optimism moderated relations between parenting stress and parent feelings.

Results—Increased optimism was found to predict increased positive feelings and decreased negative feelings after controlling for child problem behaviour and parenting stress. In addition, optimism was found to moderate the relation between parenting stress and positive feelings.

Conclusion—Results suggest that optimism may impact how parents perceive their children with DD. Future research should examine how positive and negative feelings impact positive parenting behaviour and the trajectory of problem behaviour specifically for children with DD.

Keywords

early childhood; developmental delay; behaviour problems; parenting stress; parent optimism; parent feelings

Background

Children with intellectual and developmental disabilities are at increased risk of developing persistent mental health and behaviour problems (Einfeld & Tonge, 1996; Emerson et al., 2014). In addition, preschool children with developmental delay (DD) show heightened problem behaviour as compared to their typically developing peers (Baker et al., 2003). Parent characteristics have been identified as key malleable factors that influence the development of problem behaviour and mental health problems for children with DD (Baker

et al., 2003; Emerson et al., 2014; Fenning et al., 2014; Newland & Crnic, 2011; Schuiringa et al., 2015). In particular, parents' perceptions of and attributions about their children have been shown to contribute to problem behaviour in both typically developing young children and young children with DD (Bugental & Johnston, 2000; Mullineaux et al., 2009; Woolfson et al., 2010). As such, identifying and intervening on factors that affect parents' perceptions of their children with DD may contribute to the prevention of problem behaviour and co-occurring mental health problems for these children.

Parent Feelings

Parent feelings, defined as positive emotions (e.g. happiness or joy) or negative emotions (e.g. sadness or anger) experienced when thinking about or interacting with a specific child, are associated with the development of problem behaviour over time for typically developing children (Deater-Deckard et al., 2005; Fontaine et al., 2011; Glover et al., 2010; Larsson et al., 2008; Mullineaux et al., 2009). Relations between parent feelings and child problem behaviour appear to be bidirectional, with early negative feelings predicting later conduct problems and vice versa (Fontaine et al., 2011; Larsson et al., 2008). This evidence indicates that parent feelings are worthy of further exploration in populations at risk of developing significant problem behaviour, such as children with DD. However, research has not examined the factors that contribute to parents' positive and negative feelings about their young children with DD.

Parenting Stress

Among parents of typically developing children, high levels of parenting stress are associated with lower positive feelings and higher negative feelings about a specific child (Deater-Deckard et al., 2005). Significant parenting stress may lead to more difficult parent-child interactions, resulting in reduced positive feelings and increased negative feelings (Deater-Deckard et al., 2005; Farmer & Lee, 2011). Parenting stress has been found to impact several parenting-related cognitions among parents of children with DD, such as parental self-efficacy and perceived attachment to the child with a disability (Goodman & Glenwick, 2012; Kuhn & Carter, 2006; Meirsschaut, Roeyers, & Warreyn, 2010). As such, parenting stress could also affect parents' perceptions about their child with DD, resulting in positive or negative parent feelings.

Optimism

In addition to contextual factors such as parenting stress and child problem behaviour, parent feelings might also be associated with broader personality factors. Conceptualised as a global and stable dimension of personality, optimism has been found to predict positive parenting behaviour in at-risk samples, such as mothers facing economic adversity (Carver & Scheier, 2014; Ellingsen et al., 2014; Jones et al., 2002; Taylor et al., 2010; Taylor et al., 2012). For parents of children with DD, optimism has been consistently found to predict lowered parenting stress and greater overall wellbeing (Baker et al., 2005; Ekas et al., 2010; Paczkowski & Baker, 2008). These findings suggest that optimism serves as a protective factor for parents experiencing a variety of risk factors, including child developmental delay. If optimism functions as a generalised protective factor for parents of children with DD, it may buffer the impact of risk factors such as high parenting stress or externalising problem

behaviour on parents' feelings and cognitions about their young children with DD. However, it is not currently known whether optimism is directly or indirectly associated with parent feelings.

