Maternal depression and family life events as risk factors for behavioural and emotional problems in children with intellectual and developmental disabilities and the function of child resilience as a compensatory factor in this relationship.

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Introduction

Children with intellectual and developmental disabilities (IDD) are more likely to demonstrate behaviour problems than children without IDD, and the presence of these behaviour problems have been shown to have a negative association with child outcomes, such as social ability and academic achievements (Campbell, 2003; Kaiser et al., 2007; Baker et al., 2003; Einfeld & Tonge, 1996).

Resilience may alter child behavioural and emotional problems as an outcome as it may act as a moderator between risk factors and child behavioural and emotional problems. Some children with IDD may be more resilient than others when exposed to risks.

Our aim was to compare predictions from protective and compensatory models within the same analysis models.

1) We conceptualised family life events and maternal depression as two risk factors likely to lead to higher levels of child behavioural and emotional problems.

2) If child resilience acted as a protective factor, we would expect child behavioural and emotional problems to be less affected when exposed to high levels of adverse life events or maternal depression.

Method

Mothers provided data about 312 children with IDD aged between four and 15 years old (M = 10.02, SD = 3.08). The mothers' ages ranged from 23 to 67 years (M = 42.50, SD = 7.13) and 252 were currently living with a spouse or partner. Most mothers (308) were the primary carer for their child.

Mothers were recruited to complete an online survey through a multi-point recruitment method, which included emailing online links, distributing flyers and information sheets to NHS services, UK charities and Special Educational Needs schools. Online recruitment via social media (Twitter and Facebook) and online blogs was also on-going throughout the recruitment period.

The survey included:

1) A **demographic** questionnaire.

2) **The behavioural and emotional problems** of the child with IDD were measured using the Strengths and Difficulties Questionnaire (SDQ: Goodman et al., 1997, 1998).

3) **Resilience.** The Wagnald and Young Resilience Scale (1993) was originally designed to identify the degree of resilience an individual possesses. An adapted five-item version of the measure was used for this study as there was no suitable proxy resilience measure found.

4) **Life Events.** Child and family life events were measured using life event questions from the Millennium Cohort Study.

5) **Depression**. Maternal depression symptoms over the past seven days were measured by the Hospital Anxiety and Depression Scale (HADS: Zigmond & Snaith, 1983).

Data Analysis

To examine child resilience as a moderator or as a compensatory factor, multiple regression analyses were conducted for each of the five child behavioural and emotional problem subscales (Emotional Symptoms, Child Conduct Problems, Hyperactivity, Peer Problems and Pro-social Behaviour) and the total score of child behavioural and emotional problems. Life events and maternal depression were entered in the regression models as risk variables.
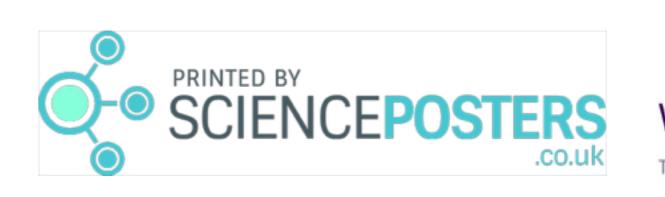
Conclusions

This study has shown:

1) Maternal depression and child resilience are both associated with child behavioural and emotional problems.

2) Maternal depression was found to act as a risk factor for child behaviour and emotional problems (specifically emotional symptoms and conduct problems).

3) Levels of child resilience consistently had a significant independent effect of child behavioural and emotional problems when maternal depression was present; therefore, we found the strongest support for a compensatory model of resilience. (The compensatory model explores whether risk factors have a direct main effect, reducing negative outcomes directly, thus overall the presence of resilience in a child with IDD has a positive impact on their behavioural and emotional problems.)

4) Child adverse life events were not found to be a significant risk factor in any of the models.

Moderated Multiple Regression Analyses Models for the Total Child Behavioural and Emotional Problems Total and Five Subscales

	Total		Subscales									
n = 312	Total Difficulties Score		Emotional Symptoms		Child Conduct Problems		Hyperactivity		Peer Problems		Pro-social Behaviour	
	R = .703		R=.591		R=.513		R= .402		R= .502		R= .507	
	R^2 = .494		R^2 = .349		R^2 = .263		R^2 = .162		R^2 = .259		R^2 = .257	
	F= 30.174		F= 23.470		F= 10.261		F= 6.736		F= 9.915		F= 10.788	
Variable	β	p	β	p	β	p	β	p	β	p	β	p
Age of child	-.161	.157	.063	.146	-.099	**.013**	-.101	**.007**	.056	.113	-.160	.158
Autism present	3.237	**<.001**	1.787	**<.001**	.366	.176	.535	.053	.867	.001	3.237	**<.001**
Down's Syndrome present	-5.085	**<.001**	-1.190	**.003**	-.454	.151	-.715	.103	-.778	.046	-1.949	**<.001**
Gender of child	-.652	.407	.860	**.010**	-.299	.243	-.179	.527	-.162	.530	-.872	**.004**
SEP	.210	.633	.148	.441	-.021	.891	.086	.576	-.031	.826	.229	.601
Child/Family Life events (centred)	.062	.840	.101	.434	-.032	.732	-.018	.856	.050	.636	-.039	739
Child Resilience (centred)	-.830	**<.001**	-.198	**<.001**	-.154	**<.001**	-.101	**.001**	-.137	**<.001**	-.239	**<.001**
Maternal Depression (centred)	.259	**.005**	.259	**.005**	.116	**<.001**	.043	.137	.045	.092	-.009	.797
Resilience x Life events (interaction)	-.029	.686	-.004	.867	-.021	.397	.024	.239	-.035	.406	-.003	.924
Resilience x Maternal depression (interaction)	.012	.470	-.008	.271	.001	.879	.007	.116	.006	.290	.006	.467

Note: Significant associations between variables are in boldface.

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