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# Unsupportive parenting and internalising behaviour problems in children with or without intellectual disability

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## Abstract

**Background** Children with intellectual disability (ID) are at heightened risk for developing other psychological disorders, including internalising disorders. Anxiety and depression have been shown to be familial, and parenting is a contributing factor to the development of these disorders. To extend this research, we examined the extent to which mother and father depression and negative, unsupportive parenting related to child internalising behaviour problems, in children with ID or with typical development (TD).

**Method** Participants were 156 mother and father dyads and their children, assessed at ages 4 and 5 years. We examined parent (mother and father) and child delay status (ID and TD) in relation to measures of both observed and self-reported unsupportive, negative parenting. Utilising moderation models, we examined the relationship between parental depression, unsupportive/negative parenting and child internalising behaviour problems.

**Results** Unsupportive, negative parenting differed based on parent gender and child delay status. In addition, father depression was a significant moderator of the relationship between unsupportive

parenting and child internalising behaviour problems.

**Conclusions** Children with ID were found to be at higher risk of experiencing unsupportive, negative parenting than children with TD. Children of depressed fathers were especially vulnerable to developing internalising behaviour problems in an unsupportive parenting context.

**Keywords** intellectual disability, internalising behaviour problems, negative parenting, unsupportive parenting

Individuals with intellectual disability (ID), aside from exhibiting impairments in intellectual and adaptive functioning, are also at heightened risk for other psychological disorders. Children with ID are up to four times as likely as typically developing (TD) children to meet criteria for a psychiatric disorder at any given time (Emerson & Hatton 2007; Einfeld *et al.* 2011). Among these, depressive and anxiety disorders have been found to be significantly higher in children with ID than in their TD peers (Green, Berkovits, & Baker, 2015; Hammen & Brennan 2003). When compared with TD youth rates of 3–7%, reported prevalence of anxiety disorders ranges from 10% to 22% in youth with ID (Dekker & Koot 2003; Emerson 2003). While there has been a focus on the elevated level of externalising disorders in children with ID (Baker *et al.* 2010), there is still much to learned about internalising disorders in this population.

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### Parenting and child internalising behaviour problems

Research on the aetiology of internalising disorders in children with TD has indicated the importance of early parent–child relationships (Rubin & Mills 1991; Chorpita & Barlow 1998). Hudson and Rapee (2001) reported observed interactions of mothers with anxious children to be significantly less positive and encouraging than those of mothers with non-anxious children, supporting findings from retrospective questionnaire studies that have shown a relationship between parental rejection and child anxiety (Gerlsma *et al.* 1990; Arbel & Stravinsky 1991). Parenting characterised as oversolicitous, intrusive or controlling and low in warmth has also been associated with greater child inhibition and anxiety (Chorpita & Barlow 1998; Degnan *et al.* 2010).

Parents of children with ID also have been found to demonstrate higher levels of intrusive and negative parenting behaviours when compared with parents of children with TD (McIntyre 2008; Brown *et al.* 2011). The present study extends this work by examining the differential effect of negative parenting behaviours on internalising behaviour problems in children with ID vs. TD.

In children with TD, a subset of parenting behaviours – parents' reactions to children's emotions – has been associated with both child emotion regulation and expression (Carson & Parke 1996; Eisenberg *et al.* 1998). One classification of parents' reactions to children's negative emotions distinguishes between supportive and unsupportive (Fabes *et al.* 2003). Supportive reactions include emotion-focused reactions, problem-focused reactions and expressive encouragement, while unsupportive reactions include punitive, minimisation and distress reactions.

Unsupportive parental reactions to children's negative emotions may impede them from developing appropriate regulatory capabilities, and even teach them to suppress their emotions, thus increasing their physical arousal and anxiety (Buck 1984; Gross & Levenson 1993). Researchers have shown unsupportive parental reactions to be associated with higher levels of emotion dysregulation in TD children (Fabes *et al.* 2001; Shaffer *et al.* 2012). Parents' unsupportive reactions

have been associated with higher levels of inhibition and internalising behaviour problems in children (Suveg *et al.* 2005; Hastings & De 2008). Further, Sanders and colleagues (2015) found that TD children who perceived their parents as being unsupportive of their emotions more often reported depressive symptoms.