Present Study and Research Questions

This study was designed to answer the following research questions:

1. Which parent and child factors are associated with parents' positive and negative feelings about their young children with DD?
2. Do optimism and parenting stress predict parents' positive and negative feelings about their young children with DD after controlling for child behaviour?
3. Does optimism moderate the relation between parenting stress and parents' positive and negative feelings about their young children with DD?
4. Does optimism moderate the relation between externalising problem behaviour and parents' positive and negative feelings about their young children with DD?

Methods

This study was part of a larger investigation of an early family-based intervention for caregivers of preschool-aged children with DD (R01 HD059838, Author, PI) and was approved by the authors' institutional review board. For this study, data were collected from 119 parents of preschool-aged children before families were randomised to the intervention or control conditions. Participants were recruited from agencies serving children eligible for early intervention and early childhood special education in a mid-size city in the Pacific Northwest region of the United States. Parents were then screened over the phone to determine whether their children met the following inclusionary criteria: 1) age 2.5 – 3.5 years, 2) determined by a multidisciplinary educational team to meet state criteria for a developmental delay 3) live with primary caregiver for a minimum of 1 year. Preschool-aged children meet state criteria for a developmental delay if they are 1.5 standard deviations below the mean in two or more developmental areas or two standard deviations below the mean in one developmental area per the results of standardised assessments. Children were not eligible for the study if they were nonambulatory, deaf, or blind. Table 1 displays key child and parent demographics for this sample.

Assessment Procedures

Parents received a \$100 honorarium for participation, which involved completing a mail-home packet of questionnaires and a family demographics interview. All measures were completed by the child's primary caregiver.

Demographics—For the present study, the demographic variables of interest were parent gender, parent education, child gender, child age, and annual household income.

Child behaviour problems—Caregivers completed the *Child Behavior Checklist for Ages 1 ½ - 5* (CBCL; Achenbach, 2000), a 99 item checklist that indicates child problems. Internalising and externalising broad-band T-scores were used in this study. The CBCL has

been used extensively with young children with DD and has excellent internal consistency reliability and concurrent validity within this population (e.g. Baker et al., 2003; Baker et al., 2005; Ellingsen et al., 2014).

Parenting stress—The Total Stress Index of the *Parenting Stress Index-Short Form* (PSI-SF; Abidin, 1995) was used as a measure of the overall level of stress experienced by parents over the past 12 months. The PSI-SF contains 36-items that yield scores on three subscales, and these subscales are combined to make up the Total Stress Index. Psychometric properties of this measure are acceptable, with reported high internal consistency and acceptable test-retest reliability (Abidin, 1995). This measure has been used extensively with families who have children with DD (e.g., Bagner & Graziano, 2012; Peer & Hillman, 2012; Tervo, 2010; Webster et al., 2008).

Optimism—The *Revised Life Orientation Test* (LOT-R; Scheier et al., 1994) was used to measure parents' generalised optimism about life events. The LOT-R asks parents to rate the degree to which they agree with 10 statements such as "In uncertain times, I usually expect the best." A higher score on the LOT-R indicates higher global optimism. The LOT-R has been used repeatedly with parents of children with DD, with these studies finding acceptable reliability and validity with this population (e.g., Baker et al., 2005; Peer & Hillman, 2012; Ellingsen et al., 2014). Cronbach's alpha for the LOT-R in this sample is $\alpha = .84$, indicating good internal consistency (Bland & Altman, 1997).

