



**Growing Up
in Ireland**
National Longitudinal
Study of Children



Growing Up in Ireland

National Longitudinal Study of Children

**THE EFFECTS OF ECONOMIC RECESSION AND FAMILY STRESS ON THE
ADJUSTMENT OF 3-YEAR-OLDS IN IRELAND**

Analysis of Wave 1 and Wave 2 of the '08 (Infant) Cohort of Growing Up in Ireland

INFANT COHORT



REPORT 8



**Growing Up
in Ireland**
National Longitudinal
Study of Children

Growing Up in Ireland

National Longitudinal Study of Children

THE EFFECTS OF ECONOMIC RECESSION AND FAMILY STRESS ON THE ADJUSTMENT OF 3-YEAR-OLDS IN IRELAND

Analysis of Wave 1 and Wave 2 of the '08 (Infant) Cohort of Growing Up in Ireland

Elizabeth Nixon, Richard Layte & Maeve Thornton

Name	Institution
Elizabeth Nixon	Trinity College Dublin
Richard Layte	Trinity College Dublin
Maeve Thornton	ESRI (Alumna)

The views expressed in this report are those of the authors and do not necessarily reflect the views of the funders or of either of the two institutions involved in preparing the report.



An Roinn Leanaí
agus Gnóthai Óige
Department of Children
and Youth Affairs

Copyright © Minister for Children and Youth Affairs, 2019

Department of Children and Youth Affairs
Block 1,
Miesian Plaza,
50-58 Baggot Street Lower,
Dublin 2
D02 XW14

Published by The Stationery Office, Dublin

ISBN 978-1-4468-8020-3

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission in writing of the copyright holder.

For rights of translation or reproduction, applications should be made to the Head of Communications, Department of Children and Youth Affairs, Block 1, Miesian Plaza, 50-58 Baggot Street Lower, Dublin 2

ACKNOWLEDGEMENTS

Growing Up in Ireland would not be possible without the children and families who give so generously of their time to participate in the study. The success of the study is due to the contribution of parents, and their children, as well as school principals, teachers and childcare staff. The authors are indebted to all participants for their time, commitment and engagement.

Thank you to the staff in the DCYA who oversee and manage the study and to the ESRI and TCD researchers who implement the study. This report benefited from the input of a number of people. The authors would like to thank Dr Claire Finn and Dr Clare Farrell in DCYA and the anonymous reviewers for their helpful comments and suggestions. Finally, the authors wish to thank colleagues in the ESRI who assisted in the preparation of this report, including James Williams, Aisling Murray and Desmond O'Mahony.

Growing Up in Ireland has been funded by the Department of Children and Youth Affairs (DCYA) in association with the Central Statistics Office (CSO). These data have been collected in accordance with the Statistics Act, 1993. The DCYA and CSO take no responsibility for the views expressed in the research. The project has been designed and implemented by the joint ESRI-TCD *Growing Up in Ireland* Study Team. © DCYA.

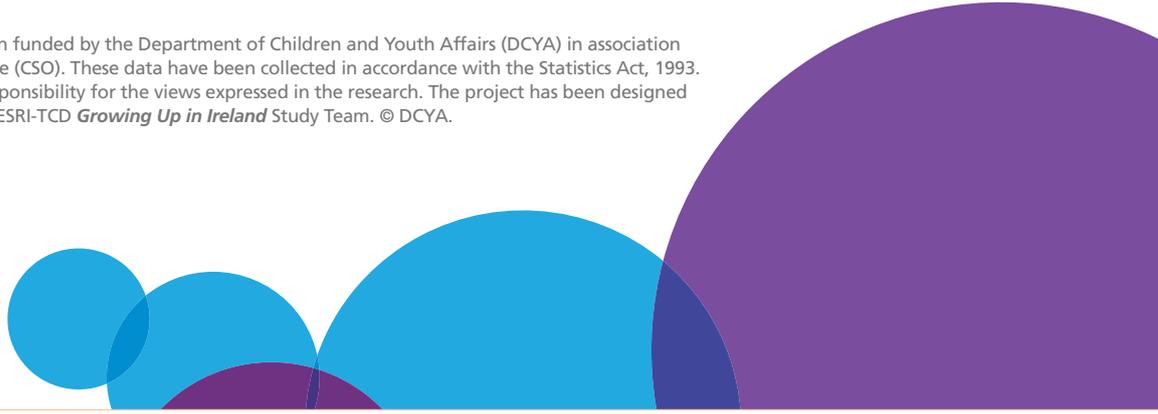


TABLE OF CONTENTS

LIST OF FIGURES	5
LIST OF TABLES	6
EXECUTIVE SUMMARY	7
CHAPTER 1: INTRODUCTION & LITERATURE REVIEW	11
Rationale for the present study	12
Economic recession and children’s development	13
The Family Stress Model	15
Childhood internalising and externalising difficulties	18
Economic strain, parents’ well-being and parenting	21
Aims of the study & outline of the report	22
CHAPTER 2: METHOD AND DATA	23
The <i>Growing Up in Ireland</i> data	24
Measurement of key constructs	24
Economic factors	24
Parental depressive symptoms and marital satisfaction	25
Parental warmth and hostility	26
Children’s internalising and externalising difficulties	26
Approach to analysis	26
CHAPTER 3: ECONOMIC RECESSION AND THE <i>GROWING UP IN IRELAND</i> FAMILIES	29
Introduction	30
Change in employment status of parents in <i>Growing Up in Ireland</i>	30
Change in income of families in <i>Growing Up in Ireland</i>	32
Indebtedness among families in <i>Growing Up in Ireland</i>	33
Economic strain	33
Changing economic circumstances and perceived economic strain	36
CHAPTER 4: ECONOMIC STRAIN, PARENTAL WELL-BEING, PARENTING AND CHILDREN’S EXTERNALISING AND INTERNALISING DIFFICULTIES	39
Economic strain, parental depressive symptoms and marital satisfaction	40
Parental depressive symptoms, marital satisfaction and parenting warmth and hostility	52
Children’s internalising and externalising difficulties	59
CHAPTER 5: DISCUSSION AND CONCLUSION	65
Overview of key findings	66
Policy implications	71
REFERENCES	73
APPENDIX	80

LIST OF FIGURES

Figure 1:	The Family Stress Model	16
Figure 2:	Change in household employment status in two-parent households from Wave 1 to Wave 2 (N = 6625)	31
Figure 3:	Change in household employment status in one-parent households from Wave 1 to Wave 2 (N = 986)	31
Figure 4:	Percentage of households that experienced less, the same or more economic strain in Wave 2 in comparison with Wave 1, according to change in income quintile from Wave 1 to Wave 2 (N = 9646)	34
Figure 5:	Change in household employment status and economic strain from Wave 1 to Wave 2 (N = 7576; two-parent households only)	35
Figure 6:	Being in arrears with rent/mortgage payments and on utility bills at Wave 2 and changes in economic strain from Wave 1 to Wave 2 (N = 9179)	36
Figure 7:	Pathways in the Family Stress Model from dimensions of economic hardship to family economic strain	37
Figure 8:	Pathways in the Family Stress Model, from dimensions of economic hardship to family economic strain to parental depression to marital dissatisfaction	40
Figure 9:	Perceived economic strain (difficulty making ends meet, based on mother's report) and depression status of mothers (N = 9671) and fathers (N = 7301)	41
Figure 10:	Mean depression scores for mothers (N = 8010) and fathers (N = 7106) (two-parent households only) and household earner status from Wave 1 to Wave 2	42
Figure 11:	Direct and indirect pathways linking economic factors, economic strain and mother's depression (W2)	45
Figure 12:	Perceived economic strain (difficulty making ends meet) and marital satisfaction of mothers (N = 8227) and fathers (N = 7232)	47
Figure 13:	Mean marital satisfaction scores for mothers (N = 7953) and fathers (N = 7046) and household earner status from Wave 1 to Wave 2 (two-parent households only)	47
Figure 14:	Mean marital satisfaction scores for mothers (N = 7441) and fathers (N = 6797) and being behind with mortgage/rent and utility bills	48
Figure 15:	Mean marital satisfaction scores for mothers (N = 8219) and fathers (N = 7229), and classification as 'depressed'	48
Figure 16:	Pathways in the Family Stress Model from economic strain to parental depression to marital satisfaction	49
Figure 17:	Pathways in the Family Stress Model from parental depression and marital satisfaction to parental warmth and hostility to child adjustment difficulties	52
Figure 18:	Mean warmth and hostility scores for mothers (N = 9629 - 9673) and fathers (N = 7276 - 7301), according to 'depression' classification	53
Figure 19:	Mean warmth and hostility scores for mothers (N = 8227) and fathers (N = 7234), according to 'distressed' relationship classification	54
Figure 20:	Pathways in the Family Stress Model from economic strain to mother's depression to mother's hostility (Table 12) and warmth (Table 13)	54

LIST OF TABLES

Table 1:	Mean change in annual household income from Wave 1 to Wave 2, by income quintile at Wave 1 (N = 9083)	32
Table 2:	Mean change in annual household income from Wave 1 to Wave 2, by household employment status from Wave 1 to Wave 2 in two-parent households (N = 7209)	32
Table 3:	Mean change in annual household income from Wave 1 to Wave 2, by household employment status from Wave 1 to Wave 2 in single-parent households (N = 7209)	33
Table 4:	Levels of economic strain reported by mothers (% of households) (Wave 1 N = 11124; Wave 2 N = 9786)	34
Table 5:	Model of change in economic strain between Wave 1 and 2 (N = 9149)	38
Table 6:	Percentage of mothers (N = 9085) and fathers (N = 6857) categorised as 'depressed', according to mother and father redundancy	42
Table 7:	Percentage of mothers (N = 9084) and fathers (N = 6857) categorised as 'depressed', according to being behind with mortgage/rent and utility bills	43
Table 8:	Model of effects on mothers' depressive symptoms (Wave 2) (N = 9118)	43
Table 9:	Model of effects on fathers' depressive symptoms (Wave 2) (N = 7359 – fathers in two-parent households only)	46
Table 10:	Model of effects on mothers' marital satisfaction (Wave 2) (N = 8009; mothers in two-parent households only)	50
Table 11:	Model of effects on fathers' marital satisfaction (Wave 2) (N = 7357; fathers in two-parent households only)	51
Table 12:	Model of effects on mother's hostility (Wave 2) (N = 9747)	55
Table 13:	Model of effects on mother's warmth (Wave 2) (N = 9743)	56
Table 14:	Model of effects on father's hostility (Wave 2) (N = 6863)	57
Table 15:	Model of effects on father's warmth (Wave 2) (N = 6886)	58
Table 16:	Mean (SD) mother (N = 9783) and father (N = 7395) warmth and hostility scores for children classified as 'problematic' and 'non-problematic' on the SDQ externalising and internalising subscales	59
Table 17:	Model of effects on children's externalising and internalising behaviour (N = 9695)	60
Table 18:	Models of effects on children's externalising difficulties (N = 7253) and internalising difficulties (N = 7254) [two-parent households only]	62
Table 19:	Model of direct effects on mother's hostility (N = 7981) and warmth (N = 8008) [mothers in two-parent households only]	80
Table 20:	Model of direct effects on father's hostility (N = 6240) and warmth (N = 6259) [fathers in two-parent households only]	81

EXECUTIVE SUMMARY

This report is concerned with understanding how the economic recession in Ireland affected stress within families, and in turn how this is associated with the behavioural and emotional adjustment of three-year-olds. The analysis is based on data collected from 9,793 families in the Infant Cohort of *Growing Up in Ireland*, interviewed first at Wave 1 when their children were nine months of age, and again at Wave 2 when their children were three years of age. The timing of the data collection at Wave 2 coincided with the onset of an economic recession in Ireland, thus enabling the changing financial circumstances of a representative sample of families to be documented, and the associations between these economic changes and parental well-being, parenting and child behavioural and emotional difficulties to be examined.

The analysis presented in this report is framed by the Family Stress Model, which proposes that economic hardship, indicated by low income, work instability and high level of indebtedness, generates stress in families and increases the risk of negative outcomes for parents (such as depressive symptoms and marital dissatisfaction). Such difficulties for parents are proposed to reduce the resources they have available for their children, resulting in less warmth and more hostility in parent-child interactions. This in turn is purported to be associated with higher levels of emotional and behavioural difficulties for children. Put simply, the Family Stress Model proposes that economic events, such as those that occur during times of recession, indirectly influence children through their impact on the lives of parents.

The Family Stress Model was originally developed in an attempt to explain how and why families and children are affected by economic downturns. In 2008, Ireland experienced an economic recession, the scale of which was unprecedented in the history of the State. The effects of the economic recession on child and family well-being in Ireland have not been studied in detail to date. Analysis of data from the first two waves of the '08 Cohort of *Growing Up in Ireland* provided a unique opportunity to do so because the timing of the data collection waves coincided with the transition to economic recession (Wave 1 data collection occurred between September 2008 and April 2009 and Wave 2 December 2010 to July 2011).

The objective of the study was to apply the Family Stress Model to examine pathways by which the recent economic recession may have affected the three-year-olds' emotional and behavioural outcomes. Since the examination of the effects of economic strain in this report is framed by the Family Stress Model, which hypothesises that economic changes influence emotional and behavioural difficulties of children via their influence on proximal family processes (such as parenting, marital satisfaction and parental depression), the report does not consider other direct or indirect pathways by which economic changes might affect children's outcomes. The analysis first documented how families from the '08 (Infant) cohort of *Growing Up in Ireland* were affected by the recession, in terms of redundancy, income changes between Waves 1 and 2, indebtedness, and mothers' perceptions of economic strain, defined as the psychological experience of stress resulting from economic circumstances. It was hypothesised that changing economic conditions, such as redundancy, wage reduction and having to cut back on basic necessities, would be associated with higher levels of economic strain. Next, the analysis considered how economic factors and strain in turn were associated with depressive symptoms and marital dissatisfaction for mothers and fathers. Finally, in line with the Family Stress Model, the hypotheses that parental depressive symptoms and marital dissatisfaction would be associated with greater hostility and less warmth in parenting and, in turn, with higher levels of child emotional (internalising) and behavioural (externalising) difficulties were also tested.

The findings of the report should be considered in light of a number of conceptual and methodological limitations. Although the current investigation is underpinned by the Family Stress Model, *Growing Up in Ireland* was not designed to test this model, and therefore there are some distinctions between how economic variables have been measured in *Growing Up in Ireland* and how they were measured in previous tests of the model. Most notably, the economic strain variable, a key mediating variable in the model, is measured in *Growing Up in Ireland* based on the mother's report of "difficulty in making ends meet", and

economic strain is not measured for fathers. An additional limitation of the study is that the data on which some of the models are built rely solely on data from mothers, thus raising the potential problem of bias in the data: associations among variables reported by one source may be inflated as a function of bias in the mind of the informant. Finally, some of the associations among variables are weak and the proportion of variance explained by some of the models is not large, suggesting that other unmeasured variables may also need to be investigated.

The findings revealed considerable variation in the extent to which families experienced changes in their economic circumstances from Wave 1 to 2. In line with the national average, 13.8% of fathers were unemployed at Wave 2, an increase from 6.1% at Wave 1, and men in the lowest income quintile at Wave 1 were 8.5 times more likely to have been made redundant than men in the highest income quintile. Sixty-five per cent of families indicated that household income had been reduced as a result of the recession, 14% of families were in arrears on their utility bills and 9% in arrears on their rent/mortgage. Based on mother report only, the proportion of families experiencing economic strain, denoted by "difficulty in making ends meet", increased from 44% to 61%, and overall 40% of families were experiencing more economic strain at Wave 2 than at Wave 1.

Economic strain, which was measured only for mothers, gives psychological meaning to the stressful experience of economic hardship, and a test of the predictors of economic strain explained a total of 40% of the variance in strain, suggesting that factors other than those considered in the model may have contributed to mothers' experiences of economic strain. The model revealed that being a single parent and a mother with a lower level of education were both associated with higher economic strain, even after controlling for income and employment status. Both mothers' and fathers' redundancy appeared to have a similar negative influence on mothers' perceived economic strain, and having working hours and social welfare reduced were also associated with higher economic strain. However, taking all other factors into account, wage reductions per se were not associated with higher levels of economic strain. It may be that, in the context of a national recession, it is only when wage reduction has a material effect on everyday life, such as having to cut back on basics and luxuries and being in arrears on bills, that strain is exacerbated. Additionally, it was the families from income quintiles 2 to 5 that were most affected by income reduction, with higher levels of income reduction occurring within the highest income quintile. It may be that these families were better able to absorb reductions in wages, especially as this was not a period when prices generally increased.

By far the greatest impact on economic strain came about as a result of having to cut back on basic necessities, not being able to afford luxuries, and being in arrears on the rent/mortgage and utility bills. Such circumstances reflect high levels of indebtedness that compromise one's role as a normal consumer and as an adult, fulfilling roles expected of them. Indeed, not surprisingly, these economic circumstances were themselves directly associated with mothers' levels of depressive symptoms, highlighting that when families are living under threat of not being able to meet basic needs, psychological vulnerability ensues. Altogether, 10.6% of mothers were classified in the 'depressed' category on the depressive symptoms screening measure at Wave 2, which represents a slight decrease overall from 11.1% at Wave 1. The proportion of mothers classified as 'depressed' on the screening measure was more than double for mothers in arrears on the rent or mortgage (23.9%) in comparison with mothers not in arrears (9.5%). Demographic characteristics, such as mother's education, age, migrant status or family structure were not associated with mothers' depressive symptoms. Other economic variables, such as being made redundant or having working hours and social welfare reduced were also not directly associated with mothers' depressive symptoms. Instead, these events were independently associated with higher levels of economic strain, which itself was associated with mothers' depressive symptoms.

Altogether, 4.5% of fathers were classified as 'depressed' at Wave 2, a slight increase from Wave 1 (3.5%). For fathers, higher levels of depressive symptoms at Wave 2 were related to mother's and father's

redundancy, having social welfare reduced and not being able to afford luxuries. Having working hours or wages reduced were not associated with fathers' depressive symptoms. The strongest economic predictor of fathers' depressive symptoms was being in arrears on utility bills: 8.1% of fathers in arrears on utility bills were classified as being depressed, in comparison with 3.8% not in arrears. Somewhat surprisingly, and in contrast to the situation for mothers, being behind with the mortgage/rent and having to cut back on basics were not associated with fathers' depression. It is unclear why this might be the case. It may be that the effects of these events influence men in ways not reported on here (e.g. anti-social behaviour). In testing models of depressive symptoms among mothers and fathers, 22% of mothers' and 15% of fathers' depressive symptoms, respectively, were explained by the models, and having a child with a behavioural condition was the strongest predictor in both models. This suggests that this may be a significant stressor for parents and may be at least as significant as economic events for parental mental well-being.

The direct relationships between both mothers' and fathers' marital satisfaction, and economic strain (reported only by mothers) and being in arrears on mortgage payments and on utility bills were weak, but stronger relationships emerged between mothers' and fathers' depressive symptoms and marital satisfaction. In testing models of marital satisfaction among mothers and fathers, 16% of mothers' and 13% of fathers' marital satisfaction, respectively, were explained by the models, leaving significant proportions of variance unexplained. The strongest drivers in both models were parents' depressive symptoms and levels of marital satisfaction at Wave 1. Interestingly, having a child with a behavioural difficulty was not associated with mothers' marital satisfaction but was associated with higher marital satisfaction among fathers. This suggests that the marital relationship can remain strong (or even be positively affected) in the context of having a child with particular difficulties.

The findings revealed that both mothers' and fathers' depressive symptoms and marital dissatisfaction had negative associations with their parenting in terms of higher levels of hostility and lower levels of warmth, with the strongest effects evident for the effects of depressive symptoms on hostility. Economic factors were also associated with parenting, but in somewhat unexpected ways: mothers under economic strain were not more hostile, but did display slightly higher levels of warmth. For fathers, none of the economic variables related to fathers' hostility, but not being able to afford luxuries was, surprisingly, associated with higher levels of fathers' warmth. It may be that, in the context of economic strain or a shortage of luxuries, parents instead divert their resources to having better interactions with their children. Altogether the models predicting parenting had weak predictive power (only 2% to 5% of variance accounted for), while the models for children's internalising and externalising difficulties had higher predictive power (explaining 26% of variance in externalising difficulties and 13% of variance in internalising difficulties), but poor model fit. In relation to children's outcomes, mothers' depressive symptoms were related to higher levels of emotional (internalising) and behavioural (externalising) difficulties, and their marital dissatisfaction was associated with higher internalising difficulties. Once mothers' depressive symptoms and marital satisfaction and parenting were accounted for, fathers' depressive symptoms, marital satisfaction and warmth became non-significant, and only fathers' hostility remained a predictor of children's externalising but not internalising difficulties. Mothers' hostility and lower warmth were also associated with greater difficulties for children. One conclusion arising from these findings is that the data support the key pathways in the Family Stress Model for understanding how economic hardship may influence parent-related characteristics, such as depressive symptoms and marital satisfaction, but that the model is less successful in explaining parenting and children's internalising and externalising difficulties, as indicated by the poor model fit indices.

Overall, the findings from this report illustrate that the economic recession experienced in Ireland since 2008 had a broadly negative but diverse effect on individuals and families. The experience of unemployment for some and falling incomes and living standards for the majority meant that levels of economic hardship and strain increased. The results of this report suggest that these economic problems had important consequences for the mental health of both parents and the quality of partners' relationships. These effects

clearly reduce the quality of life for the families affected, with knock-on effects for the quality of parenting and children's outcomes. A question remains about the stability of these difficulties over time: on the one hand, these difficulties may dissipate with the return to economic growth and increased employment; on the other hand, once these difficulties begin to emerge, they may become entrenched, resist extinction without specific intervention, and affect other aspects of development over time. This question – one that will be possible to address with future waves of *Growing Up in Ireland* data – is important as long-term consequences may well suggest that some form of policy or practice intervention should be considered.

IMPLICATIONS FOR POLICY

The policy implications have been derived based on the findings reported, while also taking account of the conceptual and methodological caveats highlighted earlier. If economic strain through low income has associations with parents' depressive symptoms and marital satisfaction, which in turn are linked with parenting warmth, hostility and children's internalising and externalising difficulties, and one policy objective is to minimise these difficulties in families, the first policy implication arising from this report is clear: social welfare policy should seek to provide a minimum income that is adequate for the needs of individuals and families, particularly during periods of economic downturn. Unfortunately, these periods also tend to be associated with a fall in tax revenues, which often means that government is forced either to borrow or raise taxes to pay for social protection or cut these payments, as happened during the fiscal crisis of 2008-2014, with direct consequences for families relying on social transfers. However, while maintaining the income and living standards of families during all phases of the economic cycle is important, this may not be a sufficient response as the processes underlying negative outcomes for children and families can be complex and multi-faceted, as suggested by the findings of this report. There is an additional challenge of identifying families in need, as income or lack thereof will be the main identifier, but often this information is not available until the end of the tax year, meaning that aid may not be made available during the year.

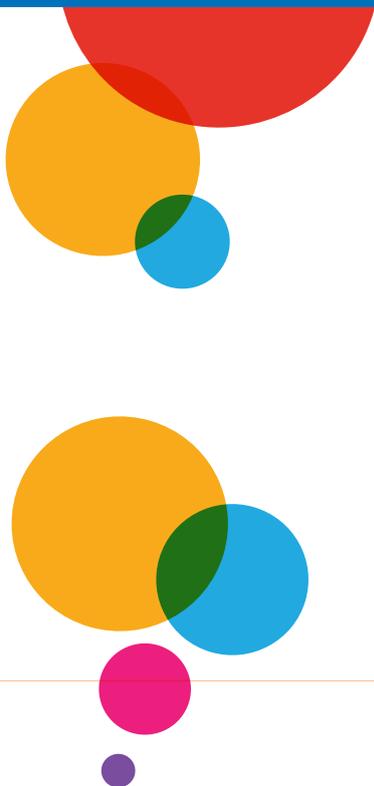
The findings of the report indicate that the strongest predictors of economic strain were being behind with mortgage/rent and utility bills and having to cut back on basic necessities. Not only did these economic circumstances lead to high levels of economic strain, they also directly contributed to mothers' depressive symptoms. Thus, families who find themselves in these particular circumstances – under threat of losing their homes or of having basic utilities cut off – are identified as being most vulnerable to negative psychological consequences. If the policy objective is to minimise the impact of economic strain on children and their parents, actions to safeguard these basic necessities for families should be a priority. One possibility might be to provide no-interest loans for utility payments, a strategy that has been implemented elsewhere.

The findings from the report also suggest that parental mental well-being plays a pivotal role in bridging the gap between more distal macro-level circumstances and children's relationships and outcomes. Higher levels of mothers' and fathers' depressive symptoms and marital dissatisfaction were associated with higher levels of hostility and lower levels of warmth in interaction with children. This spill-over effect suggests that a worthwhile avenue for intervention might centre on supporting parents to maintain positive approaches to parenting, even in light of their own personal difficulties. Any such interventions should be evidence-based and might involve support groups for parents or access to counselling or therapy for parents. Such interventions may help parents to gain a sense of control over certain aspects of their lives, and help them to understand that, despite difficult economic circumstances, they have the competence to protect their children by maintaining positive relations with them. The findings also suggest that mothers' parenting and well-being are more significant drivers of children's outcomes than fathers' parenting and well-being, although an important caveat is that mothers were the sole reporter on children's emotional and behavioural difficulties, and so associations between her parenting and children's outcomes might be subject to source bias. In the final models, only fathers' hostility was associated with higher levels of child externalising problems; paternal parenting warmth, depression and marital satisfaction did not significantly predict children's outcomes. Therefore, policies aimed at alleviating stress, particularly for mothers, are likely to yield the most positive benefits in terms of supporting children's development.



Chapter 1

INTRODUCTION & LITERATURE REVIEW



Growing Up in Ireland, the first national longitudinal study of children, is tracking the development of two groups of children from early infancy through to early adulthood.

The study reported here explores the experience of the recent economic recession in Ireland and how it relates to stress within families, and in turn young children's emotional and behavioural difficulties. The analysis draws on the first and second waves of data from the '08 Cohort of *Growing Up in Ireland*, collected when the infants were nine months and three years of age.

The analysis is guided by two theoretical frameworks which have broadly informed our understanding of how the settings and contexts within which children grow and live may adversely affect or promote their development. First, Bronfenbrenner's bioecological model proposes that child development outcomes are most strongly linked to ongoing interactions and relationships that the child has in their immediate environment (Bronfenbrenner & Morris, 2006). During the early years of a child's life, the family and home are arguably the most important setting, and the child's interactions with parents and quality of the parent-child relationship are of central significance (Parke & Buriel, 1998). Bronfenbrenner further proposed that children and families do not operate in a vacuum; rather they are susceptible to influence by what is happening within the broader contexts in which they are embedded. The severe economic recession which Ireland has experienced since 2008 represents one such societal context that is likely to have affected family functioning and children's development.

A second theoretical framework that underpins this analysis is the Family Stress Model (Conger & Conger, 2002). Briefly, this model proposes that pressures generated by economic hardship (indicated by low income, work instability, high debts) increase the risk of parents' emotional and behavioural problems, which in turn lead to increased marital conflict and reduced marital warmth, and diminished nurturing and involved parenting. This diminution of parental warmth and involvement compromises successful developmental outcomes in children. The analysis in this report is concerned with testing this model to understand the impact of economic recession on family stress and on children's psychological development, specifically the occurrence of behavioural and emotional problems at three years of age.

The next section of this chapter provides the rationale for the approach taken in this specific analysis of *Growing Up in Ireland* data, and the underlying theoretical framework of the analysis – the Family Stress Model – is outlined and discussed. Following this, a brief review is provided of the research on the risk factors associated with children's emotional and behavioural difficulties, many of which are tested in the Family Stress Model. The chapter concludes with the specific aims of the study and an outline of the report.

RATIONALE FOR THE PRESENT STUDY

The study is concerned with understanding the effects of economic recession on family processes and children's social, emotional and behavioural outcomes. The effects of the economic recession on child and family well-being in Ireland have not been studied in detail to date. Analysis of data from the first two waves of the Infant Cohort of *Growing Up in Ireland* provides a unique opportunity to do so, because the timing of the data collection waves coincided with the transition to economic recession (Wave 1 data collection occurred between September 2008 and April 2009, and Wave 2 between December 2010 and July 2011).

In 2008, Ireland was hit by an economic recession, the scale of which had not been experienced since the foundation of the State (Russell & McGinnity, 2014). In comparison with each previous year, gross national product (GNP) contracted by 2.8% in 2008 and 10.7% in 2009, and there was little net change in GNP between 2010 and 2012 (Central Statistics Office, 2009, 2010, 2011, 2012, 2013). Unemployment increased to over 14% in 2008, from a stable base of approximately 4% in 2007 and the preceding years. In particular, the sharp downturn in the construction industry resulted in differential rates of unemployment for men and women. Between 2008 and 2011, the male unemployment rate rose by 13%, while the female



unemployment rate rose by half that amount (Callan, Nolan, Keane, Savage & Walsh, 2013). Many job losses also occurred in the manufacturing and hotel/catering industries, and an embargo on recruitment in the public sector was introduced in 2009. There was also an increase in the proportion of employees working part-time, which contributed to a decline in the average working hours for those in employment (Russell & McGinnity, 2014).