This relationship has yet to be examined in children with ID, although Paczkowski & Baker (2007) found that when mothers displayed higher levels of unsupportive parenting, children with ID expressed more overall problem behaviours than their TD peers. Given that prior literature has demonstrated that unsupportive parenting is associated with child negative emotional arousal (Buck 1984; Gross & Levenson 1993), the present study focused specifically on the relationship of unsupportive parenting and child internalising behaviours.

### Parental depression and internalising behaviour problems

There is evidence of a link between parental depression and child emotion dysregulation (Kane & Garber 2004; Hoffman *et al.* 2006; Shaffer *et al.* 2012). Anxiety and depressive disorders are familial, although there has been a debate as to the strength of the genetic component involved in their development (Leve *et al.* 2005; Kendler *et al.* 2008). Research involving TD children has shown depressed parents to be less warm and positive towards their children, while being more negative and disengaged (Lovejoy *et al.* 2000; Wilson & Durbin 2010). Children of depressed parents are at higher risk of psychiatric disorders and developmental difficulties (Goodman *et al.* 2011; Reeb *et al.* 2015). Research has also linked exposure to parental displays of chronic negative emotions, such as hostility or depression, to poor behavioural and emotional functioning in children (Gotlib & Lee 1997; Fabes *et al.* 2001). The present study examined the role parental depression plays in the relationship between unsupportive parenting and child internalising behaviour problems in a sample of children with ID or TD. We asked specifically whether parental depression functions as an additive risk factor in the relationship between unsupportive, negative parenting and child internalising behaviours.

### Parenting behaviours: mothers versus fathers

Research involving children with ID has mainly focused on mothers' parenting behaviours; however, it is also important to examine the unique role fathers play in parenting. In families of TD children, parenting styles have been found to differ between mothers and fathers (Winsler *et al.* 2005; Cassano *et al.* 2014). For example, fathers displayed higher levels of minimising and punitive parenting reactions than mothers did (Eisenberg *et al.* 1996; Eisenberg *et al.* 1998). Alternatively, Baker *et al.* (2011) found that there was little agreement between mothers' and fathers' self-report of reactions to their child's emotions. The agreement or disagreement between mothers and fathers in other parenting dimensions (e.g. socialisation values) has been shown to be an important contributor to children's functioning (e.g. Deal *et al.* 1989). In general, cooperation and agreement in parenting approaches is linked to positive child outcomes (Gable *et al.* 1994; McElwain *et al.* 2007), although some disparity may help children to apply their own emotion regulation skills (McElwain *et al.* 2007).

### Present study

In order to more fully capture the domain of unsupportive, negative parenting, we utilised observational measures of negative parental affect and intrusiveness, as well as a self-report measure of unsupportive parenting reactions. We examined parents of children with ID or TD and assessed the effect of negative, unsupportive parenting and parental depression at child age 4 years on child internalising behaviour problems assessed 1 year later, at child age 5 years. Our first set of research questions addressed parent gender and child disability status (ID or TD) as related to parenting behaviours and included (1a) Do mothers and fathers differ in their levels of negative, unsupportive parenting at child age 4 years? (1b) Does this relationship differ between children with ID or TD? and (1c) Is there an interaction between parent gender and child disability status in the amount of negative, unsupportive parenting?

Our second set of research questions addressed the extent to which parenting behaviours and parent depression were associated with child internalising behaviour problems. These included (2a) Does

negative/unsupportive parenting at child age 4 years relate to child internalising behaviour problems at child age 5 years? and (2b) Does clinical vs. non-clinical level of parental depression function as a moderator between observed negative/unsupportive parenting and child internalising behaviour problems?