Positive and negative feelings

Parents' positive and negative feelings toward their child with DD were measured using the *Parent Feelings Questionnaire* (PFQ; Deater-Deckard, 2000). The PFQ consists of two scales containing items measuring feelings toward a specific child: A Likert-type scale and a 1–10 scale. On the Likert-type scale, parents are asked to rate the degree to which 24 statements such as "Sometimes I find it difficult to be around my child" and "I enjoy being my child's parent" are true or untrue for them on a 1–5 scale. On the 1–10 scale, parents are asked to rate how frequently they experience emotions such as "joyful" and "frustrated" when they are with their child on a scale where 1 = never and 10 = always. Scores on the positive feelings scales and scores on the negative feelings scales are combined to create an overall Positive Feelings composite and an overall Negative Feelings composite. The PFQ has good reliability and correlates substantially with other measures of parental affect (Deater-Deckard, 2000). Cronbach's alpha ranges from $\alpha = .72$ for the positive feelings Likert-type scale to $\alpha = .92$ for the negative feelings Likert type scale, indicating acceptable internal consistency (Bland & Altman, 1997).

Results

To address our first research question, we examined bivariate correlations to identify parent and child factors potentially associated with parent feelings. These correlations are presented in Table 2. Increased positive feelings about the child were associated with decreased internalising and externalising problems, decreased stress, and increased optimism. Increased negative feelings were associated with increased internalising and

externalising problems, increased stress, and decreased optimism. In addition, positive and negative feelings were significantly and negatively associated. Positive and negative feelings were not associated with demographic factors.

To address research question two, we conducted two separate hierarchical linear regression analyses to determine if optimism significantly predicted positive feelings and negative feelings. In each regression, internalising and externalising problem behaviour were entered in step 1, total stress was entered in step 2, and optimism was entered in step 3. Tests to see if these variables met the assumption of collinearity were not significant, indicating that multicollinearity is not a concern. Results of the analyses are presented in Table 3. In the analysis predicting positive feelings about the child, the addition of optimism in the final step significantly improved the prediction of positive feelings when added to the final model. Total stress also significantly contributed to the prediction of positive feelings in the final model, while the contributions of externalising and internalising problems were not significant. In the analysis predicting negative feelings about the child, the addition of optimism in the final step significantly improved the prediction of negative feelings in the final model. Externalising problems and total stress also significantly contributed to the final model.

To address the third research question, the interaction between parenting stress and optimism was added as step 4 of each regression. The interaction term significantly contributed to the prediction of positive feelings, indicating that optimism moderates the relation between parenting stress and positive feelings. The interaction did not significantly contribute to the prediction of negative feelings. In separate analyses, the interaction between externalising problem behaviour and optimism was added as step 4 of each regression in order to answer the final research question. This interaction did not significantly contribute to the prediction of positive feelings ($R^2 = .01$, $F = 0.83$, $p > .05$) or negative feelings ($R^2 = .00$, $F = 0.62$, $p > .05$).

Discussion

This study examined relationships between optimism and parents' positive and negative feelings toward their preschool child with DD. After controlling for child problem behaviour and parenting stress, optimism significantly improved the prediction of both positive and negative feelings. These results indicate that parents' level of global optimism may influence how they think and feel about their very young children with DD. In addition, optimism was found to moderate the relation between parenting stress and positive feelings, with parents who had high optimism experiencing increased positive feelings under condition of high parenting stress. This finding provides support for the theory that optimism serves as a general protective factor for parents of children with DD. Results of this study also uncovered surprising relationships between child problem behaviour and parent feelings. While externalising problem behaviour was initially a significant predictor of positive feelings, this prediction was no longer significant when stress was added to the model. This result suggests that for parents of children with DD, positive feelings may be driven less by child problem behaviour and more by overall parenting stress.

Limitations and Future Directions

One primary limitation of this study is that parent feelings, parenting stress, and child problem behaviour were all measured by self-report from a single informant. Future research could incorporate direct observations of child behaviour and parent positive or negative affect during parent-child interactions. In addition, the sample used in this study was drawn from one geographical region and consisted primarily of White/Caucasian mothers, so results may not generalise to other groups or regions. Finally, this study is cross-sectional, and many significant associations were in the small to moderate range. As such, additional research is needed to support and corroborate these findings. Specifically, research could examine whether optimism and parent feelings relate to observed positive parenting behaviour for parents of children with DD, as well as how positive and negative feelings affect the problem behaviour trajectory of children with DD.

