Mechanisms Linking Family Structure and Parental Depression: A Cross-National, Longitudinal Analysis

Kevin Shafer
Department of Sociology
Brigham Young University

Alex Wambach
Department of Sociology
Brigham Young University

Mikaela J Dufur
Department of Sociology
Brigham Young University

Abstract

Parental depression has significant effects on child wellbeing and family functioning. As a result, the identification of factors predicting parental depression is significant. While some research has addressed the impact of family structure stability and changes on parental depression, little work has focused on the mechanisms linking the two questions. We leverage data from both the US (ECLS-K) and UK (Millennial Cohort Study) to consider three commonly forwarded mechanisms linking family structure change to parental depression: changes in economic resources, increased stressors, and efficacy/resilience. The results suggest differences in parental depression patterns by family structure between the two countries. Furthermore, our results indicate that economic resources work differently in the two countries, while patterns for stressors and efficacy are more consistent between the US and UK. The effects of all three are particularly important for parents in non-traditional family structures and for individuals with family structure transitions.

Introduction

According to the U.S. Department of Health and Human Services (2014), depression affects about 16 million American adults every year. Because depression affects not only a victim's inner experience, but also the way they interact with their surroundings, the consequences can reach into the professional (Kessler, et al. 2006) and family (Goodman, et al. 2011) spheres. Depression in a family context might have particularly far-reaching consequences in the family system because of its consequences for the individual, their partner, and any children (Rehman, et al. 2015). In fact, depressed parents are less warm, less likely to monitor behavior, more likely to use harsh parenting techniques, and are generally less engaged compared to non-depressed parents (Goodman, et al. 2011). These differences in parenting lead to negative outcomes for children, including poorer health and academic performance (Downy and Coyne 1990). Thus, understanding the factors that influence parental depression may identify mechanisms that help parents and children alike.

While parental depression can be the result of a number of different factors, one factor in particular that we seek to understand is that of family structure transitions. Family structure transitions like marriage, divorce, or remarriage can be sources of stress and instability. There is evidence that these changes can affect parts of the family system, including children, in many ways (Brown, et al. 2015; Brown 2004). While there is a robust literature on how parental depression relates to child outcomes, relatively few studies have examined the family mechanisms that contribute to parental depression in the first place. This study aims to examine the association between different family structure transitions and parental depression and to specify the potential mechanisms that might explain this association.

Resources & Parental Depression

One potential mechanism that might help to explain an association between family structure transitions and parent mental health outcomes has to do with resources. Family structure transitions can serve as mechanisms that either dilute or consolidate family resources, and a lack of resources would likely lead to worse outcomes. For example, parents going through a divorce may face unaffordable legal expenses, or parents in stepfamilies might have child support responsibilities outside of their current marriage that divert resources. Sun and Li (2011) found evidence for this perspective when they found that family resources could account for differences in academic growth curves for children in disrupted and non-disrupted family structures, and Rettig, Leichtentritt, and Stanton (1999) found that divorced fathers had higher levels of family and life satisfaction when they were economically well-off. Given that financial strain is associated with adult depression in general (Zimmerman and Katon 2005), we might expect that financial status related to family structure transitions to also be related to depression.

Stress & Parental Depression

Another perspective holds that stress is the key to understanding outcomes related to family structure transitions (Sun and Li 2011). In this view, family structure transitions are moments of instability and unpredictability that generate stress and ultimately cause poor mental health outcomes. For parents, the stress of facing new roles as caregivers, new financial situations, and new relationship dynamics might be related to depression. While there is evidence that children who undergo family structure transitions have worse outcomes (Cavanagh & Huston 2008; Osborne and Mclanahan 2007), the picture is less clear on how stress related to family structure transitions has an effect on parent mental health.