### Methods

Participants were mother and father dyads ( $n = 156$ ), and their children for whom complete data were collected at child ages 4 and 5 years. Families in the present study were a subset of participants in the Collaborative Family Study, a collaboration of three universities located in Southern California and Central Pennsylvania. The larger study examined family processes and mental disorders in youth with ID or TD. Families of children with ID were primarily recruited from agencies that provide diagnostic and intervention services for persons with, or at risk for, developmental disabilities. Children with autism were excluded from the study. Families of children with TD were recruited primarily through local preschools.

Children were included in the ID sample ( $n = 53$ ) if, at their age 5 laboratory visit, they were determined to have an IQ in the clinical or borderline range for ID, below 85 on the Stanford–Binet Intelligence Scale (Thorndike *et al.* 1986) and a standard score below 85 on the Vineland Adaptive Behaviour Scales (VABS; Sparrow *et al.* 2005). We combined those with IQs below 70 ( $n = 40$ ) and those with IQs ranging from 71–84 (i.e. in the borderline range) ( $n = 13$ ) in the ID group. This decision was based on prior research demonstrating similarities in the difficulties faced by those with borderline intellectual functioning and those with ID (*Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition Text Revision*, American Psychiatric Association 2000; Fenning *et al.* 2007). Participants in the TD group ( $n = 103$ ) were included if they had IQ and adaptive scores of 85 or above and no previous history of a developmental delay or other disability.

### Procedure

The Institutional Review Boards of the participating universities approved study procedures. Mothers and fathers provided informed consent. Parents

completed measures of child behaviour problems, their responses to their child's negative affect and depressive symptoms at child ages 4 and 5 years. Parenting data were coded from live observations that were conducted in the family home at child age 4 years.

## Measures

### *Stanford–Binet Intelligence Scale, fourth edition*

This widely used instrument is particularly well suited for evaluating children with ID, because the examiner adapts the starting points according to the child's developmental level. The eight subtest most appropriate for 5-year-olds were administered (i.e. vocabulary, comprehension, absurdities, pattern analysis, copying, quantitative, bead memory and memory for sentences). The composite standard IQ score ( $M = 100$ ;  $SD = 16$ ) was used. High internal consistency has been reported (Glutting 1989), and there is sufficient evidence for validity, as reported in the technical manual (Thorndike *et al.* 1986).

### *Vineland Adaptive Behaviour Scales*

To assess adaptive functioning, the VABS was administered to mothers as a semi-structured interview at child age 5 years. The overall adaptive composite ( $M = 100$ ;  $SD = 15$ ), which included communication, daily living skills and socialisation domains, was utilised. The VABS has an internal consistency from .75 to .80 and Cronbach's  $\alpha$  of .93 (Sparrow *et al.* 2005).

### *Center for Epidemiological Studies Depression Scale*

The Center for Epidemiological Studies Depression Scale, administered to mothers and fathers at child age 4 years, is a 20-item self-report questionnaire that asks participants to rate each item on how often it applied to them within the last week, from 1 (rarely) to 4 (most of the time). The scoring ranges from 0 to 60, with higher scores indicating greater levels of depression. Radloff (1977) recommended a clinical cut-off of 16 or higher. Cronbach's alpha coefficients were .92 for mothers and .88 for fathers (Radloff 1977).

### *Child Behaviour Checklist for ages 1.5–5 years*

To assess child behaviour problems, mothers and fathers completed the 99-item Child Behaviour Checklist (CBCL) at child age 5 years. Each item is rated on a 3-point scale: 0 (not true), 1 (somewhat or sometimes true) or 2 (very true or often true). The CBCL yields a total problem score, broadband externalising and internalising scores, and seven narrow-band scales. The present study used T-scores for internalising behaviour problems ( $M = 50$  and  $SD = 10$ ). Mothers' CBCL scores were utilised in analyses examining mothers' parenting practices, and fathers' scores were utilised in analyses examining fathers' parenting practices. The CBCL parent report form has internalising score alpha coefficients ranging from .89 to .90 (Achenbach 2000).