References

- Abidin, RR. Professional manual. 3. Odessa, FL: Psychological Assessment Resources, Inc; 1995. Parenting Stress Index.
- Achenbach, TM. Manual for the Child Behaviour Checklist 1 ½ – 5. Burlington, VT: University of Vermont, Department of Psychiatry; 2000.
- Bagner DM, Graziano PA. Barriers to success in parent training for young children with developmental delay: The role of cumulative risk. *Behaviour Modification*. 2013; 37(3):356–377.
- Baker BL, Blacher J, Olsson MB. Preschool children with and without developmental delay: Behaviour problems, parents' optimism and well-being. *Journal of Intellectual Disability Research*. 2005; 49(8):575–590. [PubMed: 16011551]
- Baker BL, McIntyre LL, Blacher J, Crnic K, Edelbrock C, Low C. Preschool children with and without developmental delay: Behaviour problems and parenting stress over time. *Journal of Intellectual Disability Research*. 2003; 47:217–230. [PubMed: 12787154]
- Bland JM, Altman DG. Statistics notes: Cronbach's alpha. *BMJ*. 1997; 314(7080):572. [PubMed: 9055718]
- Bugental DB, Johnston C. Parental and child cognitions in the context of the family. *Annual Review of Psychology*. 2000; 51:315–344.
- Carver CS, Scheier MF. Dispositional optimism. *Trends in Cognitive Sciences*. 2014; 18(6):293–299. [PubMed: 24630971]
- Deater-Deckard K. Parenting and child behavioural adjustment in early childhood: A quantitative genetic approach to studying family processes. *Child Development*. 2000; 71(2):468–484. [PubMed: 10834478]
- Deater-Deckard K, Smith J, Ivy L, Petrill SA. Differential perceptions of and feelings about sibling children: Implications for research on parenting stress. *Infant and Child Development*. 2005; 14:211–215.
- Durand VM, Hieneman M, Clarke S, Wang &, Rinaldi ML. Positive family intervention for severe challenging behaviour I: A multisite randomized clinical trial. *Journal of Positive Behaviour Interventions*. 2012; 15:133–143.
- Durand, VM., Hieneman, M., Clarke, S., Zona, M. Optimistic parenting: Hope and help for parents with challenging children. In: Sailor, W., Dunlap, G., Sugai, G., Horner, R.H., editors. *Handbook of positive behaviour support*. New York, NY: Springer; 2009. p. 233–256.
- Einfeld SL, Tonge BJ. Population prevalence of psychopathology in children and adolescents with intellectual disability: II. Epidemiological findings. *Journal of Intellectual Disability Research*. 1996; 47:41–58.
- Ekas NV, Lickenbrock DM, Whitman TL. Optimism, social support, and well-being in mothers of children with autism spectrum disorder. *Journal of Autism and Developmental Disorders*. 2010; 40:1274–1284. [PubMed: 20195734]