For those in employment, there was some diversity in how wage rates were affected between 2008 and 2012. While wages for those in industry rose by 7% to 8%, public sector employees experienced a series of wage-related deductions. With tax-related increases, overall disposable income decreased by approximately 8% between 2008 and 2011. Furthermore, income losses differentially affected certain groups. In 2011, the real income of those in the lowest income decile was 18% lower than in 2008, while for the highest income group the real income in 2011 was 11% lower than in 2008. The budgets of 2010 and 2011 resulted in decreased rates of support across most social welfare schemes applicable to those of a working age, and cuts in universal child benefit were also made (Callan et al., 2013). Illustrating the significance of these payments for families with children, a UNICEF report (2010) suggested that, without government intervention in the form of tax credits, child benefit and other social welfare payments, child poverty rates in Ireland would be the highest (at 34%) among the 21 OECD countries studied. Between 2008 and 2011, the at-risk-of-poverty rate in Ireland increased from 14.4% to 16%, and the consistent poverty rate increased from 4.2% to 6.9% (Callan et al., 2013). Rates of child poverty also increased during the recession. Estimates suggest that Ireland's child poverty rate rose by over 10% between 2008 and 2012. Indeed, Ireland had one of the highest increases in child poverty among the OECD countries during the recession (ranking 5th highest out of 41 countries) (UNICEF, 2014).

In their analysis of data from the EU-SILC study over the course of the recession years, Whelan, Nolan and Maitre (2016) found evidence of a 'middle-class squeeze' related to those who were self-employed, and a significant loss of the advantage typically enjoyed by the higher social classes. Those who were self-employed were more likely to find themselves in low-income classes, and there was a reduction in the number of people employed in the professional and managerial classes, and self-employed classes. Social class no longer served to buffer people from the effects of stress from the economic recession, related to loss of assets, high levels of debt and increased insecurity. Similarly, Watson, Maitre, Whelan and Williams (2015) noted that economic vulnerability was a more pervasive phenomenon among families in *Growing Up in Ireland* as the recession progressed, and many households that did not fit the traditional profile of the poor were economically vulnerable. In light of these economic changes, the present investigation is concerned with understanding their effect on families and children growing up in Ireland.

ECONOMIC RECESSION AND CHILDREN'S DEVELOPMENT

To date, limited research has considered the direct effects of economic recession on children's outcomes at a population level. Regardless of income level in a family, recession in a society gives rise to instability in the labour market, including changed working hours, less job security, greater demands on employees, and alterations from year to year in the criteria for eligibility for state supports. It has been argued that income level and instability in income may exert separate and independent effects on children's outcomes (Hill, Morris, Gennetian, Wolf & Tubbs, 2013). The instability and change in the economic state of families that occur during times of recession are likely to contribute to family instability, stress or chaos, factors that themselves may affect children's development. In addition, given the uncertainty that families face during times of recession, it is suggested that investments in children may occur more intermittently; reducing consumption and investment in children's education and other activities are common responses to economic shocks (Skoufias, 2003). Additionally, reductions in the fiscal resources available to governments during times of recession affect service delivery across a range of areas pertinent to the lives of children and families, including education, health, child protection, childcare and social protection (Harper, Jones, McKay & Espey, 2009).

A review of research on the effects of the recent recession on children in the United States found that 21% of children were classified as food-insecure, meaning that they have limited or uncertain access to enough nutritionally adequate and safe food to meet essential dietary needs, and approximately 43% of families with children were struggling to afford stable housing (Sell, Zlotnik, Noonan & Rubin, 2010). Additionally, the number of families seeking assistance through public means grew substantially during the recession. The negative effects of the recent economic recession on behavioural outcomes have also been documented. Leininger and Kalil (2014) found that subjective perceptions of economic strain significantly predicted white (but not black) children's internalising difficulties, after controlling for objective indicators of adverse economic events. The authors suggested that economic strain is conceptually distinct from individual-specific adverse economic events, and that children may be directly affected by parents' worries and fears, and uncertainty about the future. Schneider, Waldfogel and Brooks-Gunn (2015) similarly found that uncertainty about the economy and lack of consumer confidence was associated with elevated levels of behaviour problems among boys, but not girls. Local unemployment rates, however, had fewer associations with children's behaviour. The authors concluded that uncertainty about the economy affects children's behaviour problems as they possibly respond to the real or perceived financial insecurity of their families or the elevated anxiety felt among the public in general.

Relative to research on the effects of economic recession on child development, there is a long history of research on the effects of socio-economic status on child development. Socio-economic status (SES) represents an individual's or family's ranking in a hierarchy according to access to or control over valued resources such as wealth, power and status (Mueller & Parcel, 1981). Despite lack of consensus over how SES should be measured, it is generally agreed that parental educational attainment, occupational status and income level are important components of SES (McLoyd, 1998). Children who grow up in a context characterised by socio-economic disadvantage consistently fare less well on a range of developmental outcomes, including social, emotional and behavioural outcomes, cognitive development, academic achievement, physical development and health status (Bradley & Corwyn, 2002; Chen, Matthews & Boyce, 2002; Duncan & Brooks-Gunn, 1997; Gennetian, Castells & Morris, 2010; McLoyd, 1998).

A number of processes that explain why socio-economic disadvantage has ill effects on development have been proposed. These processes invoke both biological and psychosocial pathways. One theory proposes that children growing up in low-income families are more likely to experience a variety of psychosocial stressors, such as chaotic home environments characterised by family conflict, dissolution and diminished parental responsiveness, and neighbourhoods characterised by higher levels of antisocial behaviour, pollutants and less access to healthy foods, safe places for recreation and high-quality childcare and education (Evans & Kim, 2013; Evans, Chen, Miller & Seeman, 2012). Over time, exposure to these poverty-related stressors can affect children's biological systems through chronic activation of their stress and immune systems (Blair & Raver, 2012; Yoshikawa, Aber and Beardslee, 2012). Evans and colleagues propose that, relative to more advantaged children, those who experience economic hardship have greater sympathetic nervous system activity (such as higher blood pressure), and dysregulated cortisol (stress hormone) and metabolic activity. Over time, these bodily systems are mobilised to deal with stressful environments and experience chronic wear and tear, rendering them more vulnerable to disease and other negative outcomes.

Other theories – namely the Family Stress Model and the Family Investment Model – focus on family processes as key mediators between experiences of economic hardship and children's outcomes. The Family Investment Model proposes that, compared with high SES parents, low SES parents have access to fewer resources and are less able to make investments in their children's development (Bradley & Corwyn, 2002; Haveman & Wolfe, 1994). Such investments include providing learning materials in the home, such as books and age-appropriate toys, and providing access to activities and services that foster academic and social competence (Conger & Donnellan, 2007). This model has received support in the literature, especially in relation to cognitive and academic outcomes (Linver, Brooks-Gunn & Kohen, 2002). Poverty and low levels of maternal education have been associated with less cognitive and linguistic stimulation in the home,



as evidenced by parents speaking fewer words to their children and reading to their children less often, activities which themselves are positively associated with language development and children's IQ scores (Bradley & Corwyn, 2002; Hoff, 2003; Hoff, Laursen & Tardif, 2002).

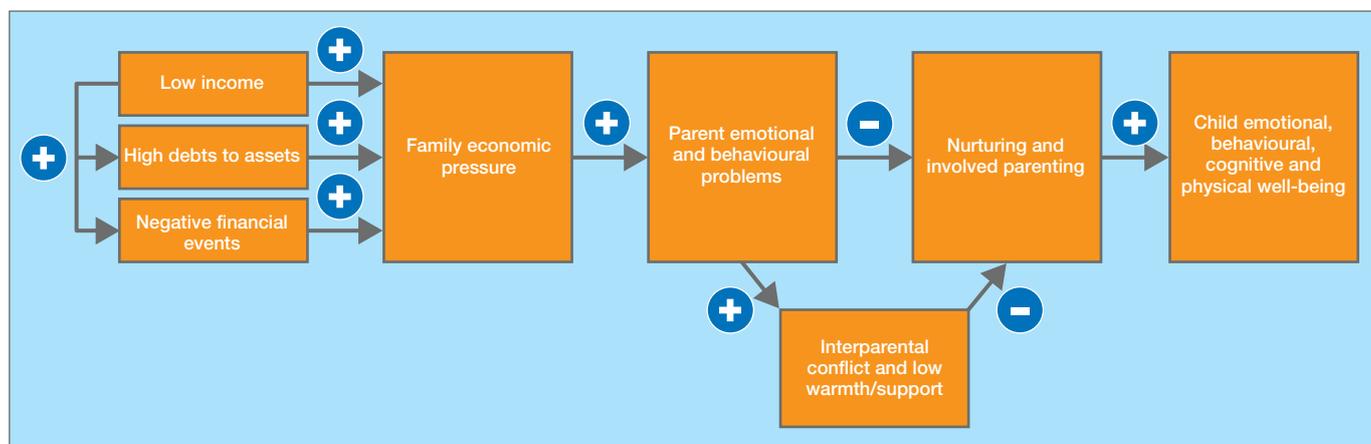
Another family process model, the Family Stress Model, implicates parental psychological distress and interparental conflict as key mediators between economic distress and insensitive parenting and children's outcomes. This model, presented below, was chosen as the key theoretical framework underpinning the present study, rather than the Family Investment Model. At three years, measures of emotional and behavioural difficulties were available, thus aligning closely with the outcomes in the Family Stress Model. In contrast, measures of school readiness and cognitive outcomes – which are central outcomes in the Family Investment Model – had not been measured with the three-year-olds in *Growing Up in Ireland*. In the following section, a brief overview of the Family Stress Model is provided.

THE FAMILY STRESS MODEL

The Family Stress Model, originally proposed by Conger and colleagues, was developed to explain how families in the Midwest of the United States were affected by a severe downturn in the dominant agricultural economy in the 1980s (Conger & Elder, 1994; Conger & Conger, 2002). The model, presented in Figure 1, posits that economic hardship, as indicated by low income, a high debt-to-asset ratio, and negative financial events, such as becoming unemployed, income instability, and increasing economic demands, generates economic pressures in the family. Economic pressures include unmet material needs, such as inadequate clothing or food, an inability to pay bills or make ends meet, and a requirement to cut back on everyday expenses in order to live within available means. These strains give psychological meaning to the stressful experience of economic hardship (Conger & Conger, 2002; Conger & Donnellan, 2007).

Beyond a certain point, high levels of economic pressure are considered to increase the risk of parental emotional and behavioural difficulties, including depression, anxiety, substance use and anti-social behaviour. Such difficulties in turn are proposed to give rise to higher levels of marital conflict and reduced warmth in the inter-parental relationship. Together, these parental and inter-parental difficulties are considered to divert parental resources away from children, leading to diminution in the quality of parenting, characterised by less warmth and responsiveness, and greater harshness and inconsistency in the discipline role. In the final stage of the model, diminished parenting is proposed to affect children's outcomes across a number of domains of development. Specifically, it is proposed that children experience increases in internalising (e.g. symptoms of depression and anxiety) and externalising (e.g. conduct and hyperactivity) problems. Children may also exhibit decreases in positive adjustment, such as cognitive ability, social competence, attachment to parents and school success. Although the model specifies a series of pathways, the basic tenet of the Family Stress Model is that economic effects indirectly influence children through their impact on the lives of parents (Conger & Donnellan, 2007).

Figure 1: The Family Stress Model



(+) denotes positive relationship between variables; (-) denotes negative relationship between variables

The Family Stress Model was initially developed and tested as part of the Iowa Youth and Families Project (IYFP), initiated in 1989. The IYFP was a longitudinal study that initially involved 451 two-parent families in rural Iowa, followed between 1989 and 1993. Subsequently, a cohort of 107 single-parent families was added, yielding a total sample of 558 adolescents and their families (Conger et al., 2002; Simons and Associates, 1996). In an initial test of the model, based on 205 seventh-grade boys (11-13 years) and their families, Conger and colleagues found that objective economic conditions, such as income, unstable work, debts-to-assets ratio and income loss, significantly predicted economic pressure, which in turn accounted for substantial proportions of variance in mothers' (46%) and fathers' (34%) depressed mood (Conger et al., 1992). Mothers' depression was associated with higher levels of marital conflict, and lower levels of nurturing parenting. Fathers' depression was not associated with marital conflict, but was associated with lower levels of nurturing parenting. Both mothers' and fathers' nurturing parenting in turn were associated with children's lower levels of adjustment problems, and better adjustment in terms of school performance, self-confidence and peer relations. Direct pathways between economic hardship and family processes and adjustment variables did not improve the fit of the model, supporting the idea that the effects of economic hardship are mediated through the influence on family processes.

In a second test of the model, based on a sample of 220 seventh-grade girls (Conger et al., 1993), broadly similar findings emerged. Economic conditions again predicted economic pressure, which was in turn related to both mothers' and fathers' depressed mood. Mothers' and fathers' depressed mood significantly predicted marital conflict for both parents, which in turn related to less nurturing parenting by both parents. Mothers', but not fathers', depressed mood was also directly related to less nurturing parenting, which in turn was linked to more adjustment problems and less positive adjustment for children.

In a further test of the model, Conger and colleagues (2002) analysed data from a sample of 422 two-caregiver African American families, each with a 10-11-year-old child. All families were two-caregiver families, but unlike in the original studies, the secondary caregivers in these families included biological parents, step-parents and grandparents. The Family Stress Model fit the data well for the families, with one marked discrepancy. As was the case in the original studies, both primary and secondary caregiver's depressed mood predicted caregiver relationship conflict, and conflict in turn predicted less nurturing parenting. However, in this study, there was an absence of a direct path between caregiver depressed mood and low nurturing caregiving, suggesting that children in these families may be protected from caregiver depressed mood, as long as the caregiving remains stable and positive.



In a test of both the Family Stress and Family Investment Models, Yeung, Linver and Brooks-Gunn (2002) found that higher family income was associated with a better physical home environment, which itself had a direct positive effect on children's cognitive ability. Higher family income was also associated with the provision of more cognitively stimulating experiences, which in turn was associated with lower levels of maternal depression and higher levels of nurturant parenting. However, neither maternal depression nor nurturant parenting were associated with children's cognitive ability. In relation to the children's behaviour problems, the Family Stress Model was applicable: higher levels of maternal depression, lower levels of nurturant parenting, and higher levels of punitive parenting were all associated with behaviour problems in children. The authors concluded that there is no single pathway through which family income effects exert their influence, and that different mediating mechanisms operate for different child outcomes. Specifically, much of the income effect on children's cognitive scores was mediated by parents' investment in providing an environment that promotes children's learning, and not by maternal emotional problems or parenting behaviours. In contrast, maternal emotional well-being was the key mediator of income effects on children's behaviour problems. Similarly, Smart, Sanson, Baxter, Edwards and Hayes (2008) reported that the effects of family financial disadvantage on children's cognitive skills and social/emotional behaviour were expressed through various pathways that involved dimensions of parenting, parental stress and well-being, and access to formal care or preschool-education. They concluded that the Family Stress Model provided a better explanation for children's social-emotional outcomes, while the Family Investment Model was better at explaining children's cognitive outcomes. Pathways accounted for in both models most likely interact and act in unison. A number of other studies have provided further support for the robustness of the Family Stress Model in explaining how the effects of economic hardship on children's outcomes are mediated through family processes. These studies have drawn on diverse samples, including low-income African American and Hispanic families (Mistry, Vandewater, Huston & McLoyd, 2002), European American and Mexican American families (Parke et al., 2004), and families living in countries other than the United States (Solantus, Leinonen & Punamäki, 2004); and variations of the Family Stress Model have been tested in divorced families (Simons et al., 1996). In the Parke et al. (2004) study, marital conflict was directly associated with child adjustment problems, but not with paternal or maternal hostile parenting. Furthermore, paternal hostile parenting was directly associated with child adjustment problems, while maternal hostile parenting was not. The authors concluded that the relative intensity and infrequency of father's discipline may make it more salient, which may account for the stronger effect of paternal than maternal discipline.

In one of the few studies to have been conducted in a context other than the United States, Solantus et al. (2004) used the model to investigate the effects of an economic recession during the early 1990s in Finland on children's mental health. Due to the longitudinal nature of the study, the researchers were also able to control for pre-recession child mental health. The data collected from 527 families of 12-year-olds revealed that the Family Stress Model was fully replicable in the Finnish sample. Across models for boys and girls, economic hardship predicted economic pressure, which in turn predicted both mothers' and fathers' mental health, and in turn the quality of marital interaction. For girls, negative marital interaction was related to compromised parenting (34% of variance explained), which together with pre-recession girls' mental health, accounted for 52% of variance in children's internalising symptoms (beta value¹ 0.13 for parenting to internalising symptoms, and 0.63 for pre-recession girls' mental health to internalising symptoms), and 79% of variance in externalising symptoms (beta value 0.65 for parenting to externalising symptoms and 0.61 for pre-recession girls' mental health to externalising symptoms). No direct relationship was found for mothers' and fathers' mental health and compromised parenting. For boys, negative marital interaction was related to mothers' but not fathers' compromised parenting, and mothers' compromised parenting (but not fathers') was related to boys' internalising symptoms. Together, mothers' compromised parenting (beta value 0.13) and boys' pre-recession mental health (beta value 0.47) accounted for 37% of variance in boys' internalising symptoms. For externalising symptoms in boys, negative marital interaction was related to both mothers' and fathers' compromised parenting, both of which were related to externalising

¹ Standardised beta values represent the strength of a relationship between a given predictor and an outcome, expressed in a standardised form, which enables the strength of various predictors in one model to be compared with each other. It is the change in the outcome (expressed in standard deviations) associated with a one standard deviation change in the predictor. For example, a one standard deviation increase in girls' pre-recession health is associated with a 0.63 standard deviation increase in girls' internalising symptoms; a one standard deviation increase in mothers' compromised parenting is associated with a 0.13 standard deviation increase in girls' internalising symptoms.

symptoms (beta value 0.13 for mothers' parenting; 0.48 for fathers' parenting) (along with boys' pre-recession mental health; beta value 0.60). Together, these factors accounted for 71% of the variance in boys' externalising symptoms. The authors concluded that the Family Stress Model was more successful in explaining externalising than internalising symptoms, that abrupt changes in economic circumstances led to stress in families and adverse changes in child mental health, and that such effects were evident even across families in higher social classes. The authors suggested that higher levels of education and higher social class do not protect parents from stress, marital conflict, compromised parenting, or children from emotional and behavioural problems, when families experience dramatic changes in financial circumstances.

In conclusion, the Family Stress Model, tested on diverse samples in a range of contexts, has provided a meaningful account of economic stress processes and their influence on child and adolescent problem behaviours. Similar to the Solantus et al. (2004) study, the aim of the present study is to evaluate the applicability of the Family Stress Model in understanding the effects of economic recession in Ireland on children's social, emotional and behavioural outcomes. The Family Stress Model proposes that economic hardship in a family generates stress within the family system, which increases risk for negative outcomes for children and parents. For children and adolescents, risk is not directly created by economic hardship, but by the response of parents to the economic difficulties they encounter (Conger & Conger, 2002). Thus, hardship-related emotions and behaviours, such as parental depression and marital conflict, result in compromised parenting processes, which in turn affect children's development. Parenting represents the most proximal mechanism through which the economic state of the family affects the development of children and adolescents (Conger & Donnellan, 2007).

Given that the Family Stress Model focuses on children's emotional and behavioural outcomes and that the pathways tested in the model implicate parental well-being and parenting in children's risk for difficulties, in the section that follows a brief review of the literature on childhood behavioural and emotional problems and the long-term implications of early difficulties is presented. Risk factors for the development of such problems are considered, with a particular focus on parents' depressive symptoms and marital satisfaction, and warmth and hostility in parenting. Previous research examining associations between economic difficulties and parenting is also considered.

CHILDHOOD INTERNALISING AND EXTERNALISING DIFFICULTIES

Behavioural and emotional problems are estimated to affect approximately one-fifth of children, including pre-school-aged children (Egger & Angold, 2006; World Health Organisation, 2001). Such problems are usually classified into either externalising or internalising problems. Externalising problems are characterised by 'acting out', under-controlled behaviours, including whininess, disobedience, defiance, aggression, hyperactivity and delinquency. Internalising problems in contrast are characterised by anxiety, depression, and withdrawn and over-controlled behaviours (Rhee, Lahey & Waldman, 2015; Zahn-Waxler, Klimes-Dougan & Slattery, 2000).

Externalising and internalising difficulties often co-occur and share common risk factors, including difficult temperament, physical health problems, a controlling parenting style and parental depression. Externalising difficulties have specific risk factors, however, including male gender, low-educated parents, peer rejection, and interparental conflict. Additional risks specific to internalising difficulties are temperamental inhibition, peer neglect, parental illness/death and overprotective parenting (Bayer et al., 2008; Rhee et al., 2015). For some children, behavioural and emotional problems in early childhood are developmental precursors to subsequent mental health problems (Mesman, Bongers & Koot, 2001; Costello, Mustillo, Erkanli, Keeler & Angold, 2003). Ashford, Smit, Van Lier, Cuijpers and Koot (2008) found that internalising problems at the age of 4-5 years predicted the persistence of such problems at 11 years. Externalising problems also show considerable longitudinal stability (Loeber & Stouthamer-Loeber, 1998). Campbell and Ewing (1990) found that 48% of preschoolers with problems such as hyperactivity, inattention and discipline problems fit the diagnostic criteria for an externalising disorder at age nine years. In support of these patterns of



continuity, Mesman et al. (2001) reported that early preschool aggression, overactivity and oppositional behaviour predicted externalising problems at 10-11 years. These authors also found predictions from early preschool anxiety and withdrawn-depressed behaviour to internalising problems into preadolescence. Furthermore, early externalising problems, specifically oppositional behaviours, were a significant predictor of preadolescent internalising problems. Early behavioural disturbance has also been cited as a key predictor of problems later into adolescence and adulthood, including psychological difficulties, poor educational outcome and involvement in crime and antisocial behaviour (Cleary & Nixon, 2012; Fergusson & Lynskey, 1998; Kolvin, Miller, Scott, Gatzanie & Fleeting, 1990; Rutter, 1989).

Overall, these findings point to the developmental significance of a range of emotional and behavioural problems from the preschool years. From a developmental perspective, the preschool and toddler years are when key mechanisms of emotional and behavioural control and regulation are established. The capacity to regulate negative emotions, such as anger and frustration, and to inhibit verbal or physical reactions to negative stimuli are important developmental tasks during this period (Sroufe, 1990; Kochanska, Coy & Murray, 2001). At this stage, preschoolers also meet with a range of social demands, such as making friends and learning social skills required by their preschool or childcare setting. An inability to adapt to these social demands is also thought to be critical to the development of internalising and externalising expressions of dysfunction in later childhood (Parker, Rubin, Price & De Rosier, 1995).

Given that early emotional and behaviour problems may potentially set a child on a pathway to externalising and internalising disorders, understanding predictors and risk factors associated with the early emergence of these problems is important for the design of preventative interventions. The role of parenting and family factors appears to be central, as evidenced by several research studies (Miner & Clarke-Stewart, 2008; Robinson et al., 2008). For example, controlling and overprotective parenting has been implicated in the development of anxiety problems in children (Edwards, Rapee & Kennedy, 2010; McLeod, Wood & Weisz, 2007). Bayer, Sanson and Hemphill (2006), who examined parenting and family stress predictors of internalising problems among a small community sample of children, found that over-involved/protective and low warm-engaged parenting were significant predictors of internalising child problems at two and four years of age, and parents' depression/anxiety was predictive of child internalising problems at age two but not four years. Family stress predicted parental depression and anxiety, lower warm-engaged, higher over-involved/protective and higher power-assertive/punitive parenting, but did not directly predict children's internalising problems. Beyond the preschool years, Ashford et al. (2008) found that low socio-economic status, family psychopathology at ages two to three years, and parenting stress at the child's age of four to five years predicted children's internalising problems at age 11 years. These authors also found that, among all children with internalising problems at age 11 years, 20% of these can be attributed to parental stress at child age four to five years. Thus, if all parents that reported parenting stress at this time had received a completely successful intervention, the prevalence of children's internalising problems at age 11 years would have been reduced by 20%.

Drawing on data from the Longitudinal Study of Australian Children, Bayer et al. (2011) investigated risk factors for a range of childhood mental health symptoms, including externalising and internalising problems. The authors reported that proximal risks – those that were most immediate in time and setting to the child – demonstrated the strongest effect on mental health. The strongest consistent predictor of children's externalising problems was harsh discipline, while internalising symptoms were predicted by poorer child physical health, maternal emotional distress, harsh discipline and overinvolved/protective parenting. The authors identified early negative parenting interactions as key mechanisms underpinning adverse outcomes in children. Similarly, based on a separate, smaller sample of children in Australia studied between the ages of seven and 36 months, Bayer, Hiscock, Ukoumunne, Price and Wake (2008) reported that maternal stress and harsh discipline emerged as key predictors of externalising problems, while having no older siblings, maternal stress and anxiety, harsh discipline and partner conflict about parenting significantly predicted children's internalising problems. The significance of harsh control strategies was

also highlighted by Spieker, Larson, Lewis, Keller and Gilchrist (1999) who found that the externalising behaviour of preschool children of adolescent mothers decreased over time only if their mothers did not use harsh disciplinary strategies.

Dwyer, Nicholson and Battistutta (2003) investigated the contribution to the risk of onset and persistence of mental health problems in children (pre-school and school-aged children) of a range of family risk factors, including adverse life events, family structure and socio-economic status, harsh parenting practices, parental verbal conflict and mood problems, and parental anti-social behaviour. Their analyses revealed that the odds of having persistent mental health problems were significantly higher among children who were exposed to harsher parenting and higher levels of parental verbal conflict and mood problems. In a series of studies based on a longitudinal study of children in Norway, Mathiesen and colleagues revealed the central role of family stress (incorporating relationship difficulties and socioeconomic difficulties) and maternal depressive symptoms on trajectories of children's externalising and internalising difficulties from infancy to adolescence. For example, Kjeldsen, Janson, Stoolmiller, Torgersen and Mathiesen (2014) found that higher levels of family stress predicted children with high and stable levels of externalising symptoms over time from other groups of children (such as those with low levels of symptoms, those whose externalising symptoms were limited to childhood, and those whose symptoms only emerged in adolescence). Karevold, Roysam, Ystrom and Mathiesen (2009) also highlighted the significance of maternal depressive symptoms and family adversity for children's internalising difficulties at 13 years. Furthermore, they found that maternal stress at child age 18 months was more strongly related to child internalising difficulties at 13 years than maternal distress experienced later in the child's childhood, indicating that children may be more vulnerable to negative effects of maternal distress during early childhood.

As a complement to research focused on factors that elevate the risk of poorer outcomes among children, studies have also sought to identify factors that promote positive outcomes or that protect against risk. For example, based on a longitudinal follow-up of children in Alberta, Canada, Cabaj, McDonald and Tough (2014) found that, even among children with previously identified risk factors (such as demographic risk and maternal mental health difficulties), protective factors – including high self-esteem among mothers and children, adequate social support, and good quality parenting time – were related to positive developmental outcomes. Similar studies have also identified modifiable protective factors that promote positive outcomes, even in the presence of risk, including parenting practices, social support and maternal mental well-being (Benzies, Harrison & Magill-Evans, 2004; Dubowitz et al., 2016)

In summary, although many children's problems abate and disappear over time, research has indicated that children who display externalising and internalising behaviour in early childhood are at increased risk of exhibiting these difficulties throughout childhood and adolescence, thus elevating their chances of a range of negative developmental outcomes, including mental health problems, poor school performance and engagement in delinquent behaviour (Fergusson & Lynskey, 1998; Rutter, 1989). Research has also consistently found that risk factors within the family context, such as harsh parenting practices, parental mental health problems, marital conflict and parental criminality are amongst the strongest predictors of child maladjustment in the early years (Dwyer et al., 2003). Furthermore, reflecting Bronfenbrenner's ecological model, the influence of broader contexts within which parents and children enact their everyday lives must also be taken into account. One such context, which is a central focus of the present investigation, is that of the socio-economic circumstances of the families and the economic recession. The effects of these on parental well-being and parenting are briefly considered in the section that follows.



ECONOMIC STRAIN, PARENTS' WELL-BEING AND PARENTING

Substantial literature attests to the psychological and behavioural morbidity associated with economic decline (Catalano et al., 2011; Paul & Moser, 2009). Involuntary job loss is the most commonly studied risk factor associated with economic recession. Evidence suggests a 15% to 30% increase in reported symptoms of depression and anxiety following job loss, compared with those who remain in stable employment (Burgard, Brand & House, 2007). It has been proposed that job loss involves not only the loss of income, but also the loss of latent functions of employment, including time structure, social contact, collective purpose, status and activity, all of which correspond to important psychological needs (Jahoda, 1981). Thus, job loss may be hazardous to health because it potentially disrupts many dimensions of socio-economic status, such as loss of income, social connections with work colleagues, and social prestige deriving from one's occupation (Strully, 2009). Indeed, certain groups appear to be more negatively affected by unemployment, including men, people in lower-status occupations, the self-employed and those with children (Paul & Moser, 2009; Backhans & Hemmingsson, 2011). These results presumably reflect a protective effect of high social support, low breadwinning obligations and higher re-employment expectations and opportunities.

Perceptions of job insecurity also increase the risk of depressive symptoms (Ferrie, Shipley, Stansfeld & Marmot, 2002), and the fear and worry that one might become unemployed may underlie psychological distress, particularly in times of uncertainty, such as during recession (Burgard, Kalousova & Seefeldt, 2012). Income volatility is also directly associated with levels of depression; people who earn low incomes are both more at risk of experiencing income loss, and more psychologically vulnerable when such losses occur (Prause, Dooley & Huh, 2009).

In line with the Family Stress Model, research has demonstrated that the effects of job loss on depressive symptoms are mediated by the psychological experience of economic strain, which has knock-on effects on psychological health and relationships within families (Kessler, Turner & House, 1987). When objective economic hardship is associated with perceived economic strain, hostile styles of interaction have been found to increase, along with a concomitant decline in the quality of the marital relationship (Conger et al., 1990). Vinokur, Price and Caplan (1996) found that experiences of economic strain had significant effects on depressive symptoms in both partners, which in turn spilled over to affect the marital relationship, with reduced support and increased expressions of negative affect (e.g. anger, dislike) and criticism towards partners.