### *Coping with Children's Negative Emotions Scale*

The Coping with Children's Negative Emotions Scale (CCNES) is a parent self-report measure of the degree to which parents perceive themselves as being reactive to young children's negative affect in distressful situations. Parents are presented with 12 hypothetical scenarios in which their child is either sad or angry. For each, they rate the likelihood (on a 7-point scale from 'very likely' to 'very unlikely') of responding in each of six ways. Three sub-scales (emotion-focused reactions, problem-focused reactions and expressive encouragement) combine to a supportive parenting reactions composite and three sub-scales (punitive, minimisation and distress) combine to an unsupportive parenting reactions composite. The CCNES has good internal and test-retest reliabilities, as well as good concurrent and construct validity (Fabes *et al.* 2003). In the current study, the composite of unsupportive parenting was calculated by taking the mean of the punitive and minimisation reactions sub-scales. Previous work has used these two sub-scales as a construct of 'harsh parental coping' (Fabes *et al.* 2001), as distress reactions might be more closely tied to parents' own emotion regulation. Punitive responses from the CCNES reflect the degree to which parents respond in a castigatory manner. Minimising reactions reflect the degree to which parents devalue the child's emotions or minimise the seriousness of the situation. Alphas in the present sample ranged from .70 to .83.

### *Parent–Child Interaction Rating System*

Mothers' and fathers' negative parenting behaviours were assessed with the Parent–Child Interaction Rating System at child age 4 years during a naturalistic home observation. This coding, for 90 min in the evening, included six 15-min segments. Coders observed for 10 min, followed by a 5-min coding period; ratings were averaged across observation periods. Coders were trained on videotapes of home observations and attended live home observations with an experienced coder until reliability met the criterion of over 70% exact agreement with the master coder and 95% agreement within one scale point. To maintain reliability within and across the two project sites, a primary coder was designated at each site. Reliability was regularly redetermined through videotapes and live home observations. Kappa coefficients, considered adequate (see Crnic *et al.* 2005), were .61 and .59 for within-site reliability at the California and Pennsylvania sites and .64 for across-site reliability.

Parent–Child Interaction Rating System coding in the home included a number of parent, child and dyadic behaviours. Each was rated on a 5-point Likert scale (1 = not at all characteristic, 5 = highly or predominantly characteristic). The scale considered both the frequency and the intensity. The codes for negative affect and intrusiveness were examined in the current study. Negative affect referred to the behavioural and verbal expression of negative emotion, disapproval and hostility. Intrusiveness referred to actions by the parent that imposed his/her own agenda on the child despite signals from the child that a different activity, pace or level of interaction was desired. The dimensional scales were combined to create a negative parenting composite. This factor has been established and replicated through factor analyses (Woodworth *et al.* 1996; Fenning *et al.* 2007).

### **Preliminary analyses and plan**

We first analysed status group differences in parent depression and child internalising behaviour problems. We did not find group differences in parental depression. However, children in the ID group exhibited significantly higher levels of internalising problems than TD children, by mother report (ID mean = 54.1, TD mean = 47.9;  $t = -3.69$ ,

$P < .001$ ) and by father report (ID mean = 55.1, TD mean = 48.4,  $t = -3.40$ ,  $P < .001$ ).

To address our first research questions, we conducted a multivariate analysis of variance. Child delay status and parent gender were entered as the independent variables and observed negative parenting and self-reported unsupportive parenting practices as the qualitatively different dependent variables. Next, to further elucidate the parent gender differences in negative/unsupportive parenting, we ran separate analysis of covariance models, with parental education as a covariate. The first model examined self-reported unsupportive parenting, which was the primary variable of interest, and the second examined observed negative parenting, while controlling for reported unsupportive parenting.