Efficacy & Parental Depression

A third possibility is that certain people might simply be more capable of handling transitions than others, and that differences between outcomes are mostly the result of selectivity. For example, marriage is increasingly in the United States becoming a destination for well-educated adults (Furstenberg 2014; Tach et al. 2014). Because they are generally more educated, married parents might simply be more equipped to handle the adversity of stress and financial uncertainty compared to other groups. Another way to examine selectivity in this context is by measuring self-efficacy. Parental self-efficacy is a set of attitudes that parents hold about their ability to parent well and overcome challenges which might protect them from depression or depressive episodes. There is evidence that self-efficacy moderates the association between spousal support and stress (Lavenda and Kestler-Peleg 2017), and that self-efficacy is negatively correlated with recent mothers' experiences of post-partum depression (Leahy-Warren, McCarthy and Corcoran 2012). Self-efficacy, then, may provide protective effects during contextual changes like taking on new roles or family structures, and may play an important part in the current study.

A Cross-National Approach

One useful approach for distinguishing among these proposed mechanisms is through cross-national comparison. In this paper, we compare the United States and the United Kingdom. These countries share western capitalist values, a common political heritage, and a common language. However, a major difference between them that makes for an interesting comparison in the size and scope of the social safety nets in the two countries should provide insight into the ways access to resources might be associated with parental depression. If stress and resilience are the most powerful mechanisms connecting depression to family structure instability and they

operate in similar ways across countries, this would suggest that these are universal factors. However, if these mechanisms operate differently across countries, there is evidence that they are context dependent.

Research Questions

In this study, we focus on family structure transitions as a potential predictor of parental depression. We hope to define the ways in which resources, stress, and efficacy might exacerbate or attenuate the effects of family structure transitions on mental health. The following research questions guide our analysis:

1. *How is family structure stability or instability associated with parental depression?*

2. *How does the lack of resources affect the relationship between stability and parent depression?*

3. *How does stress affect the relationship between stability and parent depression?*

4. *Does resilience protect against parental depression in the case of family structure stability or instability?*

5. *Are the effects of family structure stability or instability on parent mental health different between the US and the UK? In other words, are these effects context-specific?*

Methods

Data

Our comparison includes two different datasets. The UK Millennium Cohort Study (MCS) tracks children born between 2000 and 2002. Our analysis uses sweeps 1 through 5; this means respondents were parents of children who were an average of 11 years old during the last sweep (Sweep 1 N=18,818; Sweep 5 N=13,469)

(https://www.cls.ioe.ac.uk/page.aspx?sitesectionid=851). Our data in the United States comes from the US Early Childhood Longitudinal Study, Kindergarten Class of 1998-99 (ECLS-K), which follows children from their entry into kindergarten up until the 8th grade (Wave 1 N=21,260; Wave 6 N=11,820) (https://nces.ed.gov/ecls/kindergarten.asp). We use the 5th grade wave in this study in order to match the average age of 11 years old in the MCS. Our analysis use waves 1-6, which mirror the age range in MCS, with the average age of the children at the last wave being around 11 years old. We also use retrospective data to capture parents' marital status and family structure at the time of birth in order to facilitate a longitudinal model. For both datasets, we use data on parental depression from the main parent questionnaires; while main parents in these surveys are generally mothers, there are fathers represented in the data (usually single fathers) as well.

Measures

Depression. In both the MCS and ECLS-K data, we construct depression scales using a series of mental health questions in the surveys. These include questions such as "How often do you feel hopeless?" or "How often do you feel like everything is an effort?". Respondents are asked to indicate if they experience various symptoms of depression none of the time, a little of the time, some of the time, most of the time, or all of the time. We code each answer from 0 to 5, with 5 indicating that the respondent feels the given symptom all of the time. Finally, we standardize both scales in order to facilitate comparison across datasets.

Family Structure and Disruptions. We construct family structure primarily through parent data, which includes responding parent's relationship to the child, their marital status, relationship of the partner to the child, and information from household rosters. We also use retrospective information from parents on relationship status and family structure at the time of

the child's birth (see Augustine and Kimbro 2013; Potter and Potter 2016 for similar approaches).