The ways in which economic hardship affects marital interaction seem to differ, to some extent, between men and women. Although increased marital hostility has been found in both mothers and fathers when encountering economic hardship and depressed mood (Conger et al., 1993; Conger, Ge, Elder, Lorenz & Simons, 1994), there is evidence that men in particular are more prone to project their anger and frustration onto their wives (Conger et al., 1990; Skinner, Elder, & Conger, 1992). Similarly, although economic hardship has been reported to affect both parents' ability to give support to the marital partner (Simons, Lorenz, Conger, & Wu, 1992), there is also evidence that it particularly affects the mother's capacity to give warmth and harmony to the marital relationship (Brody et al., 1994). However, in a recent analysis of the effects of the recent economic recession on marriage quality in the United States, Wilcox (2011) found that the recession had both positive and negative effects on marriages. In particular, 29% of respondents said that the recession had deepened their commitment to marriage, and 26% of respondents who experienced significant financial stress claimed to be in happy marriages.

The relationship between parental depression and marital satisfaction, and parenting has been well substantiated in research, and broadly supports the notion of 'spillover' (Goodman & Gotlib, 2002; Sagrestano, Paikoff, Holmbeck & Fendrick, 2003; Lovejoy, Graczyk, O'Hare & Neuman, 2001; Erel & Burman, 1995; Grych & Fincham, 2001), including in studies based on *Growing Up in Ireland* data (Nixon, 2012; Nixon, Swords & Murray, 2013). Studies based specifically on the Family Stress Model also support these processes, although the findings do not always reveal the same pathways for mothers and fathers. For

example, Conger et al. (1993) found that mothers' depressed mood (but not fathers') was related to less nurturant parenting of girls, while, in another study of boys, both parents' depression was associated with lower levels of nurturant parenting (Conger et al., 1992). The consequences of less nurturing parenting for children's development have been well documented, both in the family stress literature and in research that specifically examines family risk factors among children who display externalising and internalising behaviour problems. As noted previously, negative parenting interactions, such as harsh discipline, parent-child conflict, and low levels of warmth, are among key factors associated with children's externalising and internalising problems (Bayer et al., 2006, 2011; Dwyer et al., 2003; Robinson et al., 2008).

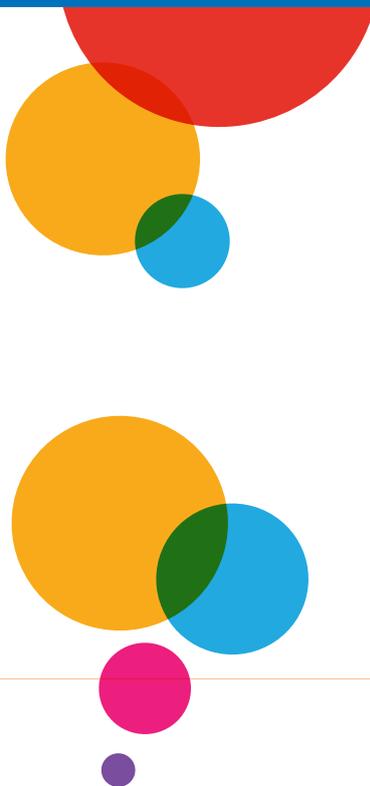
AIMS OF THE STUDY & OUTLINE OF THE REPORT

The purpose of this study is to examine pathways by which the recent economic recession in Ireland may have affected young children's behavioural and emotional outcomes, using the Family Stress Model (see Figure 1). Following a brief presentation of the data and measures used in the study (Chapter 2), the findings of the analysis are presented in Chapters 3 and 4. First, the analysis will document how families in *Growing Up in Ireland* have been affected by the recession, and how families' changing economic conditions have affected parents' perceptions of economic strain. It is hypothesised that certain changes in economic conditions, such as lower income and job loss in families, will lead to higher economic strain for parents (Chapter 3). Following this, the effect of economic strain on parental mental health and quality of marital relations is considered. It is hypothesised that greater economic strain will negatively affect parental mental health and the quality of the marital relationship, which in turn is hypothesised to be associated with poorer-quality parenting. In line with the Family Stress Model, it is further hypothesised that the quality of parenting will be associated with children's behavioural and emotional outcomes. Direct effects between parental depression and marital satisfaction and children's outcomes will also be considered (Chapter 4). In the final chapter of the report, the findings are discussed in relation to previous literature and the implications for policy.



Chapter 2

METHOD AND DATA



This chapter discusses the *Growing Up in Ireland* data used in the current analyses, the measurement of key concepts and the approach to analysis.

THE GROWING UP IN IRELAND DATA

The analysis presented in the report is based on data on 9,793 three-year-old children and their families. Initially, 11,134 children and their families participated in Wave 1 of the '08 cohort of *Growing Up in Ireland* (between September 2008 and April 2009) when the infants were nine months old. Subsequently, 9,973 of the families were interviewed for Wave 2, between December 2010 and July 2011, when the children were three years old. This reflects a 91% response rate (425 families were excluded from the sample, as they had moved abroad). Further descriptive information on the Infant Cohort at both waves is available in Williams, Greene, McNally, Murray and Quail (2010) and Williams, Murray, McCrory and McNally (2013). As noted by Watson et al (2014), the timing of Wave 1 of the fieldwork coincided with the onset of the recession (September 2008) when unemployment was rising most sharply. At Wave 2, unemployment was still increasing, although the rate of growth was at a slower rate than at the onset of the recession.

MEASUREMENT OF KEY CONSTRUCTS

The ability to test the Family Stress Model depends on how well the components in the model map onto the constructs measured in *Growing Up in Ireland*. The measurement of the key constructs is outlined below. Limitations with the measurement of the constructs are also highlighted.

ECONOMIC FACTORS

In the Family Stress Model, three economic factors are considered to give rise to economic pressure or strain: low income, high debt to asset ratio, and negative financial events, including income loss, work instability and increased economic demands. Economic strain is defined as "a syndrome of events or conditions that give psychological meaning to the stressful experience of economic hardship" (Conger & Donnellan, 2007, p. 179). In the measurement of this construct, Conger and colleagues assessed families' abilities to 'make ends meet', by specifically asking both mothers and fathers whether they had any difficulty paying bills or whether they had any money left at the end of the month. Spouses' scores were standardised and then summed.

Given that *Growing Up in Ireland* was not specifically designed to test the Family Stress Model, there are some distinctions between how economic factors were measured by the original developers of the model and in *Growing Up in Ireland*. For example, based on the information gleaned from respondents in *Growing Up in Ireland*, it was not possible to determine a debt-to-asset ratio, although information on indebtedness was collected. Economic strain was also measured slightly differently, although the question asked of Primary Caregivers did capture the experience of difficulty making ends meet, which aligns well with how it was originally conceptualised by Conger and colleagues.

In *Growing Up in Ireland*, economic strain was measured at both waves by means of one question, asked of Primary Caregivers:² "Concerning your household's total monthly or weekly income, with which degree of ease or difficulty is the household able to make ends meet?" Responses were on a six-point scale, ranging from "with great difficulty" to "very easily".

The perceived effect of the recession was measured at Wave 2 only. Mothers were asked to select a response to the following: "Would you say that the recession has had [a very significant effect, a significant effect, a small effect, no effect at all] on your family?". Mothers were then asked to indicate how the family had been affected by the recession, by selecting all relevant effects from a list of potential effects: "You were made redundant/lost your job, your spouse/partner was made redundant/lost their job, you or your spouse/partner's working hours were reduced, your or your spouse/partner's wages were reduced, your or your spouse/partner's social welfare benefits were reduced, your family can't afford luxuries (holidays, meals out, etc), your family can't afford/had to cut back on basics (food, clothes, etc), you are behind with rent/

² Almost all Primary Caregivers were women (99.6%) and almost all of these were the infant's biological parent (99.9%). For this reason, Primary Caregivers will be referred to hereafter as 'mothers'. Almost all Secondary Caregivers were male (99.6%) and the father of the child (99.9%), and hence they are referred to hereafter as 'fathers'.



mortgage payments, you are behind with utility bills (e.g. electricity, gas bills etc)”.

Several indicators of the economic status of families was attained, at both Wave 1 and Wave 2, enabling change in the economic situation of families over time to be measured. The employment status of mothers and fathers at both waves was captured; thus two-parent families were categorised into dual-earner, single-earner and no-earner families, and changes in these statuses over time were determined. Single-parent households were categorised into no-earner or single-earner households at both time points, and changes in status over time were also determined. The income level of families at both waves was categorised into quintiles, with one-fifth of families in the sample with the highest income being classified in the highest income quintile. Collection of this information at both waves also enabled change in income over time to be captured.

One of the key limitations of testing the Family Stress Model using *Growing Up in Ireland* data is that the indicator of economic strain (the extent to which parents experienced “difficulty in making ends meet”) was only measured for mothers, and not fathers. Therefore, it was not possible to examine the extent to which economic strain mediated the effect of negative economic events on fathers’ depression and marital satisfaction. The mediating pathway involving economic strain could only be tested for mothers. Additionally, the measure of economic strain was based on one item pertaining to the subjective experience of one’s economic circumstances. Economic strain can also have objective dimensions (Conger et al., 1994), such as having to cut back on basics and being in arrears on household bills. These economic circumstances were also measured in this study, but were not incorporated into the construct of economic strain or pressure – rather they were assessed as independent economic events.

PARENTAL DEPRESSIVE SYMPTOMS AND MARITAL SATISFACTION

Parental depressive symptoms were measured using an eight-item version (Melchior, Huba, Brown & Reback, 1993) of the Centre for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977). This measure is used as a screening instrument for depression in the general population, rather than being a diagnostic tool that captures the presence of clinical depression. Sample items on the scale include: “I felt that I could not shake off the blues even with help from my family and friends”, and “I thought my life had been a failure”. These items were answered with reference to the previous seven-day period, on a four-point Likert scale. A composite score is calculated by summing item responses (range: 0–24), and a cut-off score of seven or above is taken to indicate that the respondent is ‘depressed’. A classification as ‘depressed’ should not be taken to indicate a clinical diagnosis of depression, but rather a subjective indicator of parental distress. Cronbach’s alpha on this scale was high: 0.88 for mothers and 0.83 for fathers.³ Mean and standard deviation scores were 2.42 (SD = 3.575) and 1.43 (SD = 2.456) for mothers and fathers respectively. The range of scores was 0 to 24 for mothers and fathers. In terms of classification as ‘depressed’ (above a score of 7), 10.6% of mothers and 4.5% of fathers were classified as ‘depressed’.

Marital satisfaction was measured using the short four-item version of the Dyadic Adjustment Scale (DAS-4) (Sabourin, Valois & Lussier, 2005). The measure provides an assessment of dyadic satisfaction based on participants’ self-report, such as how well they think things are going between themselves and their partner, and has been used as a means of categorising marriages as either distressed or adjusted. Findings from several studies suggest that the DAS-4 has preserved the content coverage of the original 32-item DAS (Spanier, 1976) while also maintaining good psychometric properties (Sabourin et al., 2005). Three items are rated on a six-point Likert scale, and the fourth item is the degree of happiness in the relationship scale, rated from 0 (extremely unhappy) to 6 (perfect). Based on the data collected in Wave 2, internal consistency (Cronbach’s alpha) was only moderate: 0.55 for mothers and 0.53 for fathers. Mean and standard deviation scores were 16.02 (SD = 3.309) and 15.74 (SD = 3.378) for mothers and fathers respectively. The range of scores was 1 to 20 for mothers and 0 to 20 for fathers.

The measure of marital satisfaction was provided by mothers in couple relationships only, although some

³ Of the resident Secondary Caregivers (fathers), 89% completed the main Secondary Caregiver questionnaire, and 88% completed the sensitive questionnaire, which contained the measures for depression and marital satisfaction (7,301 completed the CES-D and 7,238 completed the DAS-4).

lone parents may have non-resident partners. Additionally, in lone-mother households, the quality of relationships between mothers and non-resident fathers has not been accounted for, although the quality of this relationship is immensely important for children's adjustment (Hetherington, 1999). For this reason, models that include marital satisfaction variables have only been tested for mothers and fathers in two-parent households.

PARENTAL WARMTH AND HOSTILITY

Parenting was measured using 12 items from the Parenting Style Measure of the Longitudinal Study of Australian Children (LSAC) (Australian Institute of Family Studies, 2011). Six items tapped into parental warmth (e.g. [Over the last six months, how often did you]... "hug or hold this child for no particular reason" and "have warm close times together with this child?"). Parents responded on a five-point scale from 'Never/Almost never' to 'Always/Almost always', and final 'warmth' scores were the mean of item scores, with higher scores indicating greater warmth. Six items tapped into parental hostility (e.g. "Of all the times you talk to this child about his/her behaviour, how often is this praise?" and "How often are you angry when you punish this child?"). Responses were on a five-point scale ranging from 'Never/Almost never' to 'All the time'. Final 'hostility' scores were the mean of item scores, with higher scores indicating greater levels of hostility.

Based on *Growing Up in Ireland* data for mothers (N = 9673) and fathers (N = 7276), internal consistency for parental warmth was high (0.85 and 0.84 respectively), indicating that the scale was reliable. Scores were highly skewed; most parents showed high levels of warmth, although there was some variability in scores (SDs 0.36 for mothers and 0.45 for fathers). Internal consistency for parental hostility was 0.64 for mothers and 0.64 for fathers. Mean and standard deviation scores were 1.79 (SD = 0.489) and 1.74 (SD = 0.471) for mothers' and fathers' hostility, respectively.

CHILDREN'S INTERNALISING AND EXTERNALISING DIFFICULTIES

Children's internalising and externalising difficulties at three years of age were measured using the Strengths and Difficulties Questionnaire (SDQ, Goodman, 1997), which was completed by mothers at Wave 2. The SDQ screens for behavioural and emotional difficulties, and comprises four subscales that measure emotional symptoms, conduct problems, hyperactivity/inattention and peer relationship problems. An additional subscale probes prosocial behaviour, but is not used here. Sample items include: "Often unhappy, down-hearted or tearful" and "Restless, overactive, cannot stay still for long". Each item is scored from 0 (not at all true) to 2 (certainly true). Scores from the emotional and peer relationship problems subscale were combined into an internalising score; and scores from the conduct and hyperactivity/inattention subscales were combined into an externalising score. Internal consistency was 0.73 for the externalising scale and 0.54 for the internalising scale. For the purpose of the descriptive analysis, a cut-off, representing the score closest to the 90th percentile for the *Growing Up in Ireland* sample, was selected. Children above the cut-off classified as 'problematic'; 10.5% of children were classified as problematic on the internalising scale (score of 6 or greater) and 12.6% were classified as problematic on the externalising scale (score of 10 or greater).

In line with recent research (Niclasen, Skovgaard, Andersen, Sømhøvd & Obel, 2012), internalising and externalising subscales of the Strengths and Difficulties Questionnaire were used here as indicators of children's emotional and behavioural difficulties. Thus it should be borne in mind that this is not a comprehensive psychological assessment of children's emotional and behavioural adjustment.

APPROACH TO ANALYSIS

The results of the analyses are presented in the following two chapters. The first findings chapter focuses on the economic changes that families experienced between Waves 1 and 2. Descriptive analyses are presented that capture change in employment status and income of families between Waves 1 and 2, levels of indebtedness, perceived effect of the recession and economic strain at Wave 2. Given that economic strain is a key mediating variable in the Family Stress Model, understanding what predicts strain is



important; thus bivariate associations between strain and household employment status, change in income and indebtedness are presented. Having considered the association between strain and various economic variables individually, the chapter concludes by considering the influence of these variables simultaneously on economic strain. This is a test of the first pathway in the Family Stress Model.

The second findings chapter similarly begins by presenting descriptive data on the key family process variables and bivariate analysis representing the associations among economic factors and economic strain and key family-process variables, including parental levels of depressive symptomatology and marital satisfaction. Additionally, bivariate associations between depressive symptomatology, marital satisfaction, and parent-child warmth and hostility are presented. Finally, associations between the parenting variables (warmth and hostility) and children's internalising and externalising difficulties are presented. The chapter also tests various pathways in the Family Stress Model, first examining direct and indirect pathways linking economic factors (such as indebtedness and having to cut back on basic necessities, economic strain) to mothers' and fathers' levels of depressive symptoms, and then to marital satisfaction (tested in two-parent households only). A final set of models considers how parents' depressive symptoms and marital satisfaction predict quality of parenting (warmth and hostility) and in turn how parenting predicts children's externalising and internalising difficulties. Thus, testing the Family Stress Model proceeds in sequential steps, with each regression model testing specific direct and indirect pathways in the model.

In interpreting the findings, it must be noted that some of the models rely on data collected from one source, so it is possible that there are inherent biases affecting the findings (Rothbart & Bates, 2008). In the original tests of the model, Conger et al. advocated the use of a multi-informant design to improve the measurement of theoretical constructs and the estimation of relationships among them. These procedures address the problem of single respondent biases in the study of family processes. However, with *Growing Up in Ireland*, much of the data was collected from mothers and thus some of the models rely on data from a single source. For example, in the models looking at children's outcomes, mothers reported on their depressive symptomatology, their parenting warmth and hostility and the children's internalising and externalising difficulties; associations among these variables may be inflated as a function of bias in the mind of the informant.

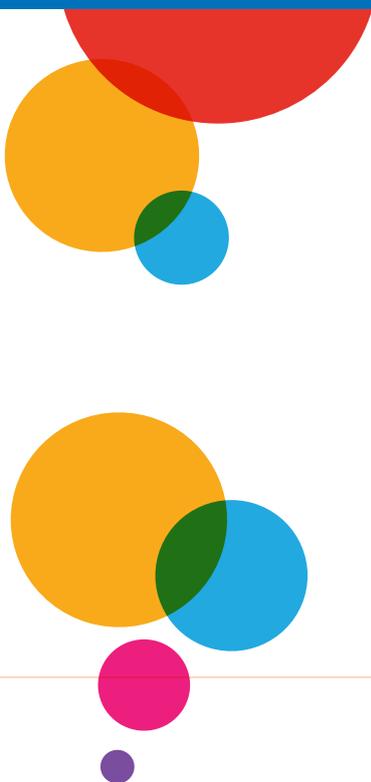
In interpreting the models, the total amounts of variance explained by the models tended to be small, suggesting that unmeasured variables must also be playing a role. The indicators of model fit and the strength of associations among variables – which were often small in magnitude – must also be considered when reviewing the findings. In addition, because the data are longitudinal, models of particular dependent variables at Wave 2 take account of or control for the level of that variable at time 1, thus modelling change over time (Kessler & Greenberg, 1981). Often, as might be expected, this stability coefficient represents the strongest predictor in the model.

Finally, the examination of the effects of economic strain in this report is framed by the Family Stress Model, which hypothesises that economic changes influence psychological and behavioural issues of children via their influence on proximal family processes (such as parenting, marital satisfaction and parental depression). Thus, the report does not consider other direct or indirect pathways by which economic changes might affect children's outcomes.



Chapter 3

ECONOMIC RECESSION AND THE GROWING
UP IN IRELAND FAMILIES



INTRODUCTION

In this chapter, the extent of change in economic circumstances among families of the *Growing Up in Ireland* '08 Cohort is examined. Specifically, changes in employment status for mothers and fathers, and changes in level of income in households between Waves 1 and 2 are presented. The extent to which families were experiencing material deprivation (such as cutting back on necessary expenses, being behind with rent/mortgage or on utility bills) and economic strain (denoted by "difficulty making ends meet") is also considered. In the final section of the chapter, the association between changing economic circumstances experienced by families and perceived economic strain is examined. In accordance with the Family Stress Model, it was hypothesised that economic conditions, such as income, unemployment and being in arrears on bills/mortgage, would significantly predict the subjective experience of economic strain.

CHANGE IN EMPLOYMENT STATUS OF PARENTS IN GROWING UP IN IRELAND

Growing Up in Ireland collected data on the employment status of parents at both data-collection waves. Across the whole sample of mothers (both single mothers and mothers in couples), the proportion in employment fell from 56.4% at Wave 1 to 53.5% at Wave 2, and the proportion reporting that they were unemployed increased from 5.6% to 6.5% (a 16% increase). Across the sample of fathers, the proportion that became unemployed was higher, from 6.1% unemployed at Wave 1 to 13.8% at Wave 2, representing a 127% increase. Employed fathers in lower-income households at Wave 1 were more likely to become unemployed by Wave 2 compared to those in higher-income households. For example, 2.8% of employed fathers in the highest income quintile subsequently became unemployed between waves, while 19.6% of those in the lowest income quintile group became unemployed over the same period. These lowest income-quintile fathers were 8.5 times more likely to have become unemployed than the highest income-quintile fathers.

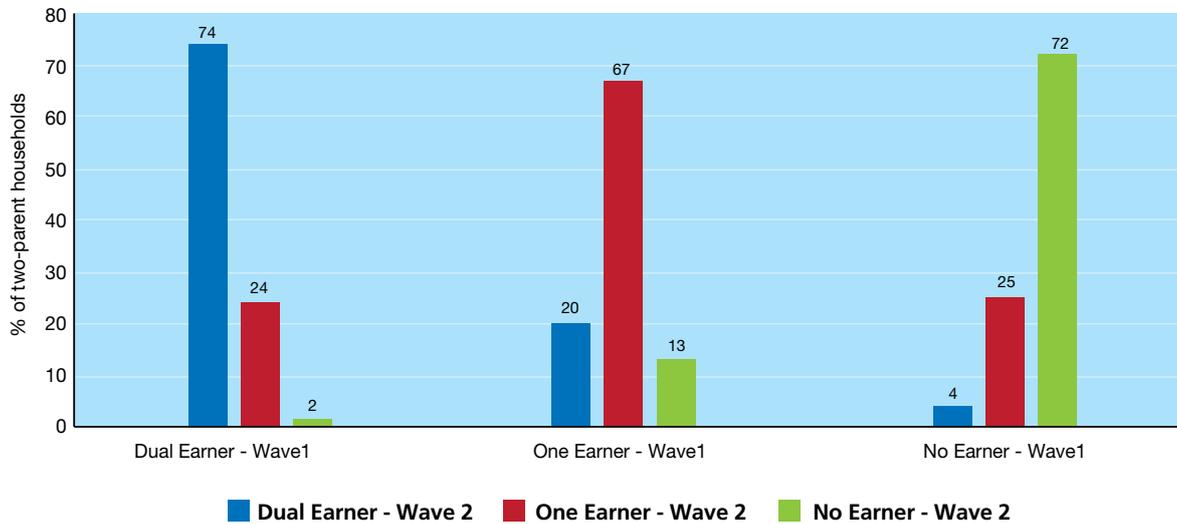
Analysis of employment patterns by household type (two-parent and single-parent households) revealed different employment dynamics across the two waves. There was relative stability in employment status among mothers in two-parent households; for example, 80% of those who were employed at Wave 1 were also employed at Wave 2. Of those mothers in two-parent households who were unemployed at Wave 1, 25% were still unemployed while 50% now described themselves as 'inactive' at Wave 2. The remaining 25% were in employment. Of those mothers in two-parent households who reported being inactive at the first wave, almost a fifth (19%) had subsequently become employed while 75% remained inactive, and 7% were now unemployed.

Fathers were less likely to be inactive and more likely to be in employment at both waves. Overall, 90% of those who had been in employment at Wave 1 were still in employment at Wave 2, and almost 60% of those who had been unemployed at Wave 1 were still without work at Wave 2, although 35% had acquired employment in the intervening period and 6% described themselves as inactive at Wave 2. Of the relatively small number of fathers who described themselves as inactive at the first interview, 68% remained inactive or unemployed at Wave 2, while 32% had gained employment in the intervening period.

In terms of employment patterns at the household level for two-parent households, Figure 2 illustrates considerable stability across waves: 74% of dual-earner households remained as such between waves, as did 67% of households where there was one parent working and 72% where no parents were working. Almost one-quarter of families changed from dual-earner to one-earner households, and one-fifth changed from one-earner to dual-earner households. One-quarter of families changed from both parents being unemployed at Wave 1 to one-earner households at Wave 2.



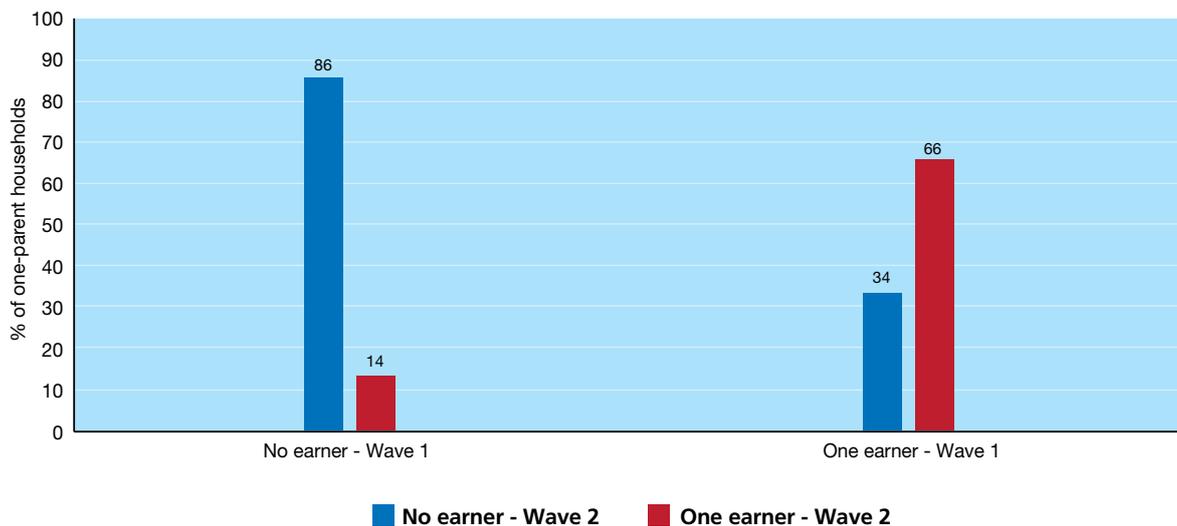
Figure 2: Change in household employment status in two-parent households from Wave 1 to Wave 2 (N = 6625)



'No earner' category includes those who are inactive such as those on disability, students, etc. Totals may not always amount to 100 due to rounding.

Among the single-parent households, 86% of those unemployed at Wave 1 remained unemployed at Wave 2, while two-thirds of those who were employed at Wave 1 remained employed and one-third of those who were employed at Wave 1 had become unemployed by Wave 2 (Figure 3).

Figure 3: Change in household employment status in one-parent households from Wave 1 to Wave 2 (N = 986)



'No earner' category includes those who are inactive such as those on disability, students, etc.

CHANGE IN INCOME OF FAMILIES IN GROWING UP IN IRELAND

Sixty-five per cent of families indicated that household income had been reduced as a result of the economic recession. Table 1 illustrates mean change in annual income from Wave 1 to Wave 2, according to income quintile at Wave 1.

Table 1: Mean change in annual household income from Wave 1 to Wave 2, by income quintile at Wave 1 (N = 9083)

Income quintile group at W1	N at W1	Mean income at W1 (€)	Mean income at W2 (€)	Mean change in income (€)	Percentage change	N at W2
Lowest quintile	1758	8500	10500	+2000	24%	1664
Second quintile	1827	13600	12900	-700	-5%	1745
Third quintile	1841	18900	16300	-2600	-14%	1787
Fourth quintile	1973	25800	21200	-4600	-18%	1886
Highest quintile	1683	41800	29900	-11900	-28%	1627
Total	9083	21600	18100	-3500	-16%	8708

The findings indicate that families in the lowest income quintile (at Wave 1) had a mean increase in annual household income of €2,000 at Wave 2, representing a 24% increase. However, households in the second through to the fifth (highest) income quintile experienced mean decreases in their annual household income, ranging from €700 (second quintile) to €11,900 (highest quintile). Although all income quintiles experienced changes in income through the period of the recession, because these are mean income changes, not all households were affected in the same way.

Further analysis considered how changes in household employment status, for both two-parent and single-parent households, as illustrated in Figures 1 and 2, were related to changes in income. Table 2 shows the mean change in income from Waves 1 to 2, based on changing employment status for two-parent households.

Table 2: Mean change in annual household income from Wave 1 to Wave 2, by household employment status from Wave 1 to Wave 2 in two-parent households (N = 7209)

Household employment status from W1 to W2	N at W2	Mean change in annual household income between W1 and W2 (€)
Still dual earner	3076	-4500
Still one earner	1860	-2800
Still no earner	239	-1400
Dual earner to one earner	940	-7700
One earner to no earner	364	-4600
Dual earner to no earner	72	-7800
No earner to one earner	76	+1300
One earner to dual earner	569	-200
No earner to dual earner	13	(Cell size too small to report)
Total	7209	-4000

Note: (-) indicates a loss of income, (+) indicates a gain in income.



As shown in Table 2, remaining in a stable employment pattern resulted in a loss of household income, with higher losses occurring for those who remained in dual-earner households. The largest declines in income occurred in households that transitioned from dual to one earner or from dual to no earner, with little difference in the average loss of income between these categories of household. Interestingly, where households transitioned from a no-earner to a one-earner household, there was only a small increase in annual household income (approximately €100 per month), and where households transitioned from a one-earner to a dual-earner household, there was a negligible drop in annual household income. These findings suggest that individuals may move into employment over the period of the recession to offset decreases in income that may otherwise occur, perhaps as a result of wage reductions, reduced working hours, or reduction in social welfare payments. In real terms, these households were not much better off.

Table 3: Mean change in annual household income from Wave 1 to Wave 2, by household employment status from Wave 1 to Wave 2 in single-parent households (N = 7209)

Household employment status from W1 to W2	N at W2	Mean change in annual household income between W1 and W2 (€)
Still one earner	273	-400
Still no earner	512	-900
One earner to no earner	144	-2600
No earner to one earner	85	+2200
Total	1014	-800

Note: (-) indicates a loss of income, (+) indicates a gain in income.