For the second set of research questions, we used PROCESS, an SPSS utility for conditional process modelling (Hayes 2013), to examine the extent to which parenting behaviours and parental depression related to child internalising behaviour problems. We tested separate models using mother and father self-reported unsupportive parenting, as well as mother and father observed negative parenting. Utilising PROCESS, we conducted 1000 bootstrap resamples (Hayes 2013) to examine a moderation model with negative/unsupportive parenting at child age 4 years as the predictor, child internalising behaviours at age 5 years as the outcome, child delay status controlled for and parental depression (clinical vs. non-clinical) at child age 4 years as the moderator.

## **Results**

### **Demographics**

Table 1 shows participant demographic variables by group status. Mothers and fathers of children with ID had significantly fewer years of education than mothers and fathers of TD children. Thus, we controlled for years of education in subsequent analyses where education related to the outcome variable.

### **Differences in parenting behaviours**

In regard to research question 1a, whether negative/unsupportive parenting differed by parent gender, results indicated that mothers and fathers differed in their unsupportive/negative parenting,  $F$

**Table 1** Descriptive statistics by group status

Variable	Demographics		
	ID mean (SD)	TD mean (SD)	t or $\chi^2$
Child IQ	60.7 (16.2)	104.7 (11.9)	$t = 19.15^{***}$
VABS	67.7 (14.5)	103.7 (15.5)	$t = 13.99^{***}$
Child gender (% male)	60.4%	57.8%	$\chi^2 = 0.09$
Child race (% Caucasian)	62.3%	65.7%	$\chi^2 = 0.18$
Mother age	33.6 (5.9)	35.3 (5.5)	$t = 1.81$
Father age	38.4 (7.4)	37.4 (5.7)	$t = -0.94$
Mother years of education	14.4 (2.2)	16.1 (2.4)	$t = 4.26^{***}$
Father years of education	14.3 (2.5)	15.8 (2.9)	$t = 3.13^{**}$

\* $P < .05$ .\*\* $P < .01$ .\*\*\* $P < .001$ .Child IQ, Stanford–Binet Intelligence Scale – fourth edition (Thorndike *et al.*, 1986); VABS, Vineland Adaptive Behaviour Scales (Sparrow *et al.*, 2005).

(2, 306) = 28.36,  $P < .001$ , partial  $\eta^2 = .16$ . Regarding question 1b, whether negative/unsupportive parenting differed by child delay status, there was a trend-level main effect of child delay status  $F(2, 306) = 2.58$ ,  $P = .08$ , partial  $\eta^2 = .02$ . Results related to question 1c, whether parent gender and child delay status interacted in predicting parenting practices, were non-significant.

In order to elucidate the directionality of the multivariate analysis of variance results, we examined observed negative parenting and self-reported unsupportive parenting separately using analysis of covariance models. The examination of self-reported unsupportive parenting revealed (Table 2) main effects of both parent gender  $F(1, 307) = 29.26$ ,  $P < .001$ , partial  $\eta^2 = .09$  and child delay status,  $F(1,$

307) = 5.15,  $P = .02$ , partial  $\eta^2 = .02$ . Mothers reported significantly lower levels of unsupportive parenting than fathers. Parents of children with ID reported higher levels of unsupportive parenting than parents of TD children. The examination of observed negative parenting (Table 2), while controlling for self-reported unsupportive parenting, revealed a main effect of parent gender  $F(1, 306) = 25.16$ ,  $P < .001$ , partial  $\eta^2 = .08$ . Mothers displayed significantly higher levels of negative parenting than fathers.