Three family structure categories capture stability in family structure over time:

Biological Married Stable: two parents who are the biological parents of the target child; married before child's birth and in all subsequent waves.

Biological Cohabiting Stable: two parents who are the biological parents of the target child; parents unmarried but co-residing before child's birth and in all subsequent waves.

Biological Single Stable: one biological parent who was single at child's birth and has neither married nor cohabited since the child's birth.

The remaining five family structure categories capture change or instability in family structure across time:

Non-married biological to married biological: child lives with both biological parents who married each other after the child was born.

Single parent family to stepfamily: child lives with one biological and one social parent who married after the child was born.

Single parent family to cohabiting: child lives with both unmarried biological parents who began cohabiting only after the child was born.

Single parent family to social family: child lives with one biological parent and one social parent who started cohabiting after the child was born. This is similar to the Post-Birth Stepfamily, though parents in the previous category married.

Non-single to single: child lives with one biological parent who became single after the child's birth. This includes parents who were divorced, separated, or widowed.

Independent Variables

Given our research questions, we have three key independent variables. First, we measure differences in resources through income and state support. We measure state support, which is time-varying, with a dummy variable where 0 indicates that the family does not receive state support, and 1 indicates that it does. Income is measured in quintiles in both datasets. Second, to test for stress, we constructed time-varying standardized scales including several measures that capture family stress like being unable to afford food, the threat of eviction, or strained familial relationships. We created similar scales in MCS and ECLS-K and standardized them both for easy comparison across contexts. Finally, we construct a parental efficacy scale as method of measuring parent resilience. For the MCS data, we use a question that asks mothers and fathers, "How good of a parent do you think you are?". Parents rated themselves on a 5-point scale where 1 is "not very good at being a parent" and 5 is "Very good at being a parent". In ECLS-K, we use a number of questions about parenting habits and attitudes to create a scale of parental efficacy, such as, "How often do you feel being a parent is harder than expected?", or "How often do you feel trapped as a parent?". While the questions are not perfectly aligned across the two datasets, we standardize both scales in order to make reasonable comparisons.

Controls

We control for time-variant and time-invariant factors in our model. Among our time-variant control variables are parent employment, residential mobility, home ownership, and household size. Employment is a series of dummy variables indicating if parents are employed full-time, employed part-time, or unemployed. Residential mobility is a dichotomous variable measuring if the respondent has moved since the last time they were interviewed for the study. Home ownership is a dichotomous variable where 1 indicates that the respondent is a

homeowner. Household size is a count of the number of people living in the respondent's home at the time of the survey.

Our time-invariant controls are child race, child gender, parental education, immigration status, and mother's age at childbirth. Child race is categorical variable that measures if the respondent is White, African or African-American, Hispanic, Asian, or Other. Child gender is a dichotomous variable where 1 indicates the child is a male. Parental education is a categorical variable where the categories are less than high school, high school, some college, first degree, and higher degree. Immigration status measures if both parents were born in the country where the survey took place, if one parent was born outside that country, or if both parents were born outside the country. Mother's age at birth is the reported age of the mother in years when the child was born.

Analysis

We used generalized estimating equation (GEE) models to estimate the effects of family structure changes, resources, stress, and efficacy on parental depression. We used GEE models because of their versatility across variance structures and because the time between ECLS-K and MCS waves is inconsistent from wave-to-wave.

Results

Table 1 reports the results for our key independent variables, although the models for each set of results include a full set of controls. The results show that there are no consistent patterns in the effect of family structure on parental depression. In the United States, the results indicate that stable single parents had, on average, depression scores 0.290 standard deviations higher than their stably married counterparts (p<.01). The transition from unmarried to married, on the other hand, reduced depression by an average of 0.232 standard deviations, compared to

stably married parents (p<.001). In the United Kingdom, the results indicate that stable

cohabiting parents were slightly more depressed, on average, than stably married parents (b=

0.044, p<.05). Transitions from unmarried to married (b= 0.073, p<.001), single to stepfamily

(b=0.182, p<.001), single parent to social family (b=0.090, p<.01), and non-single to single (b=

0.121, p<.01) all resulted in higher average parental depression scores, relative to stably married

parents.