Somewhat similar patterns emerged among the single-parent households, as shown in Table 3. Losses in income occurred for those who remained in stable employment patterns. Gains and losses in income were similar when single parents either took up or lost employment between the two waves.

INDEBTEDNESS AMONG FAMILIES IN GROWING UP IN IRELAND

Mothers were asked to report on specific effects of the recession on economic circumstances in families. One-quarter of mothers reported that the recession had “a very significant effect” on the family, while a further 38% reported “a significant effect” and 31% “a small effect”. Only 6% of mothers said that the recession had “no effect at all”. In terms of debt, 14% recorded that they were “behind with utility bills” and 9% were “behind with rent/mortgage payments”. Sixty per cent of those behind with mortgage payments were also behind with utility bills. Almost one-third of mothers said that the family could no longer afford or had to cut back on basics (32%), while 55% said that they could no longer afford luxuries.

ECONOMIC STRAIN

Economic strain was measured by means of one question, asked of mothers: “Concerning your household’s total monthly or weekly income, with which degree of ease or difficulty is the household able to make ends meet?” Responses were on a six-point scale, ranging from “with great difficulty” to “very easily”. Table 4 shows the percentage of mothers reporting varying levels of difficulty in making ends meet, at both waves of the study. The proportion of mothers reporting at least some level of difficulty increased from 44% at Wave 1 to 61% at Wave 2.

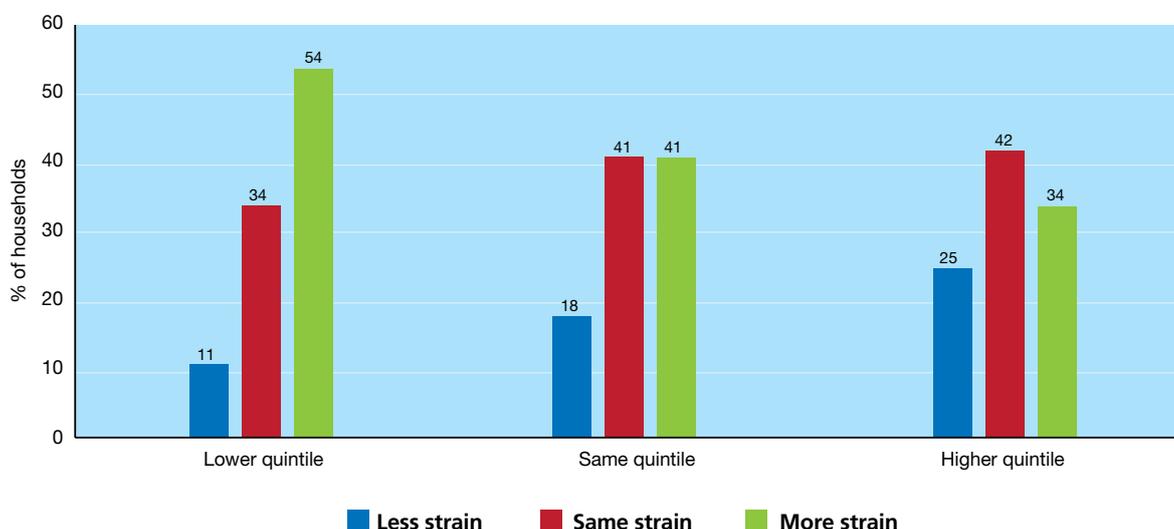
Table 4: Levels of economic strain reported by mothers (% of households) (Wave 1 N = 11124; Wave 2 N = 9786)

	Great difficulty	Difficulty	Some difficulty	Fairly easily	Easily	Very easily
Wave 1	5	8	31	38	14	5
Wave 2	8	13	40	27	9	3

While overall a greater proportion of families experienced economic strain at Wave 2 than at Wave 1, these trends mask individual differences across households. A comparison of household scores on this question at Waves 1 and 2 revealed that 16% of households (n = 1585) were experiencing less economic strain at Wave 2 than at Wave 1, 44% of households (n = 4273) were experiencing the same level of strain at both waves, while 40% (n = 3921) were experiencing more economic strain at Wave 2 than at Wave 1.

Analysis of the associations between income, household job status, indebtedness and economic strain yielded some predictable patterns. Figure 4 illustrates that a higher proportion of those who moved to a lower-income quintile (N = 2273) experienced greater levels of economic strain (54%) at Wave 2 in comparison with those who either remained in the same income quintile (41%) or moved to a higher income quintile (34%) (N = 3954 and 2273, respectively).⁴ These figures indicate that, while change in income is important with regard to perception of economic strain, other factors must also be considered.

Figure 4: Percentage of households that experienced less, the same or more economic strain in Wave 2 in comparison with Wave 1, according to change in income quintile from Wave 1 to Wave 2 (N = 9646)

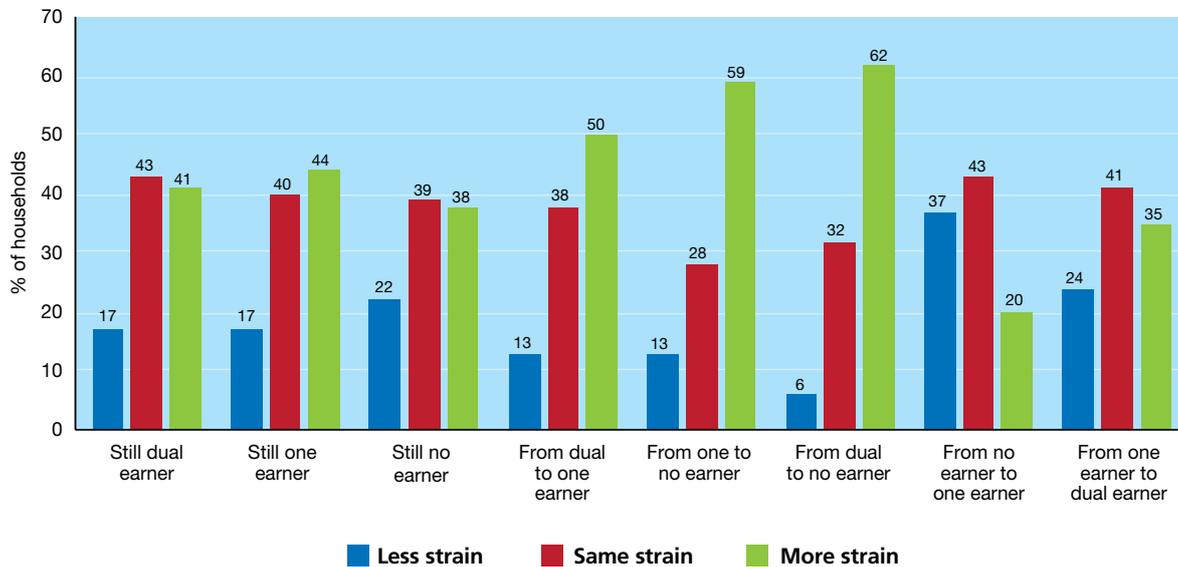


Households that transitioned into unemployment over the recession were more likely to report greater economic strain. With reference to two-parent households only, Figure 5 shows that approximately 60% of households which had moved from dual to no-earner households or from one to no-earner households were exhibiting more strain at Wave 2 than Wave 1. This compares with 41% and 44% of households which remained dual or one-earner households, respectively, and 38% of households where both parents remained unemployed. Families experienced less strain at Wave 2 than Wave 1 where employment had increased, i.e. where households had transitioned from one earner to dual earner, or from no-earner to one-earner households.

⁴ The income levels in each income quintile changed from Wave 1 to Wave 2. For example, families who remained in the highest income quintile from Wave 1 to Wave 2 had a mean decrease in income of €8,140 per annum.



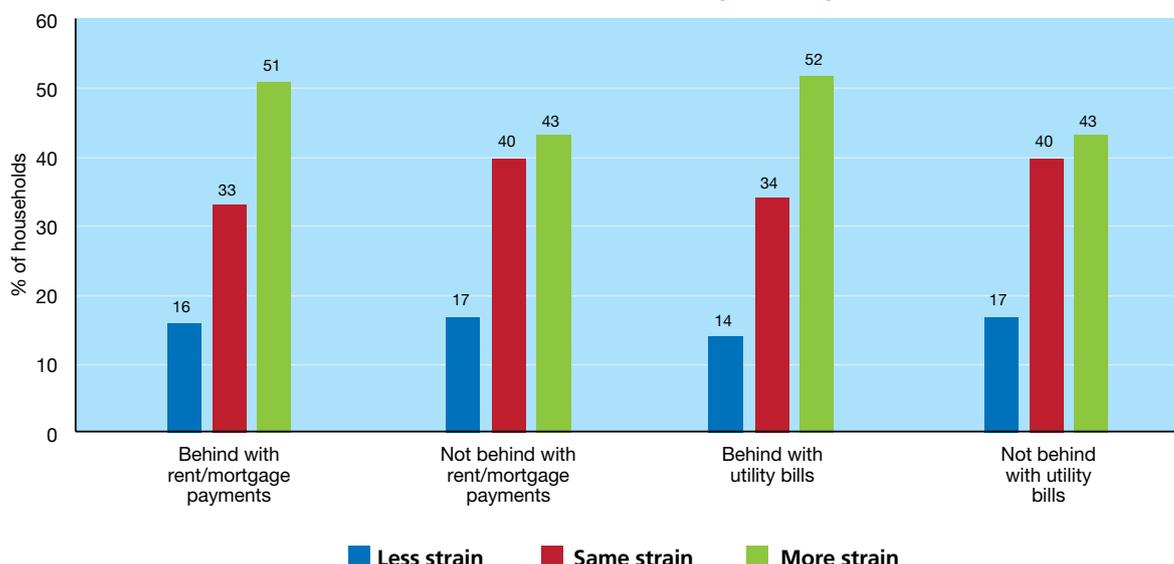
Figure 5: Change in household employment status and economic strain from Wave 1 to Wave 2 (N = 7576; two-parent households only)



With reference to one-parent households (N = 1139), among those whose household employment status remained stable from Wave 1 to Wave 2 (i.e. either no earner or one earner at both waves), approximately one-fifth experienced lower strain (22% for those that were one-earner households at both waves; 20% for those that were no-earner at both waves), around one-third experienced the same strain (32% for those that were one-earner at both waves; 38% that were no-earner at both waves) and over 40% experienced more strain (46% for those that were one-earner at both waves; 42% that were no-earner households at both waves). Among those who experienced change in household employment status from Wave 1 to Wave 2 (i.e. one to no earner, or none to one earner), approximately one-quarter experienced lower strain (24% for those households that changed from one to no-earner; 29% that changed from none to one-earner). However, of households that changed from one to no-earner, 28% experienced the same strain and 48% experienced more strain. In contrast, of families who changed from none to one-earner, 48% experienced the same strain, and 23% experienced more strain. These findings suggest that, while the transition to employment is not necessarily associated with less economic strain, there is a clear pattern in the data that suggests that taking up employment is associated with alleviation of economic strain.

Figure 6 illustrates that a greater proportion of families who were behind with their rent/mortgage payments and utility bills at Wave 2 (51% and 52%, respectively) experienced increased economic strain from Wave 1 to Wave 2, in comparison with those who were not in debt by way of their rent/mortgage or utility bills (43% and 43% respectively).

Figure 6: Being in arrears with rent/mortgage payments and on utility bills at Wave 2 and changes in economic strain from Wave 1 to Wave 2 (N = 9179)



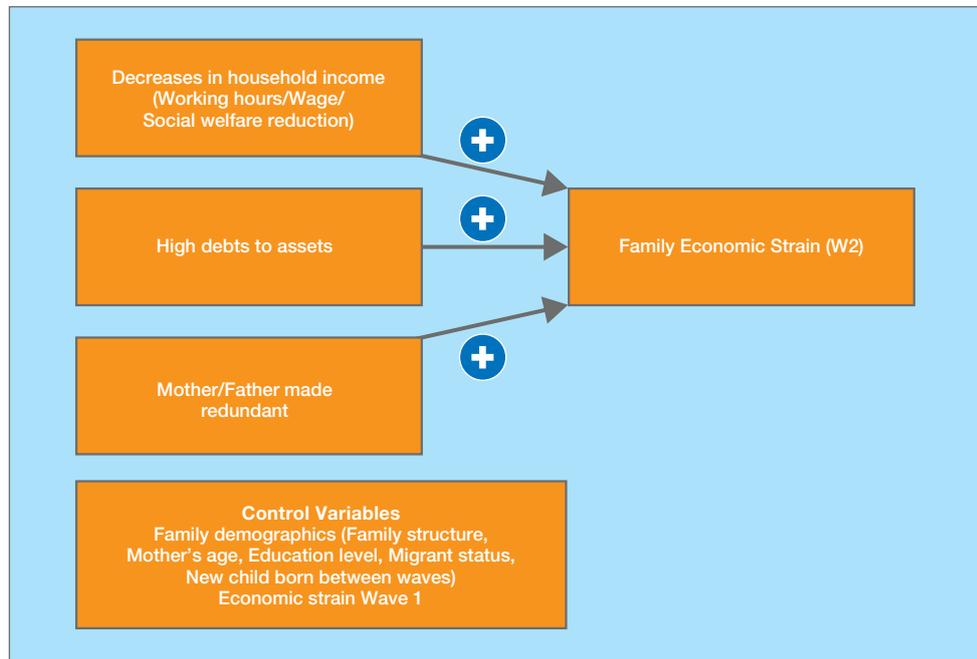
CHANGING ECONOMIC CIRCUMSTANCES AND PERCEIVED ECONOMIC STRAIN

The previous sections of the chapter documented the extent of change in economic circumstances among families in *Growing Up in Ireland* and the perceived effect of the economic recession on families. The proportion of families finding it easy to make ends meet fell from 58% to 39%, whereas the proportion experiencing economic strain (denoted by “difficulty in making ends meet”, based on mother’s report) increased from 44% to 61%. Almost two-fifths of the sample were feeling more economic strain in Wave 2 compared to Wave 1. Various negative financial events, such as job loss, loss of income and being in arrears were also associated with increased perceptions of economic strain or pressure.

It is difficult with descriptive analyses to compare the relative contribution of these negative economic events to the experiences of economic strain, and to separate their effects from the other characteristics of households that may influence the perception of economic strain. In this section, the first pathway was tested within the Family Stress Model, as illustrated below, which proposes that loss of income, negative financial events (such as unemployment) and indebtedness predict family economic pressure or strain.



Figure 7: Pathways in the Family Stress Model from dimensions of economic hardship to family economic strain



In this analysis, change in perceived economic strain between Wave 1 and Wave 2 of the study is modelled. This is accomplished by using ordinary least squares regression to predict perceived difficulty in making ends meet at Wave 2 while adjusting for reported difficulty at Wave 1. The analysis also adjusts for some characteristics of the mother and household in the first wave. These include household type, maternal age and education and migration status.⁵ Where there is no father, a category representing this situation is included so that single-parent households can be included in the analysis. The analysis then models the effect of change in key economic variables, such as reductions in social welfare, working hours and wages, redundancy, having to cut back, and indebtedness (being behind with the rent/mortgage and on utility bills). It is hypothesised that households with less resources and skills will experience higher levels of economic strain, as would those in more vulnerable labour-market situations. Similarly, it is likely that a change in these variables will have a significant impact on perceived economic strain. Given prevailing patterns of working in Ireland and the fact that these households have a young child, it was hypothesised that changes in the work situation of the father would have a more pronounced effect on perceived strain than changes for the mother. The model is illustrated in Table 5.

⁵ Migration status is indicated by three variables. Migrant 11+ refers to those who have been in Ireland for more than 10 years, Migrant 6-10 refers to those in Ireland for between six and 10 years, and Migrant 1-5 refers to those in Ireland for fewer than six years.

Table 5: Model of change in economic strain between Wave 1 and 2 (N = 9149)⁶

	Economic strain (Wave 2)
Mother Economic Strain Wave 1	0.314***
Mother Redundant	0.166***
Father Redundant	0.185***
Working Hours Reduced	0.098***
Wages Reduced	-0.023
Social Welfare Reduced	0.063***
Cannot Afford Luxuries	0.375***
Cut Back Basics	0.396***
Behind with Mortgage	0.326***
Behind with Utilities	0.325***
Single Parent 1 Child	0.147***
Single Parent 2+ Children	0.120***
Couple 2+ Children	0.042
Mother's Age	0.002
Lower 2nd	0.207***
Higher 2nd	0.150***
Post-Secondary	0.101***
Post-Grad	-0.089***
Migrant 11+	0.0365
Migrant 6-10	0.074
Migrant 1-5	0.041
New Child Born Between Waves	0.021
Constant	1.14***
R-squared	0.39

Note: ** p < 0.05, *** p < 0.01. Adjusted R-squared = 0.387 [estimated using OLS regression]

In relation to economic strain at Wave 1 and at Wave 2, the first row in Table 5 illustrates that a standard deviation unit increase in reported maternal economic strain at Wave 1 was associated with a 0.314 standard deviation unit increase in economic strain at Wave 2, adjusting for other factors. This suggests a considerable amount of change in reported economic strain between Wave 1 and Wave 2. Being a single parent (regardless of number of children) and a mother with lower levels of education were both associated with higher perceived economic strain, even adjusting for income and employment status. Incongruent with the hypothesis above, fathers being made redundant and mothers being made redundant appeared to have a similar influence on mothers' perceived economic strain. Having working hours and social welfare reduced were associated with greater economic strain. The negative beta coefficient (-0.023) for wage reductions was insignificant, indicating that, taking all other factors into account, wage reductions per se were not associated with greater economic strain. By far the greatest impact on economic strain came about as a result of having to cut back on basic necessities, not being able to afford luxuries, and being in arrears on the rent/mortgage and utility bills. The influence of these variables likely reflects a cumulative consequence of other events, such as unemployment, or social welfare and wage reductions. It should also be noted that approximately 39% of the variance in economic strain at Wave 2 is explained by this model, suggesting that factors other than those considered in this model must be playing a role in maternal economic strain.

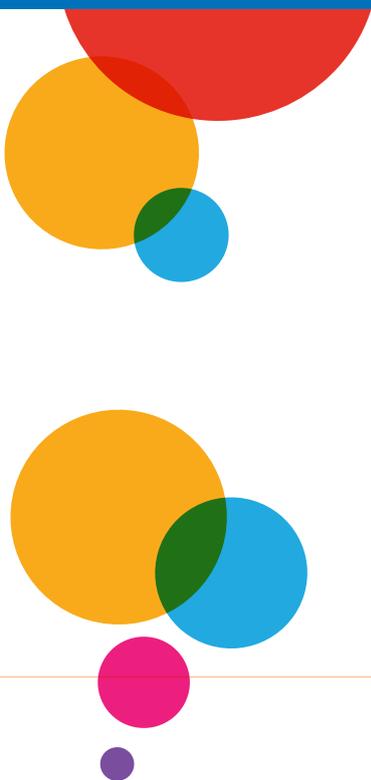
These findings will be discussed in Chapter 5 of the report. In the next chapter, economic strain and its relation to parental depressive symptomatology, marital dissatisfaction and parenting will be considered, following which relations to children's externalising and internalising difficulties will be presented.

⁶ The model shows standardised beta coefficients, which refer to how many standard deviations a dependent/outcome variable will change (here, economic strain at Wave 2), per standard deviation increase in the predictor variable. The coefficients are standardised so that their relative strengths (or effect sizes) can be compared with each other within the model.



Chapter 4

ECONOMIC STRAIN, PARENTAL WELL-BEING,
PARENTING AND CHILDREN'S EXTERNALISING
AND INTERNALISING DIFFICULTIES

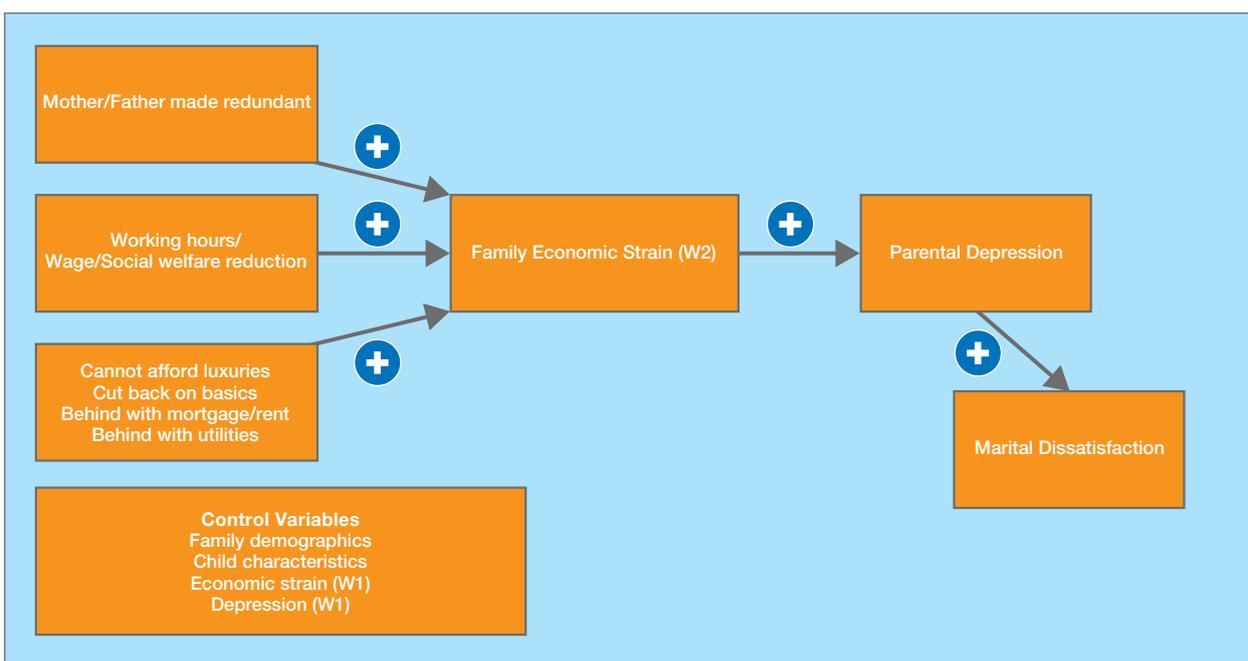


In this chapter, the links between economic strain and parental depressive symptomatology and in turn marital satisfaction are investigated. Following this, indicators of parental well-being (i.e. depressive symptomatology and marital satisfaction) are associated with parenting hostility and warmth and, in turn, with children’s internalising and externalising difficulties.

ECONOMIC STRAIN, PARENTAL DEPRESSIVE SYMPTOMS AND MARITAL SATISFACTION

In the analysis that follows, parents’ scores on a depression screening measure were used as the proxy for parents’ psychological well-being, in line with much previous research based on the Family Stress Model (Conger & Donnellan, 2007). It is acknowledged that these scores represent only one element of mental well-being. Other elements such as self-esteem, anxiety, substance use and anti-social behaviour would be equally valid proxies for parents’ psychological well-being. As illustrated in Figure 8, it is hypothesised that economic events, reflecting the recession, are associated with increased economic strain (as indicated in the previous chapter) and, in turn, increased economic strain will be associated with increased levels of depressive symptomatology, and higher levels of marital dissatisfaction. In line with the Family Stress Model, it is hypothesised that the effect of economic events on parental depressive symptomatology could be mediated by (operate through) the parents’ experience of economic strain. Similarly, it is hypothesised that the effects of economic strain on marital dissatisfaction could be mediated through depressive symptoms (i.e. economic strain will lead to more depressive symptoms, which in turn will affect the quality of the marital relationship). Finally, based on the literature, it is hypothesised that a series of additional child characteristics and family demographic variables would predict both parental depressive symptomatology and marital satisfaction. Family demographic control variables include: family structure, new child being born between waves, number of children in the household, mother’s education, and migrant status. Child control variables include dimensions of child temperament, child gender, and whether or not the child has a behavioural condition or chronic illness. Although these variables do not constitute part of the Family Stress Model, they were included as control variables in the analysis because previous research has indicated that they are associated with resources available to households, with parental depression and with marital satisfaction (Amato, 1995; McLoyd, 1998; Nixon, 2012; Zahn-Waxler, Duggal & Gruber, 2002).

Figure 8: Pathways in the Family Stress Model, from dimensions of economic hardship to family economic strain to parental depression to marital dissatisfaction



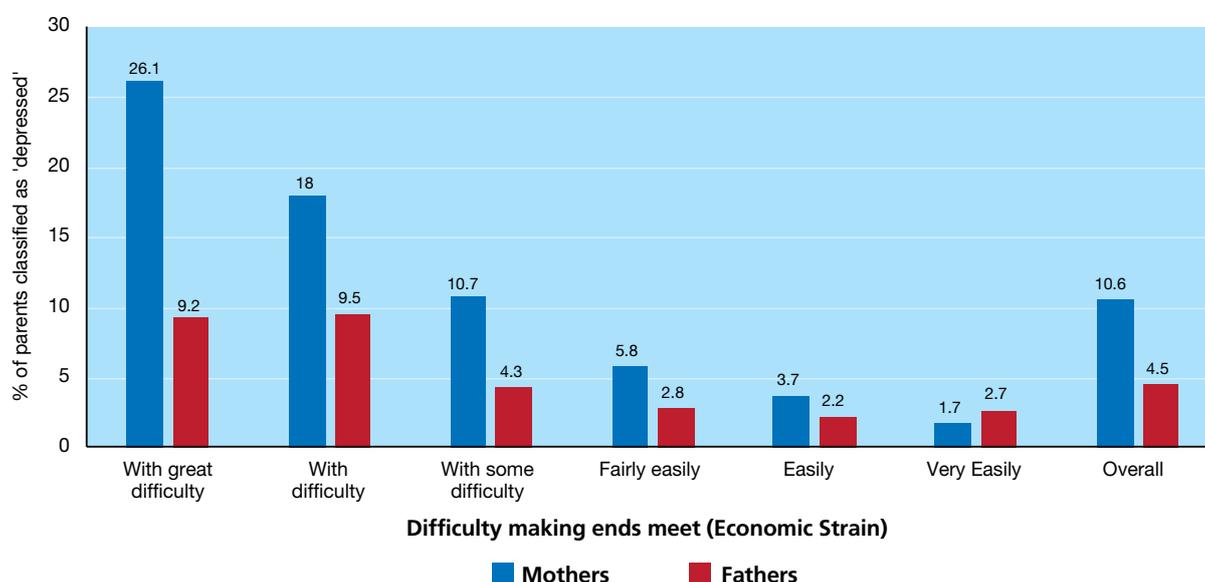


Prior to testing the model, descriptive statistics are provided to indicate the profile of simple associations among economic strain, parental depressive symptomatology and marital dissatisfaction in the families.

PARENTAL DEPRESSIVE SYMPTOMS

Descriptive analyses considered associations between those who reported significant effects of the recession and depression. Those who indicated greater difficulty making ends meet (economic strain, based on mother's report) scored higher on the depression scale, and were more likely to be categorised as 'depressed', as illustrated in Figure 9.

Figure 9: Perceived economic strain (difficulty making ends meet, based on mother's report) and depression status of mothers (N = 9671) and fathers (N = 7301)

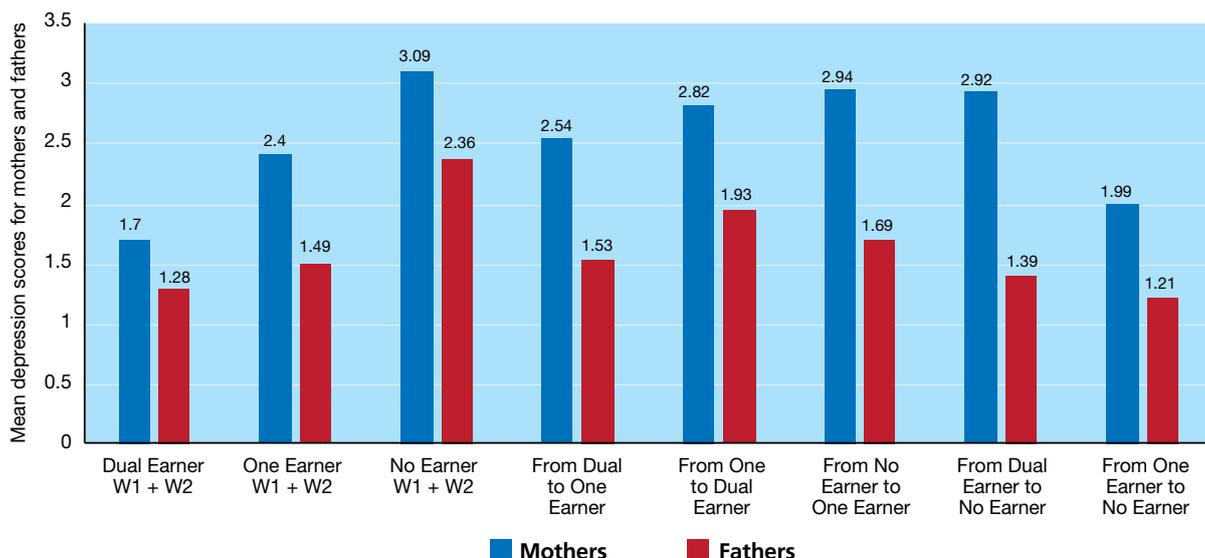


Across families with "difficulty making ends meet" (the first three sets of bars), overall 14.3% of mothers and 5.9% of fathers had scores on the CES-D that categorised them as "depressed". This difference is in spite of the fact that fathers were more likely than mothers to have difficulty in the labour market. This contrast must be considered in light of the fact that it is mothers who report on economic strain, not fathers. Additionally, mothers may be more likely to report on symptoms of depression than fathers.