#### Parental depression as a moderator

In examining question 2, whether parental depression functioned as a moderator between negative/unsupportive parenting and child

**Table 2** Negative parenting by parent gender and disability status

Variable	Question 1a: negative parenting by parent gender		F	P
	Mothers (n = 156) mean (SD)	Fathers (n = 156) mean (SD)		
Self-reported unsupportive parenting	2.15 (.61)	2.60 (.81)	29.26	<.001
Observed negative parenting	2.98 (.87)	2.57 (.56)	25.16	<.001
Variable	Question 1b: negative parenting by ID status		F	P
	ID (n = 106) mean (SD)	TD (n = 206) mean (SD)		
Self-reported unsupportive parenting	2.51 (.78)	2.31 (.73)	5.15	0.02
Observed negative parenting	2.83 (.79)	2.75 (.75)	0.02	0.90

internalising behaviour problems, we ran models for both mothers and fathers (Tables 3 and 4). However, we will only report on fathers because there was evidence in favour of this hypothesis for fathers, but not for mothers. The bootstrap results of the omnibus effect supported our overall model,  $R^2 = .40$ ,  $F(5, 149) = 5.55$ ,  $P < .001$ . The results indicated unsupportive parenting alone was not significantly related to child internalising behaviours after controlling for child delay status ( $B = .14$ ,  $t = .12$ ,  $P > .10$ ). However, the cross-product term between unsupportive parenting and father depression on child internalising behaviours was significant ( $B = 11.69$ ,  $t = 3.03$ ,  $P < .01$ ). Follow-up analyses of the moderation indicated that unsupportive parenting was significantly associated with child internalising behaviour problems at clinical (effect = 11.83,  $t = 3.20$ ,  $P < .01$ ), but not at non-clinical levels (effect = .14,  $t = .12$ ,  $P = .90$ ), of father depression. As seen in Fig. 1, at low levels of unsupportive parenting, children of both clinically and non-clinically depressed fathers showed similar levels of internalising problems. However, as unsupportive parenting increased, children whose fathers were clinically depressed displayed increasing levels of internalising behaviours, while children whose fathers were not depressed did not show these increases. This relationship was not evident when we analysed observed negative parenting.

**Table 3** Father self-reported unsupportive parenting ( $n = 155$ )

Regression results for conditional indirect effects						
Variable	B	SE	t	P		
CBCL internalising						
Constant	45.49	5.93	7.67	.000		
Father education	0.13	0.32	0.41	.681		
RHP	0.14	1.18	0.21	.903		
Father CES-D	-23.98	10.24	-2.34	.021		
Child delay status	5.99	2.00	3.00	.003		
RHP × CES-D	11.69	3.86	3.03	.003		
Conditional effect at CES-D = 0 (non-clinical) or 1 (clinical)						
Father CES-D level	Indirect effect	SE	t	P	Boot LLCI	Boot ULCI
Non-clinical	0.14	1.18	0.12	.904	-2.18	2.47
Clinical	11.83	3.20	3.20	.002	4.53	19.13

Non-standardised regression coefficients are reported.

CBCL, Child Behaviour Checklist; CES-D, Center for Epidemiological Studies Depression; RHP, reported unsupportive parenting.

**Table 4** Mother self-reported unsupportive parenting ( $n = 156$ )

Regression results for conditional indirect effects				
Variable	B	SE	t	P
CBCL internalising				
Constant	43.83	6.21	7.06	.000
Mother education	0.22	0.32	0.69	.494
RHP	-0.55	1.52	-0.36	.717
Mother CES-D	4.59	6.38	0.72	.472
Child delay status	6.71	1.72	3.91	.000
RHP × CES-D	0.89	2.73	0.69	.745