- Ellingsen R, Baker BL, Blacher J, Crnic K. Resilient parenting of children at developmental risk across middle childhood. *Research in Developmental Disabilities*. 2014; 35:1364–1374. [PubMed: 24713516]
- Emerson E, Blacher J, Einfeld S, Hatton C, Robertson J, Stancliffe RJ. Environmental risk factors associated with the persistence of conduct difficulties in children with intellectual disabilities and autistic spectrum disorders. *Research in Developmental Disabilities*. 2014; 35(12):3508–3517. [PubMed: 25238636]
- Farmer AY, Lee SK. The effects of parenting stress, perceived mastery, and maternal depression on parent-child interaction. *Journal of Social Service Research*. 2011; 37(5):516–525.
- Fenning RM, Baker JK, Baker BL, Crnic KA. Parent-child interaction over time in families of young children with borderline intellectual functioning. *Journal of Family Psychology*. 2014; 28(3):326–335. [PubMed: 24707801]
- Fontaine NMG, McCrory EJP, Boivin M, Moffitt TE, Viding E. Predictors and outcomes of joint trajectories of callous-unemotional traits and conduct problems in childhood. *Journal of Abnormal Psychology*. 2011; 120(3):730–742. [PubMed: 21341879]
- Glover MB, Mullineaux PY, Deater-Deckard K, Petrill SA. Parents' feelings toward their adoptive and non-adoptive children. *Infant and Child Development*. 2010; 19:238–251. [PubMed: 21088705]
- Goodman SJ, Glenwick DS. Correlates of attachment perceptions in parents of children with autism spectrum disorders. *Journal of Autism and Developmental Disorders*. 2012; 42(10):2056–2066. [PubMed: 22298107]
- Jones DJ, Forehand R, Brody GH, Armistead L. Positive parenting and child psychosocial adjustment in inner-city single parent African American families: The role of maternal optimism. *Behaviour Modification*. 2002; 26(4):464–481.
- Koenig JL, Barry RA, Kochanska G. Rearing difficult children: Parents' personality and children's proneness to anger as predictors of future parenting. *Parenting: Science and Practice*. 2010; 10:258–273.
- Kuhn JC, Carter AS. Maternal self-efficacy and associated parenting cognitions among mothers of children with autism. *American Journal of Orthopsychiatry*. 2006; 76(4):564–575. [PubMed: 17209724]
- Larsson H, Viding E, Rijdsdijk FV, Plomin R. Relationships between parental negativity and childhood antisocial behaviour over time: A bidirectional effects model in a longitudinal genetically informative design. *Journal of Abnormal Child Psychology*. 2008; 36:633–645. [PubMed: 17602294]
- Meirsschaut M, Roeyers H, Warreyn P. Parenting in families with a child with autism spectrum disorder and a typically developing child: Mothers' experiences and cognitions. *Research in Autism Spectrum Disorders*. 2010; 4(4):661–669.
- Mullineaux PY, Deater-Deckard K, Petrill SA, Thompson LA. Parenting and child behaviour problems: A longitudinal analysis of non-shared environment. *Infant and Child Development*. 2009; 18:133–148. [PubMed: 19436771]
- Neece CL, Green SA, Baker BL. Parenting stress and child behaviour problems: A transactional relationship over time. *American Journal on Intellectual and Developmental Disabilities*. 2012; 117(1):48–66. [PubMed: 22264112]
- Newland RP, Crnic KA. Mother-child affect and emotion socialization processes across the late preschool period: Predictions of emerging behaviour problems. *Infant and Child Development*. 2011; 20:371–388. [PubMed: 22121337]
- Paczkowski E, Baker BL. Parenting children with developmental delays: The role of positive beliefs. *Journal of Mental Health Research in Intellectual Disabilities*. 2008; 1(3):156–175. [PubMed: 20107620]
- Peer JW, Hillman SB. The mediating impact of coping style on stress perception for parents of individuals with intellectual disabilities. *Journal of Intellectual Disabilities*. 2012; 16(1):45–59. [PubMed: 22415747]
- Pike A, Iervolino AC, Eley TC, Price TS, Plomin R. Environmental risk and young children's cognitive and behavioural development. *International Journal of Behavioural Development*. 2006; 30(1):55–66.