Specific negative financial events, such as job loss, were also associated with differential levels of depressive symptoms among mothers and fathers, although the differences tended to be greater for mothers, and overall mothers tended to exhibit higher symptom levels than fathers. As illustrated in Figure 10, the highest levels of depressive symptoms were found among mothers in two-parent households where both parents had lost their jobs, followed by households which had changed from being a one-earner to a no-earner household. On the other hand, there was little difference in the mean symptom scores for mothers in the households where one person had either taken up employment (from no earner to one earner) or had lost employment (from dual to one earner). Patterns of change in household earner status may not necessarily reflect a variety of other relevant factors such as influence on income, social welfare entitlements, and desire to be out working. The lowest levels of symptoms were evident among both mothers and fathers in households that had maintained dual-earner status from Wave 1 to Wave 2, and in households that had transitioned from a one-earner to a dual-earner household. Overall, fathers' scores were less variable than mothers'. Fathers in households which had no earner at both time points had the highest scores,

while fathers in dual-earner households at Wave 2 had the lowest scores. Among mothers in single-parent households (N = 1129), there were no significant differences in mean depression scores among those who remained in employment between Waves 1 and 2 (M = 3.2), those who remained unemployed between Waves 1 and 2 (M = 3.88), those who took up employment between waves (M = 3.46) and those who lost employment between waves (M = 4.31).

Figure 10: Mean depression scores for mothers (N = 8010) and fathers (N = 7106) (two-parent households only) and household earner status from Wave 1 to Wave 2



Specific questions about the effects of either mothers or fathers losing their jobs indicated that redundancy of either parent was associated with slightly higher rates of depressive symptomatology. For fathers, there was little difference in proportions classified as ‘depressed’ dependent on mother’s redundancy. In contrast, comparing fathers who were made redundant and those who were not, approximately twice as many fathers who were made redundant were classified as ‘depressed’ compared with fathers who did not lose their jobs. Overall, classification into the ‘depressed’ category was higher among mothers than fathers.

Table 6: Percentage of mothers (N = 9085) and fathers (N = 6857) categorised as ‘depressed’, according to mother and father redundancy

	Mother Redundancy		Father Redundancy	
	Yes	No	Yes	No
Mother’s Depression	13	10.4	12.7	10.3
Father’s Depression	5	4.5	7	3.9

Other specific impacts of the recession such as being behind with mortgage/rent or being behind with payment of utility bills were also associated with psychological adjustment. About 20% to 25% of mothers in households that were behind with mortgage/rent payments or utility bills were experiencing psychological difficulties, compared to around 9% to 10% of those in households not experiencing arrears. While the pattern was somewhat similar for fathers, overall levels were substantially lower, with 9% to 10% of fathers in households in arrears being classified as having psychological difficulties.



Table 7: Percentage of mothers (N = 9084) and fathers (N = 6857) categorised as 'depressed', according to being behind with mortgage/rent and utility bills

	Behind with Mortgage/Rent		Behind with Utility Bills	
	Yes	No	Yes	No
Mother's Depression	23.9	9.5	20.4	9.2
Father's Depression	9.9	4.2	8.8	4.1

The Family Stress Model suggests that economic strain affects child well-being via the mental well-being of parents and the impact that this has on their parenting behaviours. This chapter has already offered descriptive evidence that average scores and the proportion classified as 'depressed' on the CES-D measure of depression are higher among mothers whose families had been affected by the recession, such as through job loss and being in arrears on mortgage/rent and utility bills.

These descriptive results are further tested by estimating a multivariate model of mothers' depressive symptomatology at Wave 2. This is accomplished by modelling economic strain first (as illustrated in the previous chapter), followed by a model of mothers' depressive scores. In line with the Family Stress Model, it is expected that economic factors will not be directly associated with depressive symptoms, but instead will be mediated through their effect on economic strain (perceived difficulty in making ends meet). In modelling depressive symptoms at Wave 2, adjustments are also made for depressive symptoms and economic strain at Wave 1. The model includes variables for household type, mother's age, education, and migration status to adjust for factors that are correlated with economic strain and depression.

Table 8: Model of effects on mothers' depressive symptoms (Wave 2) (N = 9118)

	Economic Strain (Wave 2)	Depressive Symptoms (Wave 2)
Economic Strain Wave 1	0.311***	
Economic Strain Wave 2		0.295***
Mother Depression Wave 1		0.374***
Mother Redundant	0.171***	
Father Redundant	0.186***	
Working Hours Reduced	0.097***	
Wages Reduced	-0.021	
Social Welfare Reduced	0.063***	
Cannot Afford Luxuries	0.376***	
Cut Basic on Basics	0.391***	0.382***
Behind with Mortgage	0.325***	0.589***
Behind with Utilities	0.320***	0.476***
Single Parent 1 Child	0.144***	-0.055
Single Parent 2 + Children	0.083	0.076
Couple 2 + Children	-0.005	-0.190
Mother's Age	-0.001	-0.006
Number of Children	0.037***	-0.003
Lower 2nd	0.184***	0.127
Higher 2nd	0.140***	0.002
Post-Secondary	0.098***	-0.014

Table 8: Continued

	Economic Strain (Wave 2)	Depressive Symptoms (Wave 2)
Post-Grad	-0.085***	-0.073
Migrant 11+	0.033	0.021
Migrant 6-10	0.065	-0.027
Migrant 1-5	0.036	-0.017
New Child Born Between Waves	0.025	0.027
Female Child	0.016	-0.019
Fussiness Wave 1		0.022***
Unpredictable Wave 1		0.033**
Chronic Illness Wave 1		0.315***
Behavioural/Developmental Condition Wave 2		2.029***
Constant	2.011***	-0.360
R squared	0.39	0.22

Note: ** p < 0.05, *** p < 0.01. CFI = 0.998; RMSEA = 0.012⁷

Table 8 shows that economic variables, specifically cutting back on basics, and being behind with the mortgage/rent and utility bills, and perception of economic strain (Wave 2) all had a direct effect on depressive scores. Mothers' scores at Wave 1, and a number of child-related characteristics, including child fussiness and unpredictability, and the child having a chronic illness (all from Wave 1) and a diagnosis of a developmental/behavioural condition⁸ (such as ADHD or autism, Wave 2) were also associated with higher levels of maternal depressive symptoms at Wave 2. The child having a behavioural condition had a substantially stronger effect on maternal depressive symptoms than a child having a chronic illness. Demographic characteristics, including mother's education, age, migrant status, having a new child between waves, and child gender were not directly associated with mothers' depressive scores. Altogether, 22% of the variance was accounted for, with diagnosis of a behavioural/developmental difficulty in the child at Wave 1 representing the strongest predictor of depressive symptoms in mothers at Wave 2.

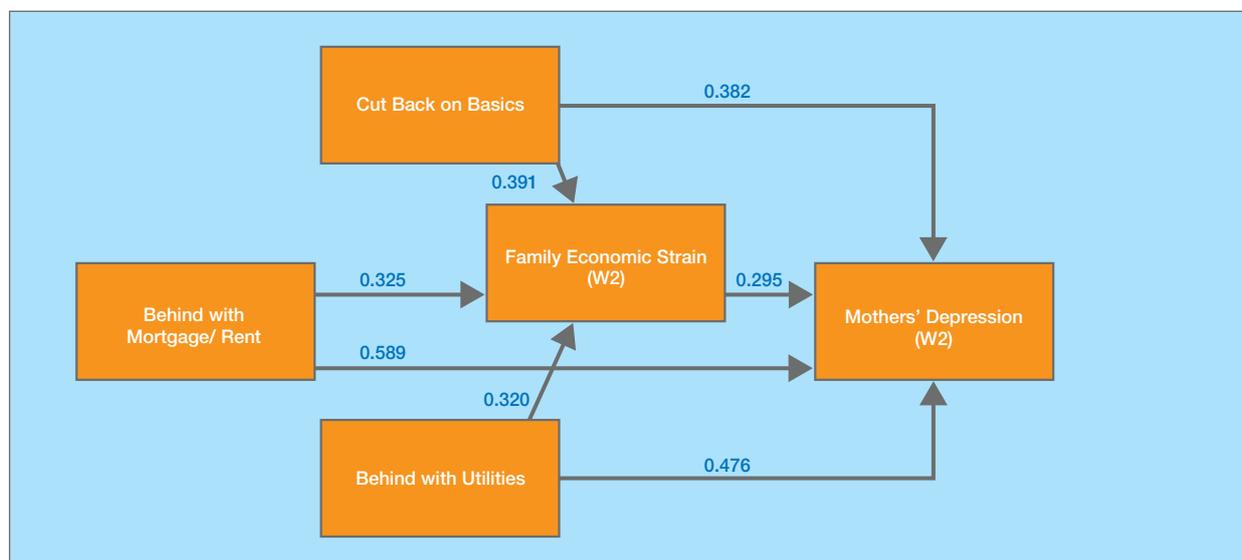
In line with the Family Stress Model, all economic factors, with the exception of having wages reduced, were associated with greater economic strain (Wave 2), and economic strain in turn was associated with depressive symptoms. As illustrated in Figure 11, in contrast to the theoretical model, having to cut back on basics and being behind with mortgage/rent and on utility bills were also directly associated with higher levels of depressive symptoms. Thus, the effect of these variables on depressive symptoms was only partially mediated by experiences of economic strain. Of the total effect of 'cutting back on basics' on symptoms, 23% of the effect was mediated through the economic strain. Similarly, 14% of the effect of 'being behind with the mortgage or rent' on symptoms and 16.5% of being 'behind with utilities' were mediated through economic strain. None of the other economic factors had direct associations with depressive symptoms (coefficients not shown).

⁷ CFI and RMSEA are indicators of model fit – or how well the data fit with the theoretical model. In a well-fitting model, RMSEA values should be less than 0.05 (although values less than 0.08 are acceptable) and CFI should be greater than 0.90.

⁸ This variable is based on mother's report at Wave 2 of children having a behavioural/developmental condition, such as autism or ADHD.



Figure 11: Direct and indirect pathways linking economic factors, economic strain and mother's depression (W2)



Note: Figures along the lines represent standardised coefficients of direct effects to economic strain and to mother's depression. All pathways were significant at $p < 0.001$.

An additional two models were run to predict mother's (two-parent households only) and father's depressive symptoms (two-parent households only). For the two-parent only mothers' model, similar results were obtained as the model just presented (which also includes single mothers), with both direct and indirect effects for cutting back on basics, and being behind with the mortgage/rent and utility bills for depressive symptoms. As was the case with the previous model, economic strain (Wave 2), and mother's depressive symptoms (Wave 1) were significant predictors, as were a number of child characteristics, most notably whether or not the child had a behavioural condition.

Table 9 illustrates the results of the model for father's depressive symptoms. The strongest predictor of fathers' depressive symptoms was having a child with a behavioural condition, followed by father's depressive symptoms at Wave 1. Among the economic variables, redundancy (either mother's or father's), social welfare reductions, not being able to afford luxuries and being behind with utility bills were associated with fathers' symptom levels. Having wages or working hours reduced, having to cut back on basics, or being behind on mortgage payments/rent were not associated with fathers' depressive symptoms. Given that no measure of economic strain was available for fathers, it was not possible to investigate whether or not the associations between these economic variables and depressive symptoms were mediated by the experience of economic strain. Overall, approximately 15% of variance in fathers' scores on the depressive screening measure was explained by this model, leaving a substantial proportion of the variance unexplained. Having a child with a behavioural/developmental condition was by far the most significant contributor to fathers' depressive symptoms.

Table 9: Model of effects on fathers' depressive symptoms (Wave 2) (N = 7359 – fathers in two-parent households only)

	Depressive Symptoms (Wave 2)
Father's Depression Wave 1	0.373***
Mother Redundant	0.183**
Father Redundant	0.157**
Working Hours Reduced	0.005
Wages Reduced	-0.006
Social Welfare Reduced	0.127**
Cannot Afford Luxuries	0.142**
Cut Back Basics	0.030
Behind with Mortgage	0.134
Behind with Utilities	0.289***
Couple 2+ Children	-0.026
Father's Age	-0.009
Number Children	0.037
Lower 2nd	0.089
Higher 2nd	0.278***
Post-Secondary	0.099
Post-Grad	0.148
Migrant 11+	0.048
Migrant 6-10	0.005
Migrant 1-5	-0.174**
New Child Born Between Waves	-0.008
EAS Fussiness	0.015**
EAS Unpredictable	0.009
Child has Chronic Illness	0.274***
Child has Behavioural/Developmental Condition	1.431***
Female Child	0.032
R squared	0.146

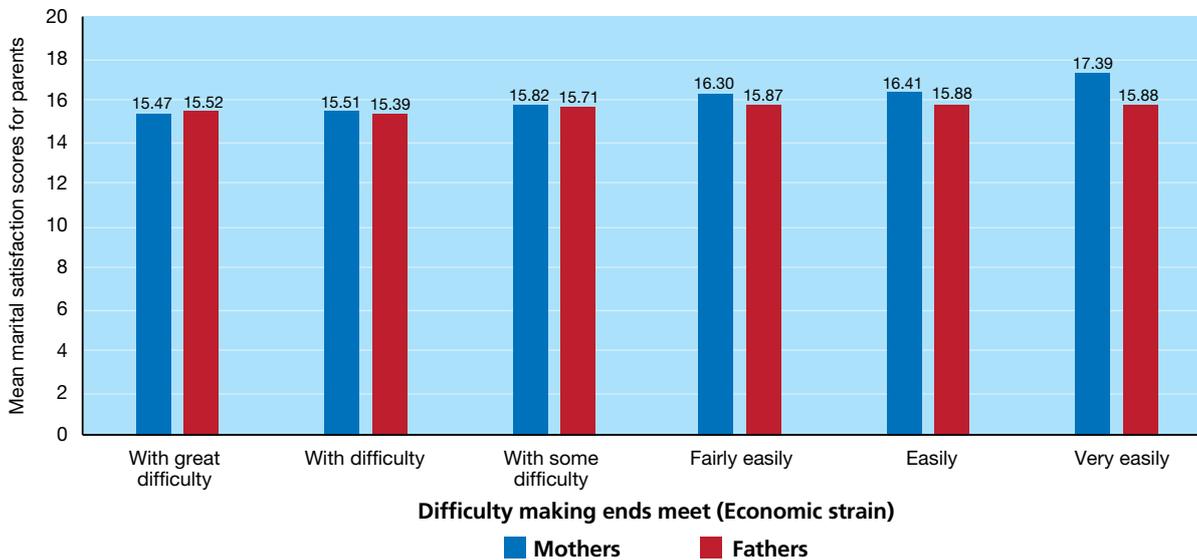
Note: ** p < 0.05, *** p < 0.01. Adjusted R-squared = 0.1456 [estimated using OLS regression].

PARENTAL MARITAL SATISFACTION

The Family Stress Model proposes that economic strain is associated with marital satisfaction through its effect on parents' depressive symptoms (i.e. parental depression mediates the association between strain and marital satisfaction). As indicated previously, those who reported greater difficulty making ends meet (economic strain) scored higher on the depression scale. In the following analysis, how marital satisfaction varies according to both economic strain and level of depressive symptoms is considered. As illustrated in Figure 12, mothers' level of marital satisfaction was inversely related to economic strain (i.e. as difficulty making ends meet was greater, marital satisfaction was lower).



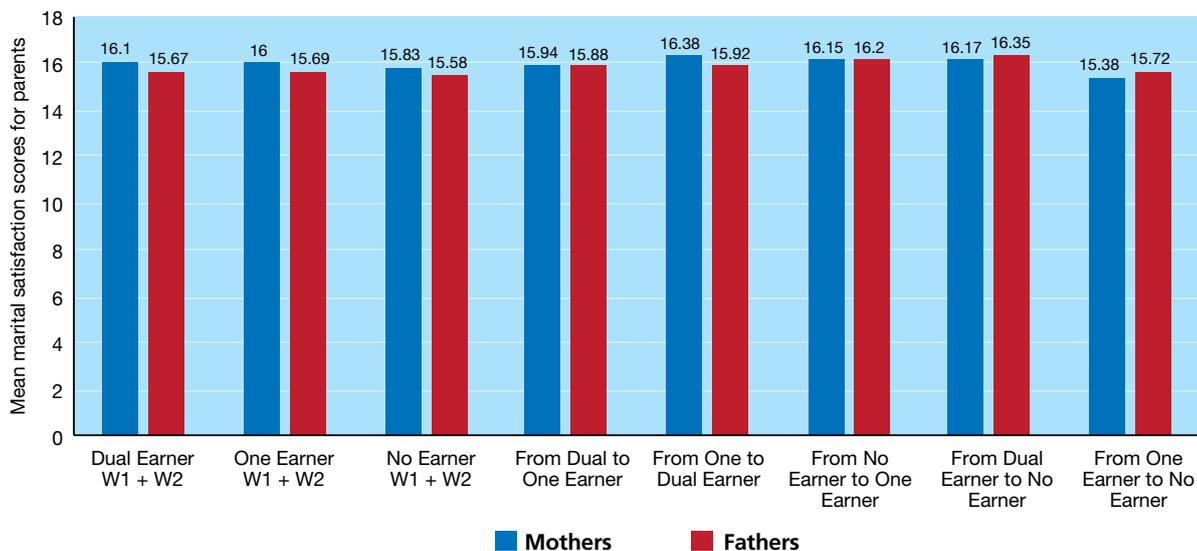
Figure 12: Perceived economic strain (difficulty making ends meet) and marital satisfaction of mothers (N = 8227) and fathers (N = 7232)



The relationship between fathers' marital satisfaction and economic strain was less clear, and fathers' marital satisfaction scores did not vary according to economic strain. However, the economic strain variable is based on mother's report and it is possible that mothers' and fathers' perception of economic strain may be different.

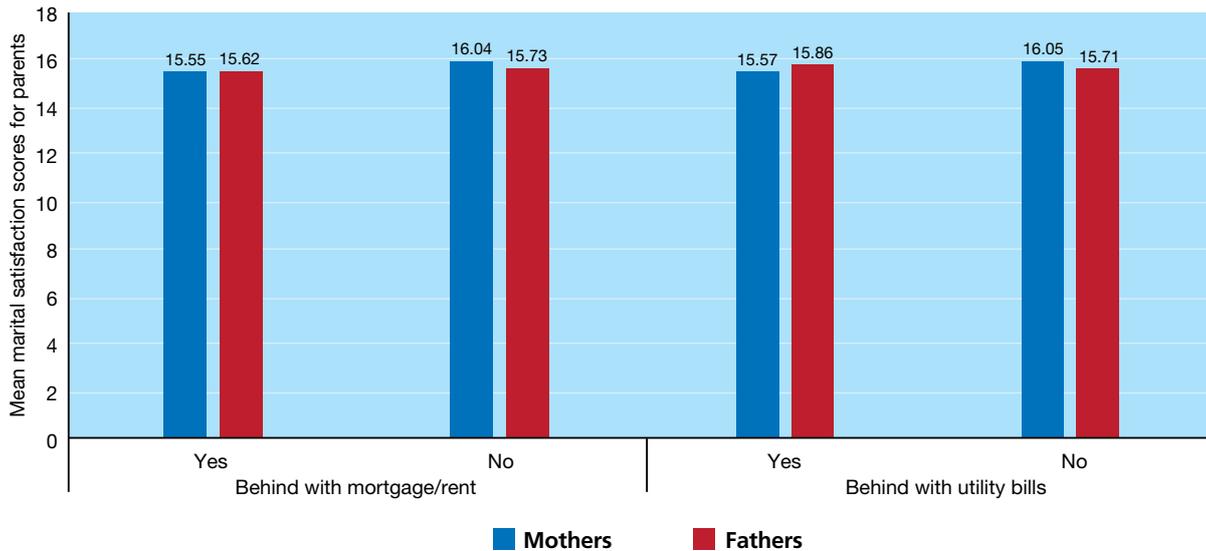
Other negative financial events, such as job loss, being behind with mortgage/rent and utility bills, were also investigated in relation to marital satisfaction. Figure 13 illustrates the mean marital satisfaction scores for mothers and fathers, according to changes in household earner status from Wave 1 to 2. Inspection of the confidence intervals around these means indicate that none of the groups significantly differed from each other in terms of marital satisfaction.

Figure 13: Mean marital satisfaction scores for mothers (N = 7953) and fathers (N = 7046) and household earner status from Wave 1 to Wave 2 (two-parent households only)



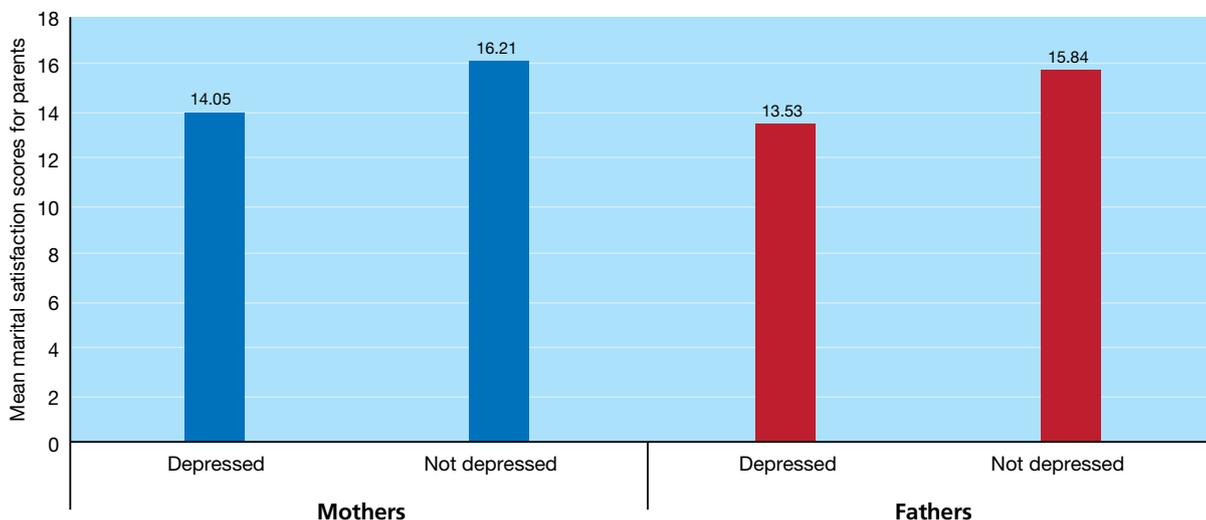
However, as illustrated in Figure 14, levels of marital satisfaction were significantly lower for mothers in households behind with mortgage payments and on utility bills in comparison with mothers from households not in arrears (effect sizes 0.15 and 0.14 respectively⁹). Fathers from households in arrears on mortgage payments (but not utility bills) also had significantly lower marital satisfaction scores than fathers from households not in mortgage arrears, but the effect size was negligible (Cohen's $d = 0.03$).

Figure 14: Mean marital satisfaction scores for mothers (N = 7441) and fathers (N = 6797) and being behind with mortgage/rent and utility bills



This preliminary analysis suggests that being behind with various payments and perception of economic strain were associated with lower marital satisfaction, especially for mothers. However, changes in the job status of individuals in the household did not relate significantly to marital satisfaction. According to the Family Stress Model, parental depression is implicated in the pathway linking economic strain and marital dissatisfaction. Prior to testing this assertion, the relationship between depressive scores and marital satisfaction was considered. As illustrated in Figure 15, both mothers and fathers who were classified as 'depressed' had lower levels of marital satisfaction, with statistically significant differences in scores between the depressed and not depressed groups. The effect sizes of the differences were medium in magnitude (Cohen's $d = 0.66$ for mothers and 0.69 for fathers).

Figure 15: Mean marital satisfaction scores for mothers (N = 8219) and fathers (N = 7229), and classification as 'depressed'

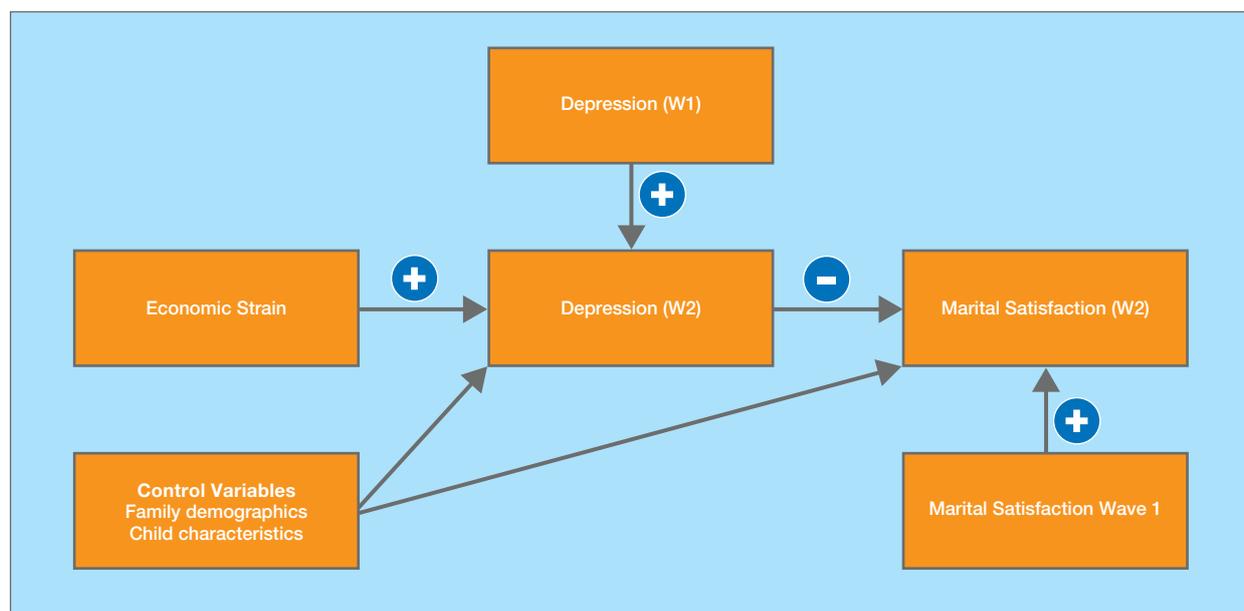


⁹ Effect sizes are measured by Cohen's d , which refers to the standardised difference between two means. Cohen's d values are interpreted as follows: negligible effect ≥ -0.15 and $< .15$; small effect $\geq .15$ and $< .40$; medium effect $\geq .40$ and $< .75$; large effect $\geq .75$ and < 1.10 ; very large effect ≥ 1.10 and < 1.45 , and huge effect > 1.45 .



Following this descriptive analysis, two models of parents' marital satisfaction, for mothers and fathers respectively, were tested (this analysis is confined to two-parent households) (see Figure 16). In line with the Family Stress Model, it was hypothesised that economic factors and economic strain would not be directly associated with marital satisfaction, but instead would be mediated through their effect on parental depression. In modelling marital satisfaction at Wave 2, adjustments were made for marital satisfaction at Wave 1. The models also included variables for number of children, the parent's age, education and migration status to adjust for factors correlated with economic strain and depression.

Figure 16: Pathways in the Family Stress Model from economic strain to parental depression to marital satisfaction



As can be seen from Table 10, mothers' economic strain had a direct negative association with marital satisfaction, such that higher levels of economic strain were associated with lower levels of marital satisfaction. Also, in line with the theory, depressive scores were associated with lower levels of marital satisfaction. Marital satisfaction was also lower among older mothers, among mothers with the lowest level of education and among some groups of migrant mothers (specifically those who had migrated to Ireland in the previous five years, and those who had been in Ireland longer than 10 years). Marital satisfaction was higher among mothers who had had another child born between the waves of the study. Child characteristics were not directly associated with marital satisfaction. Marital satisfaction was also indirectly affected by economic strain through the effect of strain on depression (beta coefficient for indirect effect = -0.071, $p < 0.001$). Of the total effect of economic strain on marital satisfaction, 28% was indirect, via the mediating mechanism of depression. Altogether, 16% of the variance in mothers' marital satisfaction was accounted for in the model.

Table 10: Model of effects on mothers' marital satisfaction (Wave 2) (N = 8009; mothers in two-parent households only)

	Depressive Symptoms (Wave 2)	Marital Satisfaction (Wave 2)
Mother Depression Wave 1	0.387***	
Mother Economic Strain Wave 2	0.378***	-0.186***
Couple 2+ Children	-0.206**	0.064
Mother's Age	-0.009	-0.072***
Number Children	0.035	0.080
Lower 2nd	0.370***	-0.320**
Higher 2nd	0.042	-0.086
Post-Secondary	0.059	-0.055
Post-Grad	0.062	-0.017
Migrant 11+	0.163	-0.332**
Migrant 6-10	0.063	-0.078
Migrant 1-5	0.024	-0.534***
New Child Born Between Waves	0.109	0.176**
EAS Fussiness	0.024***	-0.000
EAS Unpredictable	0.023	-0.011
Child has Chronic Illness	0.363***	-0.131
Child has Behavioural/Developmental Condition	2.172***	0.179
Female Child	0.010	0.031
Mother Depression Wave 2		-0.188***
Mother Marital Satisfaction Wave 1		0.209***
R squared	0.204	0.162

Note: ** p < 0.05, *** p < 0.01. CFI = 0.989; RMSEA = 0.046.

The model for fathers' marital satisfaction is illustrated in Table 11. Given that fathers were not asked their perception of the difficulty they had in making ends meet (proxy for economic strain), direct and indirect effects of economic events were modelled instead of economic strain. These variables included: being made redundant; having working hours, wages or social welfare reduced; having to cut back on basics or luxuries, and being behind with the mortgage or utility bills.