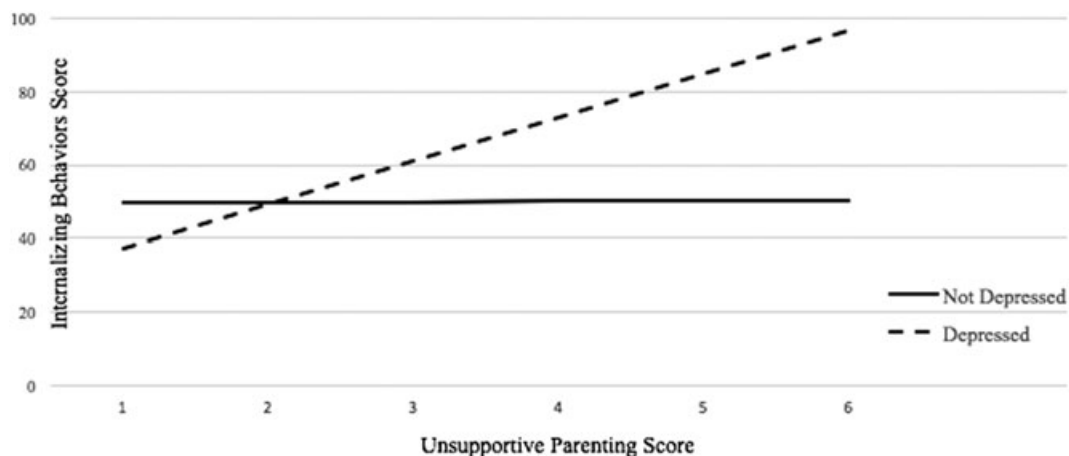
Non-standardised regression coefficients are reported.

CBCL, Child Behaviour Checklist; CES-D, Center for Epidemiological Studies Depression; RHP, reported unsupportive parenting.

## Discussion

Our first research questions addressed child delay status and parent gender differences in parenting behaviours. Regarding child delay status, there were not significant differences in observed negative parenting between parents of children with ID vs. TD. Some prior studies have found mothers of children with ID to demonstrate higher levels of negative parenting behaviours when compared with parents of children with TD (e.g. McIntyre 2008; Brown *et al.* 2011). The discrepancy between our findings and others may be related to the differences





**Figure 1** Interaction between father unsupportive parenting and father depression on child internalising behaviour problems.

in study design. Brown *et al.* (2011) examined early risk for ID as a predictor of later observed negative parenting, and McIntyre (2008) examined the construct of negative parenting in the context of a parenting intervention.

Parent self-reported unsupportive parenting, however, did differ between parents of children with ID vs. TD. Parents of children with ID reported higher levels of unsupportive parenting than parents of TD children. Children with ID experience deficits in emotion regulation when compared with TD children (Wilson 1999; Nader-Grosbois, 2014), and these deficits are likely contributing to the higher levels of unsupportive parenting practices in parents of children with ID. Additionally, children with ID tend to have externalising behaviour problems that exceed levels found among their TD peers (Baker *et al.* 2010). Perhaps parents of children with ID display more unsupportive parenting because of their children's clinical levels of externalising behaviours.

While child delay status does play a role in unsupportive parenting practices, we found the effect size to be small. This finding is promising in that emotion regulation and behaviour problems are more easily targeted through intervention than child delay status. We believe that this is the first study to examine unsupportive parenting differences in mothers and fathers of children with ID vs. TD. Future studies should examine additional moderators to understand the factors contributing to higher levels of unsupportive parenting in the ID group.

Main effects of parent gender were found in both observed negative parenting and self-reported unsupportive parenting. These appear contradictory, however, as mothers displayed higher levels of negative parenting practices than fathers during in-home observations, but fathers reported higher unsupportive parenting reactions than mothers. These apparently contradictory findings could be because unsupportive parenting reactions are specifically related to children's negative emotions, while observed negative parenting measured broader constructs (i.e. intrusiveness and negative affect) that may be more common to occur during day-to-day interactions. It may also be the case that fathers are more reactive only to children's negative emotions, as opposed to being more negative in their overall parenting practices. Our findings indicate that it is important to examine varying aspects of negative parenting in order to more fully understand the implication it has on child psychopathology.