- Scheier MF, Carver CS, Bridges MW. Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): A re-evaluation of the Life Orientation Test. *Journal of Personality and Social Psychology*. 1994; 67:1063–1078. [PubMed: 7815302]
- Schuiringa H, van Nieuwenhuijzen M, Orobio de Castro B, Matthys W. Parenting and the parent-child relationship in families of children with mild to borderline intellectual disabilities and externalising behaviour. *Research in Developmental Disabilities*. 2015; 36:1–12. [PubMed: 25262097]
- Taylor ZE, Larsen-Rife D, Conger RD, Widaman KF, Cutrona CE. Life stress, maternal optimism, and adolescence competence in single mother, African American families. *Journal of Family Psychology*. 2010; 24(4):468–477. [PubMed: 20731493]
- Taylor ZE, Widaman KF, Robins RW, Jochem R, Early DR, Conger RD. Dispositional optimism: A psychological resource for Mexican-origin mothers experiencing economic stress. *Journal of Family Psychology*. 2012; 26(1):133–139. [PubMed: 22201249]
- Tervo RC. Attention problems and parent-rated behaviour and stress in young children at risk for developmental delay. *Journal of Child Neurology*. 2010; 25(11):1325–1330. [PubMed: 20223747]
- Webster RI, Majnemer A, Platt RW, Shevell MI. Child health and parental stress in school-age children with a preschool diagnosis of developmental delay. *Journal of Child Neurology*. 2008; 23(1):32–38. [PubMed: 18184941]
- Woolfson LM, Taylor RJ, Mooney L. Parental attributions of controllability as a moderator of the relationship between developmental disability and behaviour problems. *Child: Care, Health, & Development*. 2010; 37(2):184–194.

Table 1

Child and Caregiver Demographic Variables (N = 119)

Demographic	Mean (SD)	n (%)
Child		
Mean age in months	42.34 (7.84)	
No. female		29 (24.4)
No. White/Caucasian		107 (89.9)
No. with siblings in home		92 (77.3)
Primary diagnosis of speech/language delay		54 (45.4)
Primary diagnosis of developmental delay		20 (16.8)
Primary diagnosis of autism spectrum disorder		16 (13.4)
Other primary diagnosis		19 (16.0)
Unknown primary diagnosis		10 (8.4)
Caregiver		
No. female		110 (92.4)
No. biological mother		94 (79.0)
No. living with a partner		98 (82.4)
No. White/Caucasian		104 (87.4)
No. working full or part-time		47 (39.5)
No. bachelor's degree		24 (20.2)
Annual family income in USD	39,124.79 (32,484.26)	

Table 2

Bivariate Correlations for Parent and Child Variables of Interest

Variables	1	2	3	4	5	6	7	8	9	10
1. Parent gender	–									
2. Child gender	–.06	–								
3. Child age	–.01	–.08	–							
4. Annual income	–.02	.01	.07	–						
5. Internalising problems	.02	.17	.10	–.23*	–					
6. Externalising problems	.06	.16	.14	–.20*	.69***	–				
7. Total stress	.10	.07	.16	–.11	.51***	.59***	–			
8. Optimism	.02	–.01	.06	.23*	–.25**	–.31**	–.49***	–		
9. Positive feelings	–.01	–.12	–.04	–.04	–.23*	–.36***	–.58***	.42***	–	
10. Negative feelings	–.07	.15	–.01	–.15	.36**	.52***	.60***	–.50***	–.66***	–

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

Table 3

Regression Results Predicting Positive Feelings and Negative Feelings

β	Positive Feelings				Negative Feelings			
	Step 1	Step 2	Step 3	Step 4	Step 1	Step 2	Step 3	Step 4
Externalising behaviour	-.38**	-.11	-.10	-.09	.51***	.29**	.27**	.27***
Internalising behaviour	.03	.14	.14	.12	.02	-.08	-.07	-.06
Total stress		-.59***	-.51***	-.96***		.47***	.35***	.56***
Optimism			.18*	-.51			-.26**	.06
Stress by optimism				.64*				-.30
R^2	.13***	.22***	.03*	.04*	.27***	.14***	.05**	.01
Final R^2				.41				.47
Final F				15.71***				19.81***

* $p < .05$.

** $p < .01$.

*** $p < .001$.