Table 11: Model of effects on fathers' marital satisfaction (Wave 2) (N = 7357; fathers in two-parent households only)

	Depressive Symptoms (Wave 2)	Marital Satisfaction (Wave 2)
Father Depression Wave 1	0.390***	
Mother Redundant	0.182**	0.172
Father Redundant	0.170**	-0.144
Working Hours Reduced	-0.012	-0.255**
Wages Reduced	-0.010	0.136
Social Welfare Reduced	0.120**	0.101
Cannot Afford Luxuries	0.155**	0.028
Cut Back Basics	0.038	0.014
Behind with Mortgage	0.233	-0.030
Behind with Utilities	0.284**	0.003
Couple 2+ Children	-0.101	-0.075
Father's Age	-0.008	-0.034***
Number Children	0.074	0.104**
Lower 2nd	-0.052	
Higher 2nd	0.175	
Post-Secondary	0.100	
Post-Grad	0.036	
Migrant 11+	0.092	
Migrant 6-10	0.033	
Migrant 1-5	-0.088	
New Child Born Between Waves	0.011	0.174**
EAS Fussiness	0.009	-0.001
EAS Unpredictable	0.015	-0.011
Child has Chronic Illness	0.254***	0.035
Child Beh/Dev Condition	1.601***	1.411**
Female Child	0.059	-0.085
Father Depression Wave 2		-0.231***
Father Marital Satisfaction Wave 1		0.212***
R squared	0.158	0.132

Note: ** p < 0.05, *** p < 0.01. CFI = 0.987; RMSEA = 0.022.

The model indicates that none of the economic variables was directly related to fathers' marital satisfaction, with one exception: having their working hours reduced was associated with lower levels of marital satisfaction. Marital satisfaction was higher among fathers with more children, and fathers who had had another child born between waves of the study. Older age and higher depression scores at Wave 2 were associated with lower marital satisfaction. By far the greatest predictor of fathers' marital satisfaction was having a child with a behavioural/developmental condition. However, somewhat surprisingly, this effect

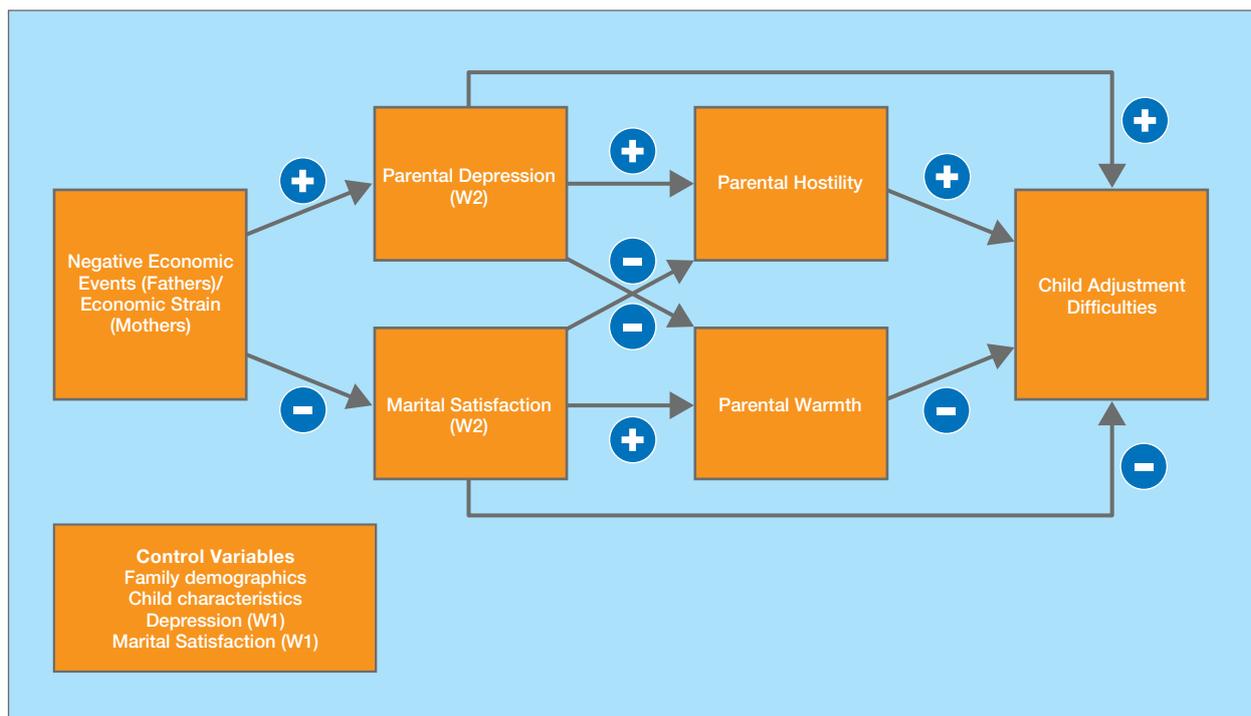
was positive – higher levels of child behavioural problems were associated with higher levels of marital satisfaction. Altogether, 13% of the variance in fathers’ marital satisfaction was accounted for.

PARENTAL DEPRESSIVE SYMPTOMS, MARITAL SATISFACTION AND PARENTING WARMTH AND HOSTILITY

Having examined the extent to which economic strain and negative financial events were associated with the depressive symptoms and marital satisfaction of parents, attention now turns to parenting (warmth and hostility). As illustrated previously, economic strain and certain negative financial events were associated with higher depression scores, for both mothers and fathers. Economic strain also had a negative association with marital satisfaction. One of the key tenets of the Family Stress Model is that parental and inter-parental difficulties may result in parents’ resources being diverted away from the children, as parents attempt to deal with their own problems. This diversion of resources is proposed to lead to less warmth and responsiveness, and greater hostility, harshness and inconsistency in interaction with children. In other words, what is going on for parents ‘spills over’ into the parent-child relationship.

In the analysis that follows, the links between economic strain (mothers’ models)/negative economic events (fathers’ models), parental depressive symptoms, marital satisfaction, and parental hostility and warmth are investigated. As illustrated in Figure 17, it is hypothesised that economic events and economic strain will be associated with higher levels of depressive symptomatology and lower levels of marital satisfaction. In line with the Family Stress Model, it is hypothesised that parents with higher depression scores will display more hostility and less warmth in their parenting, both of which in turn will be associated with higher levels of child behavioural difficulties. Parents with higher levels of marital satisfaction will be less hostile and warmer in their parenting, and this will be associated with fewer child difficulties. Control variables included in the model are also illustrated.¹⁰ In line with the Family Stress Model, it is hypothesised that the effect of more distal variables such as economic strain, depression and marital satisfaction on child outcomes will be mediated through parenting processes.

Figure 17: Pathways in the Family Stress Model from parental depression and marital satisfaction to parental warmth and hostility to child adjustment difficulties

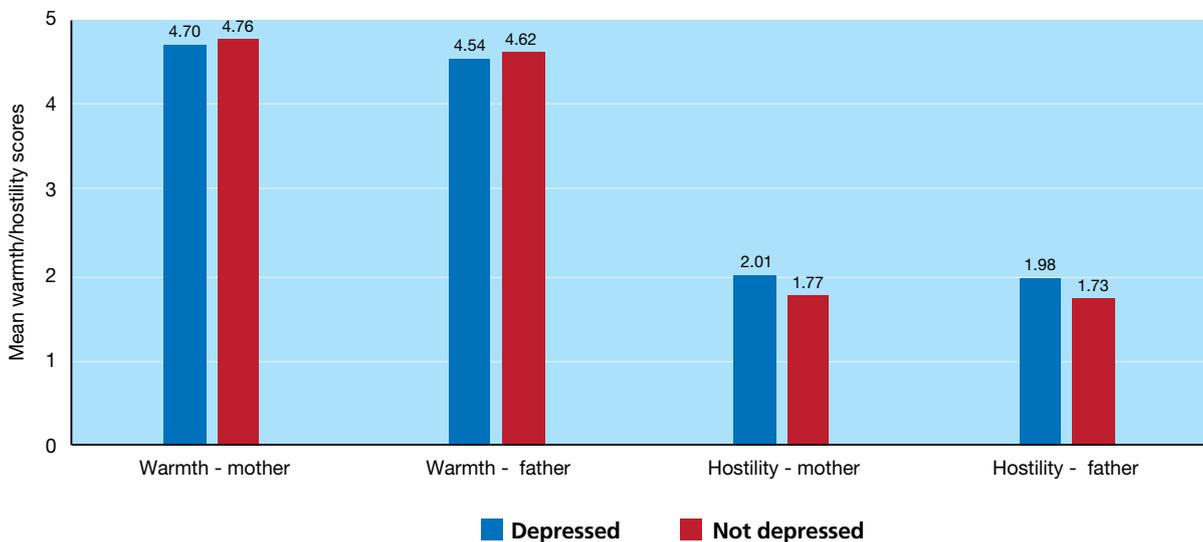


¹⁰ Family demographic control variables include: family structure, new child being born between waves, number of children in the household, mother’s education and migrant status. Child control variables include dimensions of child temperament, child gender, and whether or not the child has a chronic illness or behavioural condition.



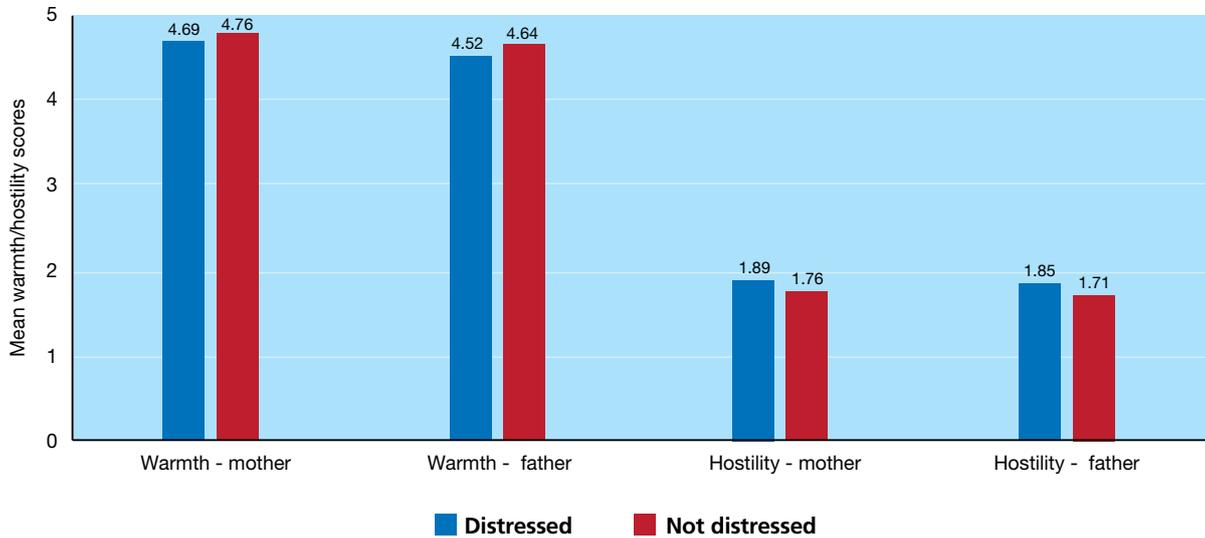
In the following analyses, relationships between parental depressive symptoms, marital satisfaction and two dimensions of parenting – warmth and hostility – are presented. It is hypothesised that higher levels of depressive symptoms and lower levels of marital satisfaction will be associated with higher hostility and lower warmth. It should be noted that mothers and fathers report on both their depression and marital satisfaction and their parenting warmth and hostility, so the possibility of single-source bias exists, which may amplify the associations among these variables. Figure 18 illustrates that mothers and fathers who reported higher levels of depressive symptoms (here classified as 'depressed') displayed higher levels of hostility and lower levels of warmth towards their children (all significantly different at $p < 0.001$). The effect sizes for the differences in warmth were small (0.17 for mother's warmth and 0.18 for father's warmth). The effect sizes for the differences in hostility were medium (0.49 for mother's hostility; 0.54 for father's hostility).

Figure 18: Mean warmth and hostility scores for mothers (N = 9629 - 9673) and fathers (N = 7276 - 7301), according to 'depression' classification



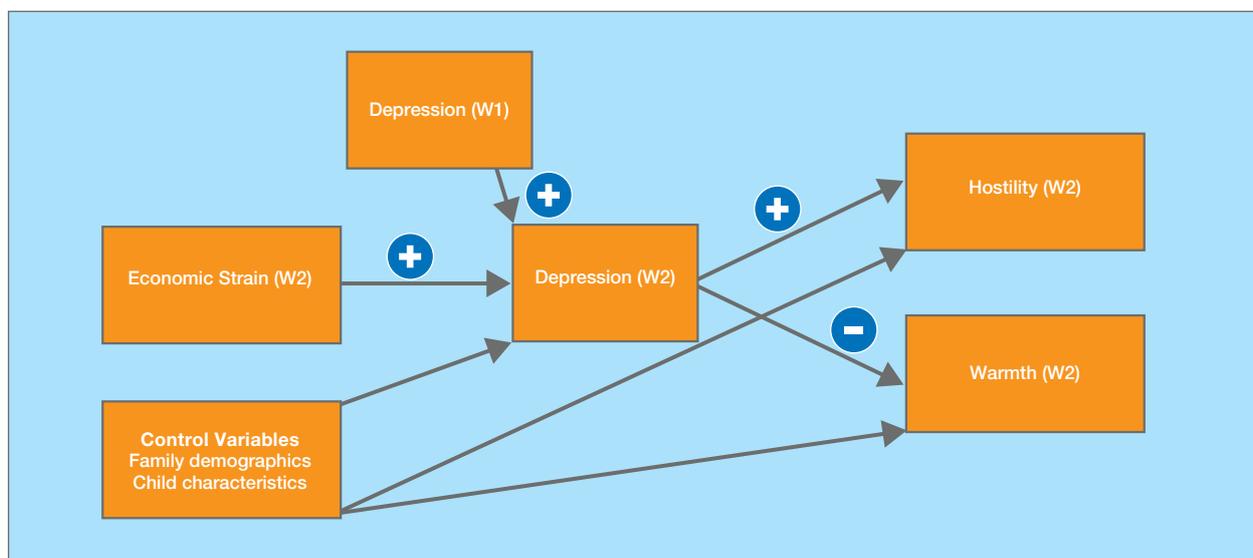
In relation to marital satisfaction, a similar pattern emerged. Here, marital satisfaction scores (DAS scale, completed separately by mothers and fathers) at one standard deviation below the mean (i.e. a score of 13 or below) were described as 'distressed' relationships. As illustrated in Figure 19, parents who displayed lower levels of marital satisfaction tended to be less warm and more hostile in interacting with their children (all comparisons were significantly different at $p < 0.001$). The effect sizes for the differences in warmth were small (0.22 for mother's warmth and 0.27 for father's warmth). The effect sizes for the differences in hostility were also small (0.27 for mother's hostility; 0.28 for father's hostility).

Figure 19: Mean warmth and hostility scores for mothers (N = 8227) and fathers (N = 7234), according to 'distressed' relationship classification



These simple associations tentatively support the Family Stress Model, which proposes that a parent's psychological difficulties and interpersonal relationships affect the nature of their parenting. In the following analyses, models of parents' hostility and warmth, for mothers and fathers respectively, were tested (fathers' analysis is confined to two-parent households). In the mothers model (see Figure 20), it was expected that economic strain would not be directly associated with parental hostility or warmth, but instead that the effect of economic strain would be mediated through its effect on parental depressive symptomatology. The models also include variables for household structure, number of children, the parent's age, education and migration status to adjust for factors correlated with economic strain and depression. Child characteristics, namely child gender, temperament and presence of chronic illness and behavioural condition, are also included as control variables.

Figure 20: Pathways in the Family Stress Model from economic strain to mother's depression to mother's hostility (Table 12) and warmth (Table 13)





Given that data were not collected on relationship satisfaction for mothers from single-parent households, marital satisfaction variables were excluded for the two models on mothers' hostility and warmth, presented in Tables 12 and 13 respectively.

Table 12: Model of effects on mother's hostility (Wave 2) (N = 9747)

	Depressive Symptoms (Wave 2)	Hostility (Wave 2)
Mother Depression Wave 1	0.376***	
Economic Strain Wave 2	0.411***	-0.003
Single Parent 1 Child	0.492***	0.035
Single Parent 2+ Children	0.684***	-0.027
Couple 2+ Children	-0.160	0.076***
Mother's Age	-0.005	-0.004***
Number Children	0.010	-0.020***
Lower 2nd	0.060	-0.042
Higher 2nd	-0.067	-0.041**
Post-Secondary	-0.050	-0.027
Post-Grad	-0.063	-0.003
Migrant 11+	0.059	0.020
Migrant 6-10	0.050	0.048**
Migrant 1-5	-0.008	0.046***
New Child Born Between Waves	0.160**	0.016
EAS Fussiness	0.022***	
EAS Unpredictable	0.032***	
Child has Chronic Illness	0.342***	
Child Beh/Dev Condition	2.459***	
Female Child	-0.021	-0.042***
Mother Depression Wave 2		0.030***
R squared	0.222	0.055

Note: ** p < 0.05, *** p < 0.01. CFI = 0.889; RMSEA = 0.087.

There was no direct association between economic strain and mother's hostility. Hostility was not associated with being in a single-parent family, but levels of hostility were higher in larger two-parent families and in groups of migrant families who had been in Ireland for ten years or less. Older mothers, mothers with more children, mothers of girls and mothers with lower levels of education had lower levels of hostility. Mothers' depressive symptoms at Wave 2 were predictive of their hostility at Wave 2. The indirect effect from economic strain to mother's hostility via maternal depression was significant (0.012, p < 0.01) and, of the total effect of strain on hostility, 80% was indirect via the mediating mechanism of depression. Only 6% of the variance in mother's hostility was explained by the model.

Table 13: Model of effects on mother's warmth (Wave 2) (N = 9743)

	Depressive Symptoms (Wave 2)	Warmth (Wave 2)
Mother Depression Wave 1	0.381***	
Economic Strain Wave 2	0.424***	0.008**
Single Parent 1 Child	-0.035	-0.031
Single Parent 2+ Children	0.226	-0.057***
Couple 2+ Children	-0.226**	-0.068***
Mother's Age	-0.012	0.001
Number Children	0.037	-0.008
Lower 2nd	0.125	0.057***
Higher 2nd	-0.033	0.033**
Post-Secondary	-0.038	0.029**
Post-Grad	-0.071	0.001
Migrant 11+	0.063	-0.022
Migrant 6-10	0.046	-0.012
Migrant 1-5	-0.029	-0.021
New Child Born Between Waves	0.027	-0.078***
EAS Fussiness	0.023***	
EAS Unpredictable	0.030**	
Child has Chronic Illness	0.343***	
Child has Behavioural Condition	2.458***	
Female Child	-0.013	0.005
Mother Depression Wave 2		-0.008***
R squared	0.218	0.021

Note: ** p < 0.05, *** p < 0.01. CFI = 0.944; RMSEA = 0.056.

In the mother's warmth model (Table 13), higher levels of strain were, surprisingly, associated with higher levels of warmth. This may be because of mothers spending more time at home with their children. Being in a single-parent or two-parent family with two or more children, or having had another child born between waves were all associated with lower levels of warmth. Lower levels of maternal education were associated with higher levels of warmth. Maternal depression scores at Wave 2 were associated with lower levels of warmth. The indirect effect of strain on warmth (via the mechanism of depression) was significant (-0.003, $p < 0.001$), but the total effect (direct and mediated effect) of strain on warmth was non-significant. Only 2% of the variance in warmth was explained by the model.

The corresponding models for fathers are presented in Tables 14 and 15. None of the economic variables directly predicted fathers' hostility. Having a female child, fewer children, being younger, and having a lower secondary education were all associated with lower levels of hostility for fathers. Fathers who were recent migrants (within the past five years) had higher levels of hostility. In addition, fathers' depression scores at Wave 2 were associated with higher levels of hostility at Wave 2. Altogether, 5% of the variance in fathers' hostility was explained by the model.



Table 14: Model of effects on father's hostility (Wave 2) (N = 6863)

	Depressive Symptoms (Wave 2)	Hostility (Wave 2)
Father Depression Wave 1	.375***	
Mother Redundant	.185**	0.003
Father Redundant	.173**	0.006
Working Hours Reduced	0	0.009
Wages Reduced	-0.015	-0.008
Social Welfare Reduced	.125**	0.009
Cannot Afford Luxuries	.146**	0.002
Cut Back Basics	0.045	-0.007
Behind with Mortgage	0.112	-0.005
Behind with Utilities	.331***	-0.015
Couple 2+ Children	-0.085	0.129***
Father's Age	-0.009	-0.006***
Number Children	0.06	-0.031***
Lower 2nd	-0.028	-0.100***
Higher 2nd	0.091	-0.031
Post-Secondary	0.011	-0.028
Post-Grad	-0.04	-0.004
Migrant 11+	0.086	-0.03
Migrant 6-10	0.021	0.01
Migrant 1-5	-0.161	0.044**
New Child Born Between Waves	-0.004	0.047***
EAS Fussiness	.016**	
EAS Unpredictable	0.009	
Child has Chronic Illness	.273***	
Child has Behavioural Condition	1.390***	
Female Child	0.054	-0.049***
Father Depression Wave 2		0.033***
R squared	0.145	0.049

Note: ** p < 0.05, *** p < 0.01. CFI = 0.935; RMSEA = 0.053.

In relation to fathers' warmth, only one economic variable was directly associated with warmth; not being able to afford luxuries was associated with higher levels of warmth. Being in a family with two or more children was associated with lower levels of warmth. Fathers of girls had higher levels of warmth. Relative to fathers with a degree, fathers from all other education groups (both above and below degree level) had higher levels of warmth. Fathers' depression scores at Wave 2 were associated with lower levels of warmth. Altogether, the model predicted only 2% of variance in fathers' warmth.

Table 15: Model of effects on father’s warmth (Wave 2) (N = 6886)

	Depressive Symptoms (Wave 2)	Warmth (Wave 2)
Father Depression Wave 1	0.376***	
Mother Redundant	0.188**	0.015
Father Redundant	0.170**	-0.010
Working Hours Reduced	0.005	-0.00
Wages Reduced	-0.018	0.004
Social Welfare Reduced	0.128**	0.020
Cannot Afford Luxuries	0.147**	0.027**
Cut Back Basics	0.041	0.005
Behind with Mortgage	0.145	0.011
Behind with Utilities	0.320***	0.034
Couple 2+ Children	-0.082	-0.087***
Father’s Age	-0.009	-0.000
Number Children	0.058	-0.011
Lower 2nd	-0.043	0.081***
Higher 2nd	0.084	0.054***
Post-Secondary	0.005	0.045***
Post-Grad	-0.048	0.043**
Migrant 11+	0.080	0.001
Migrant 6-10	0.021	0.013
Migrant 1-5	-0.155	0.003
New Child Born Between Waves	-0.004	-0.016
EAS Fussiness	0.016***	
EAS Unpredictable	0.009	
Child has Chronic Illness	0.274***	
Child has Behavioural Condition	1.448***	
Female Child	0.053	0.032***
Father Depression Wave 2		-0.015***
R squared	0.146	0.022

Note: ** p < 0.05, *** p < 0.01. CFI = 0.972; RMSEA = 0.031.

An additional four models investigating predictors of mothers’ and fathers’ hostility and warmth were tested, using marital satisfaction rather than depression as a mediating mechanism. These models are illustrated in the Appendix at the end of the report (Tables 19-20). Briefly, these models indicate that mothers’ depressive scores and lower levels of marital satisfaction were associated with higher levels of hostility, while economic strain was not directly associated with hostility. Mothers’ depressive scores were associated with lower maternal warmth, while higher economic strain and marital satisfaction were both associated with greater warmth. For fathers, depressive scores and lower levels of marital satisfaction were associated with higher levels of hostility. Fathers’ depressive scores were associated with lower levels of warmth while their marital satisfaction was associated with higher levels of warmth.



CHILDREN'S INTERNALISING AND EXTERNALISING DIFFICULTIES

One of the key tenets of the Family Stress Model is that, when parents exhibit higher levels of hostility and lower levels of warmth, children in turn display higher levels of behavioural and adjustment difficulties. These assertions were initially tested by comparing warmth and hostility scores for mothers and fathers of children classified as 'problematic' and 'non-problematic', based on their SDQ scores.¹¹ The results indicate that mothers and fathers of children classified as 'problematic' for both internalising and externalising difficulties had higher hostility and lower warmth scores in comparison with mothers and fathers of 'non-problematic' children (differences were significant at $p < 0.001$ in all cases). Effect sizes were large for mother's hostility, medium for father's hostility and small for mother's and father's warmth.

Table 16: Mean (SD) mother (N = 9783) and father (N = 7395) warmth and hostility scores for children classified as 'problematic' and 'non-problematic' on the SDQ externalising and internalising subscales

Parenting Dimension	Externalising			Internalising		
	Non-problematic	Problematic	Effect size (Cohen's d)	Non-problematic	Problematic	Effect size (Cohen's d)
Mother Warmth	4.68 (0.407)	4.76 (0.356)	0.22 (small)	4.76 (0.356)	4.67 (0.422)	0.25 (small)
Mother Hostility	1.74 (0.452)	2.19 (0.552)	0.96 (large)	1.77 (0.472)	2.00 (0.573)	0.47 (medium)
Father Warmth	4.62 (0.440)	4.54 (0.495)	0.18 (small)	4.62 (0.442)	4.54 (0.488)	0.16 (small)
Father Hostility	1.72 (0.455)	1.97 (0.545)	0.55 (medium)	1.73 (0.463)	1.84 (0.541)	0.23 (small)

The Family Stress Model suggests that economic strain affects child well-being via the mental well-being of parents and the impact this has on their parenting behaviours. Table 16 outlined the link between dimensions of parenting and children's adjustment, with stronger links evident between parental hostility and child adjustment problems than between parental warmth and child adjustment. In the analysis that follows, these associations were further tested by estimating multivariate models of children's externalising and internalising difficulties at Wave 2. It was hypothesised that higher levels of hostility and lower levels of warmth would be associated with higher levels of internalising and externalising difficulties. Broadly, this hypothesis was supported by the data. It should be noted that, unlike all other models presented in the report, the models of externalising and internalising behaviours, illustrated in Tables 17 and 18, had poor model fit, suggesting that the data overall do not fit the theoretical model well. Despite this, the pathways observed were in line with what is proposed in the Family Stress Model.

¹¹ Mothers completed the Strengths and Difficulties Questionnaire on their children's behavioural and emotional adjustment (at Wave 2). Children who scored above 6 were classified as 'problematic' on an internalising subscale (combined peer relations and emotional subscales) and children who scored above 10 were classified as 'problematic' on an externalising subscale (conduct and hyperactivity subscales).

Table 17: Model of effects on children’s externalising and internalising behaviour (N = 9695)

	Mother Warmth Wave 2	Mother Hostility Wave 2	Child Externalising Difficulties Wave 2	Child Internalising Difficulties Wave 2
Mother Warmth Wave 2			-0.420***	-0.371***
Mother Hostility Wave 2			2.675***	0.758***
Mother Depression Wave 2	-0.008***	0.030***	0.082***	0.065***
Single Parent 1 Child	-0.028	0.047	0.457***	0.098
Single Parent 2+ Children	-0.054***	0.049**	0.335**	0.056
Couple 2+ Children	-0.068***	0.079***	-0.148	-0.426***
Mother's Age	0.001	-0.004***	-0.051***	-0.014***
Number Children	-0.007	-0.027***	0.004	0.015
Lower 2nd	0.061***	-0.049**	1.398***	0.669***
Higher 2nd	0.036***	-0.045**	0.825***	0.433***
Post-Secondary	0.032**	-0.029	0.600***	0.270***
Post-Grad	0.001	-0.002	0.142	0.026
Migrant 11+	-0.021	0.019	0.149	-0.034
Migrant 6-10	-0.010	0.045**	0.010	0.413***
Migrant 1-5	-0.020	0.048***	0.368***	0.482***
New Child Born Between Waves	-0.079***	0.053***	-0.049	0.050
Female Child	0.005	-0.043***	-0.421***	-0.080
EAS Fussiness			0.071***	0.037***
EAS Unpredictable			0.054***	0.026***
Child has Chronic Illness			0.292***	0.468***
Child has Behavioural Condition			4.702***	3.936***
R squared	0.02	0.06	0.28	0.13

Note: ** p < 0.05, *** p < 0.01. [CFI = 0.794; RMSEA = 0.116 for externalising model; CFI = 0.652, RMSEA = 0.116 for internalising model].

The model illustrates that, for mothers, higher levels of hostility, lower levels of warmth and higher levels of depressive symptoms were all positively associated with children’s externalising difficulties at Wave 2. Being a more recent migrant (less than five years in Ireland), lower levels of maternal education, younger age of mothers, and coming from a single-parent family were also associated with higher levels of behaviour difficulties. Boys, and children rated as fussy and unpredictable, or as having a chronic illness or a behavioural/developmental condition had higher levels of externalising difficulties. The effect of maternal depression on child adjustment was partially mediated through its effect on hostility and warmth; depression was associated with higher levels of hostility, lower levels of warmth and greater child adjustment difficulties. Of the total effect of mothers’ depression on child externalising difficulties, 50.4% was indirect, via the mediating mechanisms of increased hostility (48.5% indirect effect) and lower warmth (1.9% indirect effect). Altogether, 28% of the variance in children’s externalising difficulties was explained in the model, with the strongest predictors being the child having a developmental condition, followed by mother’s hostility and low levels of maternal education.



In terms of children's internalising difficulties, similar patterns in relation to parenting and depression emerged as was the case for externalising difficulties; higher levels of hostility, lower levels of warmth and higher levels of maternal depressive symptoms were associated with higher levels of internalising difficulties at Wave 2. Lower levels of maternal education, younger age of mothers, and being a migrant to Ireland (within the past ten years) were associated with higher levels of child internalising difficulties. Children from single-parent families were no more likely than children from two-parent families with one or two children to have internalising difficulties. However, children from two-parent families with more than two children were less likely to experience internalising difficulties. As was the case for externalising difficulties, children rated as fussy and unpredictable, or as having a chronic illness or a behavioural condition had higher levels of internalising difficulties. Of the total effect of mother's depression on child internalising difficulties, 28.3% was indirect, via the mediating mechanism of increased hostility (25.2% indirect effect) and lower warmth (3.1% indirect effect). Altogether, 13% of the variance in children's internalising difficulties was explained in the model. The strongest predictors were the child having a behavioural condition, followed by mother's hostility and low levels of maternal education.