Our further analyses addressed the extent to which unsupportive parenting and depression contribute to child internalising behaviour problems. Prior studies have shown unsupportive parenting to be associated with TD children's internalising behaviour problems (Suveg *et al.* 2005; Hastings & De 2008). The current study found father depression to moderate the relationship between unsupportive parenting and child internalising behaviour problems. That is, at low levels of unsupportive parenting, children of both clinically and non-clinically depressed fathers showed similar levels of internalising problems. However, as

unsupportive parenting increased, children whose fathers were clinically depressed were shown to have increasing levels of internalising behaviours. It appears that children of depressed fathers are especially vulnerable to the development of internalising behaviour in an unsupportive context. These results suggest that having the genetic predisposition to developing an internalising disorder by way of having a depressed parent, and being fathered in an unsupportive manner may be functioning as additive risk factors. This is consistent with prior studies that have demonstrated an association between paternal depression and negative parenting on the development of internalising behaviours (Kane & Garber 2009; Marchand-Reilly, 2012). The present study extends these studies by examining the additive effects of parental depression and unsupportive parenting on internalising behaviour problems in a sample including children with ID.

For mothers, on the other hand, we did not find depression to be a moderator between unsupportive parenting and child internalising behaviour problems. One explanation for this discrepant finding between mothers and fathers is that mothers reported lower levels of unsupportive parenting. It may be that lower levels of unsupportive parenting act as a buffer against the development of internalising behaviour problems for both children of clinically and non-clinically depressed mothers. Future research could examine other potential factors (e.g. supportive parenting practices and spousal support) that may serve to buffer the relationships between maternal depression and child internalising behaviours.

#### Limitations and future directions

Just as parents influence their children's behaviours, children influence their parents' behaviours (Sameroff & Mackenzie 2003; Pettit & Arsiwalla 2008; Neece *et al.* 2012). However, this study was unidirectional, focusing on parent's effects on their children. As a next step, bidirectional relationships between parenting behaviours and child internalising behaviours could be examined to explore transactional relationships.

Given the challenge of collecting in home data, we were limited by a smaller sample size for the current study. Future research could continue to examine

mother and father negative, unsupportive parenting utilising a larger sample size. Further, unsupportive parenting and child internalising behaviour were both assessed utilising parent-report questionnaires, making shared method variance a limitation. Future research could examine unsupportive parenting through observational measures. Researchers could continue to examine consistency between mothers and fathers, as results from the present study suggest that mothers and fathers influence their children's behaviours in different ways. Finally, future research could examine the combined effect mothers' and fathers' parenting has on child outcomes, as it may also be beneficial to examine the family system as a whole.

#### Conclusion

The present study addressed the complex relationships between negative/unsupportive parenting, parental depression and child internalising behaviour problems as these manifest in mothers and fathers of children with or without ID. Overall, we found differences in unsupportive parenting practices between parents of children with ID vs. TD. We also found differences in self-reported unsupportive and observed negative parenting practices when comparing mothers and fathers. These findings are concerning given that previous research has shown unsupportive parental reactions to be associated with higher levels of emotion dysregulation and internalising problems (Fabes *et al.* 2001; Hastings & De 2008). Children with ID have heightened levels of emotion dysregulation and psychopathology. Parents may be exacerbating these problems through their heightened use of unsupportive parenting practices, therefore, creating a coercive cycle between unsupportive parenting and child emotional and behavioural difficulties. This suggests that parenting interventions for children with ID may benefit from targeting unsupportive parenting practices.

Father depression moderated the relationship between unsupportive parenting attitudes and child internalising behaviour problems. This suggests that father depression and unsupportive parenting may be acting as additive risk factors for children in the development of internalising disorders. These findings have implications for psychotherapy, supporting the perspective that intervention for a parent's depression should focus not only on

depressive symptoms but also on parenting attitudes and practices. Additionally, children of depressed parents may also benefit from individual preventative intervention.

The present findings suggest that family researchers should, when possible, study both mothers and fathers, as their parenting and impact on the child is not necessarily the same. Future research is needed to further disentangle the differential roles that fathers and mothers play in the development of child internalising symptoms.

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