The models for two-parent families, which include data from fathers and data on marital satisfaction, are shown in Table 18.

Table 18: Models of effects on children’s externalising difficulties (N = 7253) and internalising difficulties (N = 7254) [two-parent households only]

	Mother Warmth Wave 2	Mother Hostility Wave 2	Father Warmth Wave 2	Father Hostility Wave 2	Child Externalising Difficulties Wave 2	Child Internalising Difficulties Wave 2
Mother Warmth W2					-0.380***	-0.365***
Mother Hostility W2					2.433***	.741***
Father Warmth W2					0.054	-.033
Father Hostility W2					0.766***	-.002
Mother Marital Satisfaction W2	0.012***	-0.017***			-0.011	-.030***
Father Marital Satisfaction W2			0.021***	-0.021***	.009	.000
Mother Depression W2	-0.005***	0.026***			0.064***	0.062***
Father Depression Wave 2			-0.008***	0.028***	-0.011	.009
Couple 2+ Children	-0.060***	0.082***	-0.081***	0.114***	-0.157	.452***
Mother's Age	0.002	-0.005***			-0.055***	-.012**
Number Children	-0.010	-0.029***	-0.009	-0.028***	0.006	0.021
Lower 2nd	0.080***	-0.064**	0.076***	-0.092***	1.306***	.638***
Higher 2nd	0.037**	-0.030	0.051***	-0.033	0.785***	.400***
Post-Secondary	0.043***	-0.036**	0.051***	-0.033**	0.623***	.234***
Post-Grad	0.000	-0.010	0.034**	-0.002	0.151	.044
Migrant 11+	-0.024	0.007	-0.000	-0.023	0.072	-.184
Migrant 6-10	0.006	0.048**	0.018	0.007	0.108	.387***
Migrant 1-5	-0.008	0.024	0.011	0.026	0.375***	.492***
New Child Born between Waves	-0.076***	0.059***	-0.027**	0.049***	-0.033	.103***
Female Child	0.001	-0.035***	0.034***	-0.049***	-0.409	-.082
EAS Fussiness					0.068***	.037***
EAS Unpredictable					0.069***	.030***
Child has Chronic Illness					0.241***	.460***
Child has Behavioural Condition					4.878***	4.263***
R squared	0.03	0.06	0.04	0.07	0.26	0.13

Note: ** p < 0.05, *** p < 0.01. [CFI = 0.617; RMSEA = 0.110 for externalising model; CFI = 0.491, RMSEA = .0110 for internalising model].



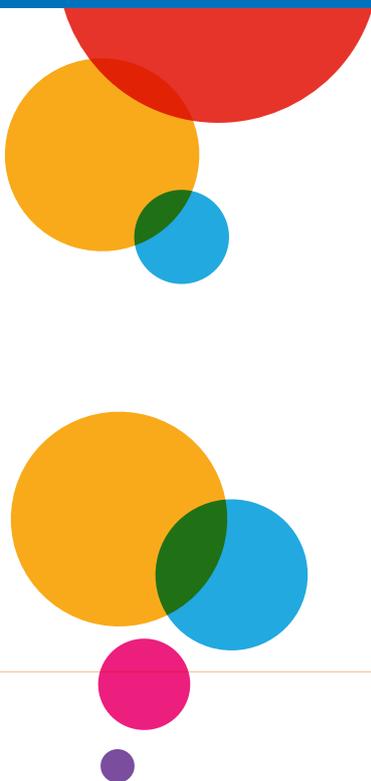
The first model for child externalising difficulties illustrates that high levels of maternal and paternal hostility and lower levels of maternal – but not paternal – warmth were associated with higher levels of child externalising difficulties. Mothers', but not fathers', depression was directly associated with higher levels of child externalising difficulties. Neither mothers' nor fathers' marital satisfaction was directly associated with child externalising difficulties. Having a younger mother, being a recent migrant (within the last five years) and a mother with a lower level of education were all associated with higher externalising difficulties. Children rated as temperamentally fussy and unpredictable, or as having a chronic illness or a behavioural condition had higher levels of externalising difficulties. Of the total effect of mother's depression on child adjustment, 48.5% was indirect, via the mediating mechanism of increased hostility. The model explained a total of 26% of the variance in child externalising difficulties, and the key predictors were having a behavioural condition, mother's hostility and mother's education level.

The second model on child internalising difficulties revealed that higher levels of maternal hostility and lower levels of maternal warmth were associated with higher levels of child internalising difficulties. Paternal hostility and warmth were not associated with child internalising difficulties. Mother's – but not father's – depression and marital dissatisfaction were directly associated with higher levels of child internalising difficulties. Having a younger mother, a mother with a lower level of education, and being a migrant to Ireland (within the past ten years), coming from a family with two or more children or a family where a new child had been born between study waves were all associated with higher internalising difficulties. Children rated as temperamentally fussy and unpredictable, or as having a chronic illness or a behavioural condition had higher levels of internalising difficulties. Of the total effect of mother's depression on child adjustment, 23% was indirect, via the mediating mechanism of increased hostility. Of the total effect of mother's marital satisfaction on child internalising difficulties, 36% was indirect, via the mediating mechanism of increased hostility (26% indirect effect) and lower warmth (10% indirect effect). Altogether, 13% of the variance in child internalising difficulties was explained by the model. In the final chapter of the report, these findings will be discussed in relation to previous literature and the implications for policy will be considered.



Chapter 5

DISCUSSION AND CONCLUSION



In this report, data from Wave 1 and Wave 2 of the '08 cohort of *Growing Up in Ireland* were analysed to examine the effect of the economic recession on families and to investigate potential pathways by which negative economic events may affect children's emotional and behavioural adjustment. The study was underpinned by the Family Stress Model, which proposes that family processes, including parenting behaviours, parental mental well-being and quality of the couple relationship, are key mediators between experiences of economic hardship and children's outcomes. More specifically, the model proposes that economic hardship – as indicated by low income and negative financial events such as job loss, being in arrears on mortgage, rent or utility bills, or having to cut back on basics – gives rise to economic strain, a psychological experience of stress resulting from these financial circumstances. Economic strain is then proposed to give rise to psychological difficulties, such as anxiety or depression, and these difficulties in turn are proposed to be associated with higher levels of dissatisfaction in the couple relationship. Together, psychological distress and marital dissatisfaction are purported to diminish the resources that parents have available to their children. The consequence of this is that parents are less warm and more hostile in their interactions with their children. This diminished parenting is proposed to affect children's social, behavioural and emotional development, as indicated by higher levels of adjustment difficulties (internalising and externalising problems). In this report, models of the predictors of economic strain (Chapter 3), parental depression and marital satisfaction, and parenting and child adjustment difficulties (Chapter 4) were tested, for both mothers and fathers. The findings of the report facilitate a better understanding of the pathways in families by which economic events may adversely affect child outcomes.

OVERVIEW OF KEY FINDINGS

The findings of the report demonstrate that families of the '08 cohort of *Growing Up in Ireland* experienced considerable change in their employment and income situations between Wave 1 and Wave 2 of data collection, which coincided with the economic recession in Ireland, and this had consequences for mothers' perceived level of economic strain. Overall, unemployment or inactivity among mothers increased from 5.6% to 6.5%, an increase of 16% between the waves (2007/8 to 2010/11). The national increase in unemployment was reflected more strongly among the fathers than the mothers: among fathers, unemployment increased from 6.1% to 13.8%, an increase of 127%. For fathers already unemployed at Wave 1, the probability of moving to employment was low, with 60% still unemployed at Wave 2. Employed fathers who were in the lowest income quintile households at Wave 1 were 8.5 times more likely to become unemployed by Wave 2 than fathers in the highest income quintile, a fact no doubt related to the disproportionate number of job losses that occurred in the construction industry. Lower-educated and lower-income households that were employed at Wave 1 were also more likely to experience unemployment and a fall in working hours at Wave 2.

Despite these changes, it should also be noted that approximately one-fifth of families changed from having no earner at Wave 1 to having one earner at Wave 2, while a similar proportion changed from one earner at Wave 1 to dual-earner families at Wave 2. However, the overall effect of this shift in terms of income was small, especially for the two-parent households; indeed households that transitioned from having one earner to two earners still saw an overall decrease in their annual income, suggesting that one parent may have taken up employment in order to offset decreases that might otherwise have occurred. Even among those households that had not experienced unemployment, a large majority saw their household income decrease between waves. Nearly two-thirds of the sample, 63%, reported that the recession had a 'significant' or 'very significant' impact on their family, with 65% reporting a reduction in wages since the first wave. Declines in income level were greatest among the higher income quintiles. Contrary to expectations, on average, income among the lowest quintile group did not decrease on average between the study waves, perhaps reflecting how these families were protected by state supports at the time. Notably, 55% of households reported that they could no longer afford luxuries, which may include

spending on resources for children, such as paying for extracurricular activities. More worryingly, 32% had to cut back on or could no longer afford basics, 14% were behind with the payment of utility bills and 9% were behind with rent/mortgage payments. This latter figure is slightly lower than what was reported for the rate of mortgage/rent arrears among Irish households in 2011 at 11.6% (Maître, Russell & Whelan, 2014). Overall, mothers were less affected by wage reduction and job loss than fathers.

These findings point to diversity in the negative economic events experienced by the families. However, the impact or meaning of these events is likely to vary depending on the financial demands on the family, as well as the availability of social support to the families, and other personal and family attributes. Perceptions of economic strain (based on mother's report of 'difficulty in making ends meet') reflect the psychological experience of stress resulting from these financial circumstances. Overall, 61% of mothers reported at least some level of economic strain (an increase from 42% at Wave 2; a figure that reflects substantial economic strain among Irish families, even prior to the recession). Moreover, the data suggest that there were considerable changes in the levels of economic strain from Wave 1 to Wave 2, with 40% of families experiencing more strain, and the remaining families experiencing less or the same amount of strain. The proportion of families experiencing 'difficulty' or 'great difficulty' in making ends meet increased from 13% at Wave 1 to 21% at Wave 2.

In terms of the predictors of economic strain, a substantial proportion of variance, 39%, was accounted for in the model tested. Having to cut back on basics, being behind with utility bills and being behind on the mortgage were the strongest predictors of economic strain. Either mother or father being made redundant had a weaker effect on economic strain, as did having social welfare payments or working hours reduced. Interestingly, having wages reduced was not associated with higher levels of economic strain; it may be that, in the context of a national recession, experiencing a wage reduction is a lesser issue with which to contend. Perhaps it is only when wage reduction has a material effect on everyday life, such as having to cut back on basics and luxuries and being in arrears on bills, that strain is exacerbated, as evidenced by the direct effects between these economic events and strain. Additionally, it was the families from income quintiles 2 to 5 that were most affected by income reduction, with higher levels of income reduction occurring within the highest income quintiles. It may be that these families are better able to absorb reductions in wages, especially as this was not a period when prices generally increased. Mothers from single-parent families and with lower levels of education were also more likely to experience economic strain, even after controlling for other variables.

The key message is that strain is highest when families are in arrears on mortgage/rent payments and on utility bills, and have to cut back on basic necessities. Such circumstances reflect a high level of over-indebtedness, compromising one's role as a normal consumer and as an adult fulfilling roles expected of them (such as providing shelter and security for one's family). Not only were these circumstances associated with economic strain, they were also directly associated with mothers' levels of psychological distress, as indicated by their scores on the depression screening measure. While these findings run somewhat counter to the Family Stress Model, which posits that the effect of all economic circumstances operate through their effect on economic strain, they are not surprising. Being behind on mortgage or rent payments and utility bills and having to cut back on basics represents a situation where families are living under threat of not having basic needs met, such as shelter, heat and food, and thus is it unsurprising that psychological vulnerability and stress ensues. Indeed, these findings concur strongly with other research that has demonstrated clear direct associations between over-indebtedness and psychological difficulties, such as depression (Jenkins et al., 2008; Selenko & Batinic, 2011; Sweet, Nandi, Adam & McDade, 2013; Turunen & Hiilamo, 2014).

Given that economic strain was not measured for fathers, it was not possible to estimate the effect of economic strain on fathers' levels of depressive symptoms; instead, certain economic events were considered. Redundancy (either their own or their partner's), having social welfare reduced, not being able to afford

luxuries, and being behind with utility bills were associated with higher depressive symptoms for fathers. The findings on the negative effects of fathers' redundancy on their depressive symptoms resonate with much previous research on the effects of unemployment on well-being (Burgard et al., 2007, 2012; Jahoda, 1981). In contrast to mothers, being behind on mortgage/rent payment or having to cut back on basics were not associated with fathers' depression scores. The reasons behind this remain unclear. It may be that the effect of these events may affect men in ways not explored here; for example, through increased anti-social behaviour or substance use, or that men do not report symptoms of depression as readily as women; indeed, the proportions of men categorised as 'depressed' were lower in all groups. Since the screening measure for depression was completed by 88% of fathers, it is also possible that the fathers who did not complete it were those experiencing the most distress. Other variables that predicted fathers' depressive symptoms included having a child with a chronic illness and a child with a behavioural condition, which was the strongest predictor in the model. Together, the models for predicting parental depressive symptoms explained a modest amount of variance: 22% for mothers' depressive symptoms and 15% for fathers'. In both models, child behavioural condition was most strongly related to mothers' and fathers' depression. These findings suggest that having a child with a developmental or behavioural condition is a significant stressor for parents, and may be at least as significant as economic events for parental mental well-being.

With respect to marital satisfaction, mothers' economic strain had a direct negative association. When mothers were under more strain, they had lower marital satisfaction scores. In line with the Family Stress Model, the effect of economic strain on marital satisfaction was also mediated through its effect on depression, though not wholly so. Of the total effect of economic strain on marital satisfaction, just over one-quarter was indirect via the mediating mechanism of depression, which itself was associated with lower levels of marital satisfaction. Altogether, 16% of the variance in mothers' marital dissatisfaction was accounted for by the model, with the key predictors being: migrant status, having a lower secondary level of education, economic strain, depression and being a younger mother. Having a new child born between waves of the study was associated with higher levels of marital satisfaction. Unlike the model for mothers' depression, child characteristics (such as presence of a behavioural condition) were not directly associated with mothers' marital satisfaction.

For fathers, negative economic events (as opposed to strain) were modelled onto marital satisfaction, and among these, having working hours reduced was associated with lower levels of fathers' marital satisfaction. None of the other economic variables, such as redundancy or being in arrears, was associated with fathers' marital satisfaction. It may be that, as fathers' working hours are reduced, they spend more time at home and this may precipitate higher levels of conflict in the household. However, if this was the case, one might also expect fathers' redundancy to be associated with greater marital dissatisfaction, but it was not. Altogether, a small proportion of variance, 13%, in fathers' marital satisfaction was explained by the model, with the key predictors of dissatisfaction including having working hours reduced, depression, and marital satisfaction at Wave 1. Counter to expectations, having a child with a behavioural condition was directly (though not strongly) associated with higher levels of marital satisfaction among fathers ($p = 0.04$). Further investigation revealed that the total effect of child behavioural difficulties on marital satisfaction was rendered statistically insignificant once the indirect effect (via the mediating mechanism of depression) was accounted for. It is also plausible that parenting a child with behavioural difficulties may strengthen the quality of the inter-parental relationship, although such a finding has not been well substantiated in previous research (Erel & Burman, 1995).

In relation to parenting warmth and hostility, based on the Family Stress Model, it was hypothesised that parental depression would be related to higher hostility and lower warmth in parenting, and that marital satisfaction would be related to higher warmth and lower hostility. It was also hypothesised, based on the Family Stress Model, that higher hostility and lower warmth would be related to greater adjustment difficulties among children. The models tested revealed that both mothers' and fathers' levels of depression and marital dissatisfaction (two-parent households only) were associated with higher levels of hostility and

lower levels of warmth, as predicted by the Family Stress Model. Economic factors did not show a direct relationship with mothers' or fathers' hostility. This is consistent with the Family Stress Model, which does not propose a direct relationship between economic strain and parenting; rather, economic strain and negative economic events are proposed to exert their influence through their effect on parental well-being (as illustrated in Chapter 4).

Despite pathways emerging as statistically significant, the models were weak in explaining variance in parenting. Only 2% to 5% of mothers' (and fathers') warmth and hostility respectively were explained by the models. Surprisingly, economic strain was directly associated with increased levels of maternal warmth. One possible explanation is that, with more strain and fewer economic resources, mothers end up spending more time with their children, and they may attempt to protect their children from material deprivation by providing more emotional support. Economic strain was not directly associated with higher levels of hostility; rather, the effect of strain on hostility was almost wholly mediated through its effect on depression. Depressive symptoms were associated with higher levels of hostility and lower levels of warmth, and marital satisfaction was associated with lower levels of hostility and higher levels of warmth. Broadly, these findings support these pathways in the Family Stress Model (Conger et al., 1992, 1993) and other research which indicates that stresses affecting parents can spill over into the parent-child relationship (Goodman & Gotlib, 2002; Sagrestano et al., 2003; Erel & Burman, 1995). Somewhat similar findings emerged in respect of fathers, and the models were similarly as weak as the mothers' models in explaining variance in fathers' parenting. Negative economic events were not associated with fathers' hostility, while not being able to afford luxuries, alone, was associated with increased levels of warmth. Again, consistent with previous research, fathers' depression was associated with higher levels of hostility and lower levels of warmth while marital satisfaction was associated with lower hostility and higher warmth.

Thus, surprisingly, across both sets of models of parenting, economic strain and having to cut back on luxuries brought about direct positive implications for warmth in the parent-child relationship, perhaps as a result of parents spending more time with their children. Overall, given that only small amounts of variance in parenting were accounted for, significant untested factors must also be playing a role; in the context of Ireland, the Family Stress Model appears to be a useful framework for understanding effects of economic factors on parental well-being, rather than on parenting behaviours per se. Indeed, the relationship between economic variables and parenting is not always as one might expect; economic strain was not associated with mothers' hostility and in fact had a small but significant positive effect on warmth. The general conclusion that could be drawn from these models is that the psychological experience of economic strain (for mothers) and certain economic events, such as being in arrears on utility bills and not being able to afford luxuries (for fathers), had negative associations with their mental health and marital satisfaction. Overall though, these economic events do not directly negatively influence how parents interact with their young children. Their effect at this point appears to be largely limited to the couple relationship and parents' well-being.

In relation to children's externalising and internalising difficulties, the statistical fit indices revealed that at this final step the data did not fit the theoretical model well, which suggests that the theoretical model may not be as good for predicting child outcomes as it is for predicting family processes. However, some of the pathways in the model did align with what was expected from previous literature. Mother's parenting emerged as a key predictor, with higher hostility and lower warmth being associated with both externalising and internalising difficulties for children. This finding emerged in spite of the limited variability in parents' warmth and hostility scores. Previous research has similarly shown that parental hostility and low levels of parental warmth are proximal risks associated with poorer behavioural outcomes in children (Dwyer et al., 2003; Edwards et al., 2010; Robinson et al., 2008). Father's hostility was also associated with higher levels of externalising difficulties, but not internalising difficulties, and father's warmth was not directly associated with either externalising or internalising difficulties.

Children had more externalising and internalising difficulties (based on mother's report) when mothers had higher scores on the depression scale. Lower marital satisfaction scores for mothers were associated with higher internalising but not externalising difficulties for children. In contrast, father's depression and marital satisfaction scores were not significantly directly related to children's outcomes. An important caveat when interpreting these findings is that mothers reported on both the outcome measure (the SDQ) and the predictor measures (depression and marital dissatisfaction), whereas this was not the case for fathers. Thus, the significance of statistical associations for variables reported upon solely by mothers may be partly a function of single-source bias.

In addition to parenting hostility and warmth, and mother's depression and marital satisfaction, other family and child-related variables were significantly related to child internalising and externalising difficulties. Of particular note for both types of outcomes were lower levels of maternal education and migrant status (less than five years in Ireland). Across all models of children's outcomes, by far the strongest predictor was the presence of behavioural or developmental condition. Some of this strong association is most likely accounted for by the conceptual overlap between having a behavioural or developmental condition, and the types of difficulties and problem behaviours captured in the SDQ scale. Overall, the models explained 26% and 13% of the variance in externalising and internalising difficulties, respectively, with the majority of the explained variance arising from the inclusion of child behavioural/developmental conditions. Broadly speaking, predictors of internalising and externalising difficulties were similar, although hostility was a more significant predictor of externalising difficulties than internalising difficulties. It may be that children who experience hostile parenting are more likely to emulate that hostile behaviour and act out in a manner that characterises externalising difficulties. Coming from a single-parent household increased the risk of externalising difficulties; while coming from a larger, two-parent household decreased the risk of internalising difficulties.

The findings tentatively suggest that what goes on in terms of mother's own well-being carries more significance for children's outcomes at three years than is the case for fathers. This may be due to the fact that mothers – who self-identified as the Primary Caregivers of their children – are likely to spend more time in direct contact with them. Thus, the opportunity for children to be adversely affected by mothers' depression or marital dissatisfaction is greater than by fathers' depression or marital dissatisfaction. The findings may also suggest that when fathers are depressed or dissatisfied in their marriage, it is possible for children to be buffered from these negative influences, but the same does not happen when it is mothers who are depressed or dissatisfied in their marriage. However, as alluded to previously, the issue of single-source bias, where mothers report on both the predictors and the outcome, must be considered in interpreting these findings.

The longitudinal nature of *Growing Up in Ireland* means that it will be possible to ascertain the longer-term effect of negative economic events, economic strain, parental depression and marital satisfaction on parenting and children's externalising and internalising difficulties over time. The findings suggest that economic strain and other specific negative financial events, notably being in arrears on utility bills and on the rent/mortgage and having to cut back on basics, were having significant deleterious effects on mothers' psychological well-being and were negatively affecting partner relationships within households. It is possible that the effect of the economic recession on children will only emerge over time, as stress and strain for parents takes its toll over a longer period. Alternatively, as the economy stabilises, the potential for these negative effects to be reversed can be examined, as future waves of data become available. It is also worth noting that, while modest amounts of variance are explained by the models, significant proportions remain unexplained. Not all families suffered economically during the recession and, even among those which did, not all experienced negative consequences in terms of depressive symptoms, marital satisfaction and parenting, and in turn in relation to child outcomes. The findings thus point to the resilience of families and their ability to cope with stress and buffer their children from negative outcomes.

POLICY IMPLICATIONS

The findings from this report illustrate that the economic recession experienced in Ireland from 2008 on had a broadly negative but diverse effect on individuals and families. The experience of unemployment for some and falling incomes and living standards for the majority meant that levels of economic hardship and strain increased substantially. The results of this report suggest that these economic problems had consequences in terms of the mental health of both parents and the quality of partners' relationships. These effects clearly reduce the quality of life for the families who are affected, with knock-on effects for quality of parenting and children's outcomes. Questions remain about the stability of these difficulties over time: on the one hand, these difficulties may dissipate with the return to economic growth and increased employment; on the other hand, they may leave lasting effects over time. It is also the case that a macro-economic shock such as occurred could exacerbate difficulties in families who were already struggling before the recession. These questions – which will be possible to address with future waves of *Growing Up in Ireland* data – are important, as long-term consequences may well suggest that some form of policy or practice intervention should be considered. Additionally, a complementary focus on families that thrive and cope well despite shocks such as recession will enable promotive and protective mechanisms to be identified and targeted in government policy.

Before discussing policy implications, it is important to mention that macro-economic policy implications will not be discussed. Clearly, the maintenance of a stable economy with high levels of employment and living standards for the bulk of the population would be the best way to ensure that these types of processes do not occur. Recommendations on such issues are beyond the remit of this report. Instead, some of the ways in which policy and practice could improve the situation and outcomes for families who are experiencing economic strain, both during recessions and more generally, will be considered. Even during the height of the economic boom in Ireland in the mid-2000s, 17% of individuals had weekly incomes that put them 'at risk of poverty', using official measures, and this proportion was higher for those aged younger than 18 years. This means that economic strain characterises the lives of individuals even during good economic times (Whelan, Layte, Maître & Nolan, 2001). Indeed, figures from the first wave of data collection, prior to the recession, indicated that over 40% of families in Ireland were experiencing economic strain. Thus, some of the policy implications also relate to the more general issue of supporting children who grow up in disadvantaged households.

Given that economic strain had an impact on parents and the policy objective is to minimise this, the first policy implication is clear: social welfare policy should seek to provide a minimum income that is adequate for the needs of individuals and families, particularly during periods of economic downturn. Unfortunately, these periods also tend to be associated with a fall in tax revenues, which often means that government is forced either to borrow or raise taxes to pay for social protection or cut these payments. The fiscal crisis of 2008-2014 was characterised by the latter, with direct consequences for families relying on social transfers. These are political decisions based on a range of constraints and policy/political objectives but they have serious implications for individual and family well-being and relativities among social groups (Callan, 2015). However, while maintaining the income and living standards of families during all phases of the economic cycle is important, this may not be a sufficient response as the processes underlying negative outcomes for children and families can be complex and multi-faceted, as suggested by the findings arising from this report. As will be discussed below, multidisciplinary and integrated services in the community are likely to be a more effective way to improve outcomes for families than passive social welfare benefits alone, if evidence shows that they are effective. The findings of this report indicate that the lowest income quintile did not show a decrease in income, which means that government and budgetary policies during the years of the recession did go some way towards protecting those in the lowest income groups.

The findings of the report indicate that the strongest predictors of economic strain are being behind with mortgage/rent and utility bills and having to cut back on basic necessities. Not only did these economic

circumstances lead to high levels of economic strain; they also directly contributed to mothers' depressive symptoms. Thus, families who find themselves in these particular circumstances – under threat of losing their homes or of having basic utilities cut off – are identified as being most vulnerable to negative psychological consequences. If the policy objective is to minimise the impact of economic strain on children and their parents, actions to safeguard these basic necessities for families should be a priority.

The findings from the report point to the pivotal role that parental mental well-being plays in bridging the link between more distal macro-level circumstances and children's relationships and outcomes. Surprisingly, mothers' economic strain was directly associated with slightly higher levels of warmth in interaction with their children and was not associated with higher levels of hostility. These findings highlight how mothers maintain good relationships with their children even under conditions of economic stress. Additionally, having to cut back on luxuries was directly associated with higher warmth between fathers and their children, highlighting that the absence of luxuries may free fathers to spend more time with their children or engage with them in distinct ways. Thus, it is important to build on and nurture such positive dynamics when they do occur and to highlight to parents that economic resources are not essential for positive parent-child interactions. At the same time, however, these economic factors were associated with higher levels of depressive symptoms for both mothers and fathers. Further, both mothers' and fathers' depressive symptoms and their marital dissatisfaction were significantly associated with higher levels of hostility and lower levels of warmth in interaction with their children, with small to medium effect sizes. This spill-over effect suggests that a worthwhile avenue for intervention might centre on supporting parents to maintain positive approaches to parenting, even in light of their own personal difficulties. Such interventions might involve support groups or access to counselling or therapy for parents, and might help them to gain a sense of control over certain aspects of their lives, and to understand that, despite difficult economic circumstances, they have the competence to protect their children by maintaining positive relations with them. A range of parent support and parenting programmes are available that could be piloted for these particular circumstances and in this particular context. However, before selection and implementation of any programmes, efficacy should have previously been established through rigorous scientific evaluation (Harold, Acquah, Sellers & Chowdry, 2016). Additionally, screening for mental health difficulties and timely identification of such difficulties is key. Such screening could be linked with child health check-ups, when a parent is also usually in attendance.

The findings in this report also suggest that mothers' parenting and well-being are more significant drivers of children's outcomes than fathers' parenting and well-being (though an important caveat is that the mothers reported on child outcomes, as well as their own parenting). In the final models, only fathers' hostility was associated with high levels of child adjustment problems; paternal parenting warmth, depression and marital satisfaction did not significantly predict children's internalising and externalising difficulties. Therefore, policies aimed at alleviating stress, particularly for mothers, are likely to yield the most positive benefits in terms of supporting children's development.

The findings also indicate that children within certain family groups were more likely to be characterised as having higher internalising and externalising difficulties. For example, children from single-parent families, with younger mothers, with mothers with lower levels of education, and in recently migrated families had higher levels of externalising difficulties and may be specifically at risk. Children with mothers with lower levels of education and in migrant families had higher levels of internalising difficulties. These findings point to particular groups of children and families who may be at particular risk, and are an important target for intervention and support. An interesting question for future analysis is whether these families were more vulnerable to the effects of economic recession. Future waves of *Growing Up in Ireland* will also provide data to enable an examination of the potential long-term impact of economic recession on children and the key mechanisms through which this may occur, as well as the mechanisms that interrupt negative cycles of effects and promote recovery and resilience. This will provide a stronger evidence base from which to design interventions to improve the lives of children and families in Ireland.

REFERENCES

- Amato, P.R. (1995). Single-parent households as settings for children's development, well-being, and attainment: A social network/resources perspective. *Sociological Studies of Children*, 7, 19-47.
- Australian Institute of Family Studies (2011). *Longitudinal Study of Australian Children Annual Statistical Report 2010*. Retrieved from <http://www.growingupinaustralia.gov.au/pubs/asr/2010>
- Ashford, S., Smit, F., Van Lier, P.A.C., Cuijpers, P. & Koot, H.M. (2008). Early risk indicators of internalising problems in late childhood: a 9-year longitudinal study. *Journal of Child Psychology and Psychiatry*, 49, 774-780.
- Backhans, M.C. & Hemmingsson, T. (2011). Unemployment and mental health – who is (not) affected? *European Journal of Public Health*, 22, 429-433.
- Bayer, J.K., Hiscock, H., Ukoumunne, O.C., Price, A. & Wake, M. (2008). Early childhood aetiology of mental health problems: A longitudinal population-based study. *Journal of Child Psychology & Psychiatry*, 49, 1166-1174.
- Bayer, J.K., Sanson, A.V. & Hemphill, S.A. (2006). Parent influences on early childhood internalising difficulties. *Journal of Applied Developmental Psychology*, 27, 542-559.
- Bayer, J.K., Ukoumunne, O.C., Lucas, N., Wake, M., Scalzo, K. & Nicholson, J.M. (2011). Risk factors for childhood mental health symptoms: National Longitudinal Study of Australian Children. *Pediatrics*, 128, 865-879.
- Benzies, K.M., Harrison, M.J. & Magill-Evans, J. (2004). Parenting stress, marital quality, and child behaviour problems at age 7 years. *Public Health Nursing*, 21, 111-121.
- Bezruchka, S. (2009). The effect of economic recession on population health. *Canadian Medical Association Journal*, 181, 251-285.
- Blair, C. & Raver, C.C. (2012). Child development in the context of adversity. *American Psychologist*, 67, 309-318.
- Bradley, R.H. & Corwyn, R.F. (2002). Socioeconomic status and child development. *Annual Review of Psychology*, 53, 371-399.
- Brody, G. H., Stoneman, Z., Flor, D., McCrary, C., Hastings, L. & Conyers, O. (1994). Financial resources, parent psychological functioning, parent co-caregiving, and early adolescent competence in rural two-parent African American families. *Child Development*, 65, 590-605.
- Bronfenbrenner, U. & Morris, P. (2006) The bioecological model of human development. In W. Damon & R.M. Lerner (Series Eds.) & R.M. Lerner (Vol. Ed.), *Handbook of Child Psychology: Vol. 1. Theoretical models of human development* (6th ed., pp. 793-828). New York: Wiley.
- Burgard, S., Brand, J. & House, J. (2007). Toward a better estimation of the effect of job loss on health. *Journal of Health and Social Behaviour*, 48, 369-384.
- Burgard, S., Kalousova, L. & Seefeldt, K. (2012). Perceived job insecurity and health: The Michigan recession and recovery study. *Journal of Occupational & Environmental Medicine*, 54, 1101-1106.
- Cabaj, J.L., McDonald, S.W. & Tough, S.C. (2014). Early childhood risk and resilience factors for behavioural and emotional problems in middle childhood. *BMC Pediatrics*, 14, 166.
- Callan, T. (2015). *Evidence to Joint Committee on Education and Social Protection. Impact of social protection payments on income distribution*. Dublin: The Economic and Social Research Institute.
- Callan, T., Nolan, B., Keane, C., Savage, M. & Walsh, J.R. (2013). The Great Recession, austerity and inequality: Evidence from Ireland. *Intereconomics*, 6, 335-339.

Campbell, F. A., Pungello, E. P., Miller-Johnson, S., Burchinal, M. & Ramey, C. T. (2001). The development of cognitive and academic abilities: Growth curves from an early childhood educational experiment. *Developmental Psychology, 37*, 231-242.

Campbell, S. B., & Ewing, L. J. (1990). Follow-up of hard-to-manage preschoolers: Adjustment at age 9 and predictors of continuing symptoms. *Journal of Child Psychology and Psychiatry, 31*, 871-889.

Catalano, R., Goldman-Mellor, S., Saxton, K., Margerison-Zilko, C., Subbaraman, M., Le Winn K. & Anderson, E. (2011). The health effects of economic decline. *Annual Review of Public Health, 32*, 431-450.

Central Statistics Office (2009). *Statistical Yearbook of Ireland, 2009*. Dublin: Government Publications.

Central Statistics Office (2010). *Statistical Yearbook of Ireland, 2010*. Dublin: Government Publications.

Central Statistics Office (2011). *Statistical Yearbook of Ireland, 2011*. Dublin: Government Publications.

Central Statistics Office (2012). *Statistical Yearbook of Ireland, 2012*. Dublin: Government Publications.

Central Statistics Office (2013). *Statistical Yearbook of Ireland, 2013*. Dublin: Government Publications.

Chen, E., Matthews, K.A. & Boyce, W.T. (2002). Socioeconomic differences in children's health: How and why do these relationships change with age? *Psychological Bulletin, 128*, 295-329.

Cleary, A. & Nixon, E. (2012). Early adult outcomes for Irish children with behavioural difficulties. *International Journal of Social Psychiatry, 58*, 643-651.

Conger, R.D. & Conger, K.J. (2002). Resilience in Midwestern families: Selected findings from the first decade of a prospective longitudinal study. *Journal of Marriage and the Family, 64*, 361-373.

Conger, R.D., Conger, K.J., Elder, G.H.J., Lorenz, F.O., Simons, R.L. & Whitbeck, L.B. (1992). A family process model of economic hardship and adjustment of early adolescent boys. *Child Development, 63*, 526-541.

Conger, R.D., Conger, K.J., Elder, G.H.J., Lorenz, F.O., Simons, R.L. & Whitbeck, L.B. (1993). Family economic stress and adjustment of early adolescent girls. *Developmental Psychology, 29*, 206-219.

Conger, R.D. & Donnellan, M.B. (2007). An interactionist perspective on the socioeconomic context of human development. *Annual Review of Psychology, 58*, 175-199.

Conger, R.D. & Elder, G.H.J. (1994). *Families in troubled times: Adapting to change in rural America*. Hawthorne, NY: De Gruyter Aldine.

Conger, R.D., Elder, G.H., Lorenz, E.O., Conger, K.J., Simons, R.L., Whitbeck, L.B., Huck, S & Melby, J.N. (1990). Linking economic hardship to marital quality and instability. *Journal of Marriage and the Family, 52*, 643-656.

Conger, R.D., Ge, X., Elder, G.H., Lorenz, F.O. & Simons, R.L. (1994). Economic stress, coercive family process and developmental problems of adolescents. *Child Development, 65*, 541-561.

Conger, R.D., Wallace, L.E., Sun, Y., Simons, R.L., McLoyd, V.C. & Brody, G.H. (2002). Economic pressure in African American families: A replication and extension of the family stress model. *Developmental Psychology, 38*, 179-193.

Costello, E.J., Mustillo, S., Erkanli, A., Keeler, G. & Angold, A. (2003). Prevalence and Development of Psychiatric Disorders in Childhood and Adolescence. *Archives of General Psychiatry, 60*, 837-844.

Dubowitz, H., Thompson, R., Proctor, L., Metzger, R., Black, M.M., English, D., Poole, G. & Magder, L. (2016). Adversity, maltreatment and resilience in young children. *Academic Pediatrics, 16*, 233-239.

Duncan, G.J. & Brooks-Gunn, J. (Eds.). (1997). *Consequences of Growing Up Poor*. New York: Russell Sage Foundation.

- Dwyer, S.B., Nicholson, J.M. & Battistutta, D. (2003) Population level assessment of family risk factors related to the onset or persistence of children's mental health problems. *Journal of Child Psychology & Psychiatry*, 44, 699-711.
- Edwards, S.L., Rapee, R.M. & Kennedy, S. (2010) Prediction of anxiety symptoms in preschool-aged children: examination of maternal and paternal perspectives. *Journal of Child Psychology & Psychiatry*, 51, 313-321.
- Egger, H.L. & Angold, A. (2006). Common emotional and behavioural disorders in preschool children: presentation, nosology, and epidemiology. *Journal of Child Psychology & Psychiatry*, 47, 313-337.
- Erel, O. & Burman, B. (1995). Interrelatedness of marital relations and parent-child relations: A meta-analytic review. *Psychological Bulletin*, 118, 108-132.
- Evans, G.W. & Kim, P. (2013). Childhood poverty, chronic stress, self-regulation and coping. *Child Development Perspectives*, 7, 43-48.
- Evans, G.W., Chen, E., Miller, G.E. & Seeman, T.E. (2012). How poverty gets under the skin: A life course perspective. In V. Maholmes & R. King (Eds.) *The Oxford Handbook of Poverty and Child Development* (pp. 13-26). New York: Oxford University Press.
- Ferrie, J.E., Shipley, M.J., Stansfeld, S.A & Marmot, M.G. (2002). Effects of chronic job insecurity and change in job security on self-reported health, minor psychiatric morbidity, physiological measures, and health related behaviours in British civil servants: the Whitehall II study. *Journal of Epidemiology & Community Health*, 56, 450-454.
- Fergusson, D. & Lynskey, M. (1998). Conduct problems in childhood and psychosocial outcomes in young adulthood: A prospective study. *Journal of Emotional & Behavioural Disorders*, 6, 2-18.
- Gennetian, L.A., Castells, N. & Morris, P.A. (2010). Meeting the basic needs of children: Does income matter? *Children and Youth Services Review*, 32, 1138-1148.
- Goodman, R. (1997). The Strengths and Difficulties Questionnaire: A Research Note. *Journal of Child Psychology & Psychiatry*, 38, 581-586.
- Goodman S. H. & Gotlib I. H. (Eds) (2002). *Children of depressed parents: Mechanisms of risk and implications for treatment*. Washington, DC: APA.
- Grych, J.H. & Fincham, F.D. (Eds.) (2001). *Child Development and Interpersonal Conflict: Theory, Research and Applications*. New York: Cambridge University Press.
- Haas, S.A. (2006). Health selection and the process of social stratification. The effect of childhood health on socioeconomic attainment. *Journal of Health & Social Behaviour*, 47, 339-354.
- Haas, S.A. & Fosse, N.E. (2008). Health and the educational attainment of adolescents: Evidence from the NLSY97. *Journal of Health and Social Behaviour*, 49, 178-192.
- Harold, G.T., Acquah, D., Sellers, R. & Chowdry, H. (2016). *What works to enhance interparental relationships and improve outcomes for children*. London: Department for Work and Pensions.
- Harper, C., Jones, N., McKay, A. & Espey, J. (2009). *Children in times of economic crisis: Past lessons, future policies*. London: Overseas Development Institute.
- Haveman, R.H. & Wolfe, B.S. (1994). *Succeeding Generations. On the Effects of Investments in Children*. New York: Sage.
- Hetherington, E.M. (1999). Should we stay together for the sake of the children? In E.M. Hetherington (Ed.) *Coping with Divorce, Single Parenting and Remarriage* (pp. 93-116). Mahwah, NJ: Lawrence Erlbaum Associates.

Hill, H.D., Morris, P., Gennetian, L.A., Wolf, S. & Tubbs, C. (2013). The consequences of income instability for children's development. *Child Development Perspectives*, 7, 85-90.

Hoff, E. (2003). The specificity of environmental influence: Socioeconomic status affects early vocabulary development via maternal speech. *Child Development*, 74, 1369-1378.

Hoff, E., Laursen, B. & Tardif, T. (2002). Socioeconomic status and parenting. In M.H. Bornstein (Ed.) *Handbook of Parenting: Volume 2: Biology and Ecology of Parenting*. (2nd ed: pp. 231-252). New Jersey: Lawrence Erlbaum Associates.

Jahoda, M. (1981). Work, employment and unemployment: Values, theories and approaches in social research. *American Psychologist*, 36, 184-191.

Jenkins, R., Bhugra, D., Bebbington, P., Brugha, T., Farrell, M., Coid, J., Fryers, T., Weich, S., Singleton, N. & Meltzer, H. (2008). Debt, income and mental disorder in the general population. *Psychological Medicine*, 38, 1485-1493.

Karevold, E., Roysamb, E., Ystrom, E. & Mathiesen, K.S. (2009). Predictors and pathways from infancy to symptoms of anxiety and depression in early adolescence. *Developmental Psychology*, 45, 1051-1060.

Kessler, R.C. & Greenberg, D.F. (1981). *Linear panel analysis. Models of quantitative change*. New York: Academic Press.

Kessler, R.C., Turner, J.B. & House, J.S. (1987). Intervening processes in the relationship between unemployment and health. *Psychological Medicine*, 17, 949-961.

Kjeldsen, A., Janson, H., Stoolmiller, M., Torgersen, L. & Mathiesen, K.S. (2014). Externalising behaviour from infancy to mid-adolescence: Latent profiles and early predictors. *Journal of Applied Developmental Psychology*, 35, 25-34.

Kochanska, G., Coy, K.C., & Murray, K.T. (2001). The development of self-regulation in the first four years of life. *Child Development*, 72, 1091-1111.

Kolvin, I., Miller, F.J.W., Scott, D.M., Gatzanie, S.R.M. & Fleeting, M. (1990). *Continuities of deprivation? The Newcastle 1000 Family Study*. Aldershot, UK: Avebury.

Layte, R. & McCrory, C. (2012). Pediatric chronic illness and educational failure: The role of emotional and behavioural problems. *Social Psychiatry and Psychiatric Epidemiology*, 48, 1307-1316.

Leininger, L.J. & Kalil, A. (2014). Economic strain and children's behaviour in the aftermath of the Great Recession. *Journal of Marriage and Family*, 76, 998-1010.

Linver, M.R., Brooks-Gunn, J. & Kohen, D.E. (2002). Family processes as pathways from income to young children's development. *Developmental Psychology*, 38, 719-734.

Loeber, R. & Stouthamer-Loeber, M. (1998). The development of juvenile aggression and violence: Some common misconceptions and controversies. *American Psychologist*, 53, 242-259.

Lovejoy, M. C., Graczyk, P. A., O'Hare, E. & Neuman, G. (2000). Maternal depression and parenting: A meta-analytic review. *Clinical Psychology Review*, 20, 561-592.

Maître, B., Russell, H. & Whelan, C.T. (2014). *Trends in Economic Stress and the Great Recession in Ireland – An Analysis of the CSO Survey on Living and Income Conditions*, Social Inclusion Technical Paper No. 5, Dublin: Department of Social Protection.

Melchior, L.A., Huba, G.J., Brown, V.B. & Reback, C.J. (1993). A short depression index for women. *Educational and Psychological Measurement*, 53, 1117-1125.

Mesman, J., Bongers, I.L. & Koot, H.M. (2001). Preschool developmental pathways to preadolescent internalising and externalising problems. *Journal of Child Psychology and Psychiatry*, 42, 679-689.

- McLeod, B.D., Wood, J.J. & Weisz, J.R. (2007). Examining the association between parenting and childhood anxiety: A meta-analysis. *Clinical Psychology Review, 27*, 155-172.
- McLoyd, V.C. (1998). Socioeconomic disadvantage and child development. *American Psychologist, 53*, 185-204.
- Miner, J.L. & Clarke-Stewart, K.A. (2008). Trajectories of externalising behaviour from age 2 to age 9: Relations with gender, temperament, ethnicity, parenting and rater. *Developmental Psychology, 44*, 771-786.
- Mistry, R.S., Vandewater, E.A., Huston, A.C. & McLoyd, V.C. (2002). Economic well-being and children's social adjustment: The role of family process in an ethnically diverse low-income sample. *Child Development, 73*, 935-951.
- Mueller, C.W. & Parcel, T.L. (1981). Measures of socioeconomic status: Alternatives and recommendations. *Child Development, 52*, 13-30.
- Niclasen, J., Skovgaard, A.M., Andersen, A.M., Sømhøvd, M.J. & Obel, C. (2013). A confirmatory approach to examining the factor structure of the Strengths and Difficulties Questionnaire (SDQ): A large scale cohort study. *Journal of Abnormal Psychology, 41*, 355-365.
- Nixon, E. (2012). *Growing Up in Ireland: How Families Matter for Social-Emotional Outcomes of 9-Year-Old Children*. Dublin: Government of Ireland.
- Nixon, E., Swords, L. & Murray, A. (2013). *Growing Up in Ireland: Parenting and Infant Development*. Dublin: Government of Ireland.
- Paul, K.I. & Moser, K. (2009). Unemployment impairs mental health: Meta-analyses. *Journal of Vocational Behaviour, 74*, 264-282.
- Parke, R.D. & Buriel, R. (1998). Socialisation in the family: Ethnic and ecological perspective. In W. Damon (Series Ed.) & N. Eisenberg (Vol. Ed). *Handbook of Child Psychology: Vol. 3. Social, Emotional and Personality Development* (5th ed., pp. 463-552). New York: Wiley.
- Parke, R.D., Coltrane, S., Duffy, S., Buriel, R., Dennis, J., Powers, J., French, S. & Widaman, K.F. (2004). Economic stress, parenting, and child adjustment in Mexican American and European American families. *Child Development, 75*, 1632-1656.
- Parker, J.G., Rubin, K.H., Price, J.M. & De Rosier, M.E. (1995). Peer relationships, child development, and adjustment: A developmental psychopathology perspective. In D. Cicchetti & D.J. Cohen (eds.). *Developmental Psychopathology, Vol 2: Risk, Disorder, and Adaptation* (pp. 96-161). Oxford: John Wiley & Sons.
- Prause, J., Dooley, D. & Huh, J. (2009). Income volatility and psychological depression. *American Journal of Community Psychology, 43*, 57-70.
- Radloff, L.S. (1977) The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement, 1*, 385-401.
- Rhee, S.H., Lahey, B.B. & Waldman, I.D. (2015). Comorbidity among dimensions of childhood psychopathology: Converging evidence from behaviour genetics. *Child Development Perspectives, 9*, 26-31.
- Robinson, M., Oddy, W.H., Li, Jianghong, Kendall, G.E., deKlerk, N.H., Silburn, S.R., Zubrick, S.R., Newnham, J.P., Stanley, F.J. & Mattes, E. (2008). Pre- and postnatal influences on preschool mental health: a large scale cohort study. *Journal of Child Psychology & Psychiatry, 49*, 1118-1128.
- Rothbart, M. K. & Bates, J. E. (2008) Temperament. In W. Damon & R. M. Lerner (Eds.), *Child and adolescent development. An advanced course* (pp. 54-92). Hoboken, NJ: Wiley.
- Russell, H. & McGinnity, F. (2014). Under pressure: The impact of recession on employees in Ireland. *British Journal of Industrial Relations, 52*, 286-307.

- Rutter, M. (1989). Pathways from childhood to adult life. *Journal of Child Psychology & Psychiatry*, 30, 23-51.
- Sabourin, S., Valois, P. & Lussier, Y (2005). Development and validation of a brief version of the dyadic adjustment scale with a nonparametric item analysis model. *Psychological Assessment*, 17, 15-27.
- Sagrestano, L. M., Paikoff, R. L., Holmbeck, G. N. & Fendrick, M. (2003). A longitudinal examination of familial risk factors for depression among inner-city African American adolescents. *Journal of Family Psychology*, 17, 108-120.
- Scaramella, L.V., Sohr-Preston, S.L., Callahan, K.L. & Mirabile, S.P. (2008). A test of the family stress model on toddler-aged children's adjustment among Hurricane Katrina impacted and nonimpacted low-income families. *Journal of Clinical Child & Adolescent Psychology*, 37, 530-541.
- Schneider, W., Waldfogel, J. & Brooks-Gunn, J. (2015). The Great Recession and behaviour problems in 9-year-old children. *Developmental Psychology*, 51, 1615-1629.
- Selenko, E. & Batinic, B. (2011). Beyond debt. A moderator analysis of the relationship between perceived financial strain and mental health. *Social Science and Medicine*, 73, 1725-1732.
- Sell, K., Zlotnik, S., Noonan, K. & Rubin, D. (2010). *The effect of recession on child well-being*. Philadelphia, PA: PolicyLab and First Focus.
- Simons, R.L. & Associates (1996). *Understanding the differences between divorced and intact families: Stress, interaction and child outcome*. Thousand Oaks: Sage.
- Simons, R.L., Lorenz, F.O., Conger, R.D. & Wu, C.I. (1992). Support from spouse as mediator and moderator of the disruptive influence of economic strain on parenting. *Child Development*, 63, 1282-1301.
- Skinner, M. L., Elder, G. H. & Conger, R. D. (1992). Linking economic hardship to adolescent aggression. *Journal of Youth and Adolescence*, 21, 259-276.
- Skoufias, E. (2003). Economic crises and natural disasters: Coping strategies and policy implications. *World Development*, 31, 1087-1103.
- Smart, D., Sanson, A., Baxter, J., Edwards, B. & Hayes, A. (2008). *Home-to-school transitions for financially disadvantaged children*. Final Report. Sydney, Australia: The Smith Family and the Australian Institute of Family Studies.
- Solantus, T., Leinonen, J. & Punamäki, R.L. (2004). Children's mental health in times of economic recession: Replication and extension of the family stress model in Finland. *Developmental Psychology*, 40, 412-429.
- Spanier, G. B. (1976). Measuring dyadic adjustment: New scales for assessing quality of marriage and similar dyads. *Journal of Marriage and the Family*, 38, 15-28.
- Spieker, S.J., Larson, N.C., Lewis, S.M., Keller, T.E. & Gilchrist, L. (1999). Developmental trajectories of disruptive behaviour problems in preschool children of adolescent mothers. *Child Development*, 70, 443-458.
- Sroufe, L.A. (1990). An organizational perspective on the self. In D. Cicchetti & M. Beeghly (Eds.), *The self in transition: Infancy to childhood* (pp. 281-307). Chicago: University of Chicago Press.
- Stuckler, D., Basu, S., Suhrcke, M., Coutts, A. & McKee, M. (2009). The public health effect of economic crises and alternative policy responses in Europe: an empirical analysis. *The Lancet*, 374, 315-323.
- Strully, K.W. (2009). Job loss and health in the US labour market. *Demography*, 46, 221-246.
- Sweet, E., Nandi, A., Adam, E.K. & McDade, T.W. (2013). The high prices of debt: Household financial debt and its impact on mental and physical health. *Social Science and Medicine*, 91, 94-100.
- Sylva, K., Melhuish, E., Sammons, P., Siraj-Blatchford, I. and Taggart, B. (Eds) (2010). *Early childhood matters: Evidence from the effective pre-school and primary education project*. London: Routledge.

- Turunen, E. & Hiilamo, H. (2014). Health effects of indebtedness: A systematic review. *BMC Public Health*, *14*, 489-496.
- UNICEF (2010). *The children left behind. A league table of inequality in child well-being in the world's rich countries*. Florence, Italy: Innocenti Research Centre.
- UNICEF (2014). *Children of the recession .The impact of the economic crisis on child well-being in rich countries*. Florence, Italy: Innocenti Research Centre.
- Vinokur, A.D., Price, R.H. & Caplan, R.D. (1996). Hard times and hurtful partners: How financial strain affects depression and relationship satisfaction of unemployed persons and their spouses. *Journal of Personality and Social Psychology*, *71*, 166-179.
- Watson, D., Maitre, B., Whelan, C.T. & Williams, J. (2015). *Dynamics of Economic Vulnerability and Socio-Emotional Development*. Dublin: Government of Ireland.
- Whelan C.T., Layte, R., Maître, B. & Nolan, B. (2001). Income, deprivation and economic strain: An analysis of the European Community Household Panel Survey. *European Sociological Review*, *17*, 357-372.
- Whelan, C.T., Nolan, B. & Maitre, B. (2016). *Economic Stress and the Great Recession in Ireland: The Erosion of Social Class Advantage*. Dublin: UCD Geary Institute for Public Policy.
- Wilcox, W.B. (2011). *The Great Recession and Marriage. National Marriage Project Report Web Release*. Charlottesville, VA: National Marriage Project.
- Williams, J., Greene, S., McNally, S., Murray, A. & Quail, A. (2010). *Growing Up in Ireland. The Infants and their Families*. Dublin: Government of Ireland.
- Williams, J., Murray, A., McCrory, C. & McNally, S. (2013). *Growing Up in Ireland. Development from Birth to Three Years*. Dublin: Government of Ireland.
- World Health Organisation (2001). *World Health Report: 2001: Mental health: New understanding, new hope*. Geneva: World Health Organisation.
- Yeung, J.W. & Hofferth, S.L. (1998). Family adaptations to income and job loss in the U.S. *Journal of Family and Economic Issues*, *19*:255–83.
- Yeung, W.J., Linver, M.R. & Brooks-Gunn, J. (2002). How money matters for young children's development: Parental investment and family processes. *Child Development*, *73*, 1861-1879.
- Yoshikawa, H., Aber, J.L. & Beardslee, W.R. (2012). The effects of poverty on the mental, emotional and behavioural health of children and youth. Implications for prevention. *American Psychologist*, *67*, 272-284.
- Zahn-Waxler, C., Duggal, S. & Gruber, S. (2002). Parental psychopathology. In M.H. Bornstein (Ed.), *Handbook of Parenting, Volume 4. Social Conditions and Applied Parenting* (2nd ed., pp.295-327). New Jersey: Lawrence Erlbaum Associates.
- Zahn-Waxler, C., Klimes-Dougan, B. & Slattery, M.J. (2000). Internalising problems of childhood and adolescence: Prospects, pitfalls, and progress in understanding the development of anxiety and depression. *Development and Psychopathology*, *12*, 443-466.

APPENDIX

TABLE 19: MODEL OF DIRECT EFFECTS ON MOTHER'S HOSTILITY (N = 7981) AND WARMTH (N = 8008) [MOTHERS IN TWO-PARENT HOUSEHOLDS ONLY]

	Marital Satisfaction (Wave 2)	Hostility (Wave 2)	Marital Satisfaction (Wave 2)	Warmth (Wave 2)
Mother Marital Satisfaction Wave 1	0.209 ***		0.209***	
Mother Depression Wave 2	-0.188***	0.028***	-0.188***	-0.007***
Economic Strain Wave 2	-0.187***	-0.003	-0.186***	0.011***
Couple 2+ Children	0.109	0.075***	0.064	-0.065***
Mother's Age	-0.073***	-0.006***	-0.072***	0.002
Number Children	0.084**	-0.019***	0.081	-0.012**
Lower 2nd	-0.316**	-0.060**	-0.303	0.082***
Higher 2nd	-0.068	-0.042**	-0.069	0.039**
Post-Secondary	-0.037	-0.034**	-0.038	0.039***
Post-Grad	0.017	-0.006	0.017	-0.002
Migrant 11+	-0.327**	0.012	-0.331**	-0.017
Migrant 6-10	-0.087	0.053**	-0.078	-0.008
Migrant 1-5	-0.525***	0.020	-0.534***	-0.013
New Child Born Between Waves	0.129	0.021	0.177**	-0.076***
EAS Fussiness	-0.001		-0.000	
EAS Unpredictable	-0.011		-0.011	
Child has Chronic Illness	-0.139		-0.131	
Child has Behavioural Condition	0.004		0.180	
Female Child	0.038	-0.034***	0.036	-0.001
Mother Marital Satisfaction Wave 2		-0.016***		0.013***
R squared	0.167	0.066	0.167	0.034

Note: ** p < 0.05, *** p < 0.01. [CFI = 0.858; RMSEA = 0.090 for Hostility Model; CFI = 0.914, RMSEA = 0.064 for Warmth model].

TABLE 20: MODEL OF DIRECT EFFECTS ON FATHER'S HOSTILITY (N = 6240) AND WARMTH (N = 6259) [FATHERS IN TWO-PARENT HOUSEHOLDS ONLY]

	Marital Satisfaction (Wave 2)	Hostility (Wave 2)	Marital Satisfaction (Wave 2)	Warmth (Wave 2)
Father Marital Satisfaction Wave 1	0.215***		0.214***	
Father Depression Wave 2	-0.233***	0.026***	-0.231***	-0.008***
Mother Redundant	0.166	0.003	0.171	0.014
Father Redundant	-0.131	-0.006	-0.144	-0.001
Working Hours Reduced	-0.247***	0.002	-0.243**	0.002
Wages Reduced	0.146	-0.010	0.128	0.004
Social Welfare Reduced	0.103	0.014	0.112	0.017
Cannot Afford Luxuries	0.021	-0.003	0.028	0.025*
Cut Back Basics	0.035	-0.004	0.017	-0.002
Behind with Mortgage	-0.047	-0.001	-0.035	0.010
Behind with Utilities	0.016	0.026	0.005	0.032
Couple 2+ Children	-0.088	0.130***	-0.087	-0.090***
Father's Age	-0.035***	-0.007***	-0.035***	0.001
Number Children	0.085	-0.030***	0.081	-0.012
Lower 2nd	0.310	-0.107***	0.292	0.089***
Higher 2nd	0.209	-0.033	0.200	0.053***
Post-Secondary	0.069	-0.034	0.059	0.053***
Post-Grad	0.208	0.002	0.187	0.044**
Migrant 11+	-0.035	-0.019	-0.034	0.002
Migrant 6-10	-0.122	0.005	-0.116	0.023
Migrant 1-5	-0.482***	0.041**	-0.448***	0.005
New Child Born Between Waves	0.157	0.047***	0.149	-0.027**
EAS Fussiness	0.000		0.002	
EAS Unpredictable	-0.008		-0.011	
Child has Chronic Illness	-0.038		-0.043	
Child has Behavioural Condition	1.510**		1.377**	
Female Child	-0.084	-0.047***	-0.082	0.035***
Father Marital Satisfaction Wave 2		-0.022***		0.022***
R squared	0.139	0.073	0.138	0.049

Note: ** p < 0.05, *** p < 0.01. [CFI = 0.858; RMSEA = 0.090 for Hostility Model; CFI = 0.914, RMSEA = 0.064 for Warmth model].



**Growing Up
in Ireland**
National Longitudinal
Study of Children

If you would like further information about
Growing Up in Ireland, please visit

www.growingup.ie

e-mail growingup@esri.ie

or freephone 1800 200 434



An Roinn Leanai
agus Gnóthaí Óige
Department of Children
and Youth Affairs

Le ceannach díreach ó
FOILSEACHÁIN RIALTAIS,
52 FAICHE STIABHNA, BAILE ÁTHA CLIATH 2
(Teil: 076 1106 834 nó Riomhphost: publications@opw.ie)
nó trí aon díoltóir leabhar.

To be purchased from
GOVERNMENT PUBLICATIONS,
52 ST. STEPHEN'S GREEN, DUBLIN 2.
(Tel: 076 1106 834 or Email: publications@opw.ie)
or through any bookseller

ISBN 978-1-4468-8020-3



9 781446 880203