We found evidence that resources were generally protective in both the United States and

United Kingdom. Respondents in the third, fourth, and fifth quintiles all had depression scores

that were, on average, lower than the first quintile. The same was true for all quintiles, compared

to the first quintile, in the United Kingdom. Meanwhile, state benefits had a substantial

protective effect for individuals in the United States (b=-0.358, p<.001), while the effect was

slightly positive in the United Kingdom (b=0.050, p<.05).

Stressors were associated with increased depressive symptoms in both the United States

and United Kingdom. In the United States, the average effect of each additional stressor was

associated with a 0.090 standard deviation increase in depression (p<.001). The analogous effect

in the United Kingdom was 0.162 standard deviations (p<.001). Conversely, parental efficacy

was strongly protective in both the United States (b= -0.266, p<.001) and the United Kingdom

(b=-0.193, p<.001).

Table 2 focuses on family structure and the moderating effects of resources, stress, and

efficacy on parental depression. With respect to resources, we used two moderators: income and

state support. The results show no clear patterns in either country between income and family

structure. For each quintile, there were significant findings in both countries, but there was no

consistency with particular family structures either within or between nations. This suggests that

any findings may be statistical noise. Meanwhile, state support had more consistent patterns. Across family structures, state support helped reduce gaps in depression between stably married parents and other family structures. In both the United States and United Kingdom, state support reduced depressive symptoms among stable cohabiting, stable single, and individuals transitioning from non-single to single family structures, although the effects were less pronounced than for stably married individuals. In the United States, a particularly sizeable negative effect was found for individuals that transitioned from single parenthood to a social family.

Turning to stressors, we found no consistent pattern in its moderating influence by family structure and the vast majority of effects were nonsignificant. However, the effect of efficacy was protective for all non-traditional family structures in the United States. In the United Kingdom, we found that efficacy was protective for stable cohabiting parents, parents that transitioned from single parent to a stepfamily, and from non-single to single. The effect was protective for stable single parents, as well—though it was less protective than for stably married individuals.

Discussion

Our study addresses the importance of three potential mechanisms linking family structure changes to parental mental health. Overall, the main effects models show that parents that have undergone a family structure transition may not be reliably different than stable, two-parent biological families when it comes to the parent's mental health, especially in the US. While some patterns in the UK data, though not every family transition type is significantly different from stable married biological families. On the other hand, income, state support, stress, and efficacy all appear to be important predictors of parent depression in both the US and UK.

One intriguing difference between the two countries is that state support is protective against depression for some marginalized family structures, such as those that are cohabiting or single in the United States, while it has the opposite effect for similar groups in the UK. This might be due to the fact that all UK citizens receive state benefits when they become parents (gov.uk 2018), but we defined state benefits in our study as additional benefits beyond the norm, which might have selected for parents who are already in a particularly dire situation compared to most in the UK.

The resource-based explanation of parent depression is somewhat supported by our results, as there are no clear interaction effects between income and family structure, but state support does seem to protect against depression for certain types of family structures. While it is a significant predictor of depression in our main effects model, there does not appear to be any clear pattern related to stress in our interaction models. Stress and depression have been strongly linked to each other in the past (Kessler 1997), but our results indicate that there may not be any additive effects of stress on depression based on different family structure transitions. Efficacy, on the other hand, had particularly robust effects on lowering depression scores for all family structures in the US. Strangely, the pattern is not quite so clear in the UK, but efficacy was generally protective.

While our findings provide several interesting insights into our understanding of parental mental health and family structure transitions, our findings related to state support and self-efficacy may have the clearest implications. Our study provides evidence that supporting parents undergoing changes in family structure, both economically and socially, can be protective against mental health issues related to non-traditional family structures and family structure changes.

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Table 1. GEE Results for Parental Depression in the United States (n=9,604, 48,020 person-years) and United Kingdom (n=14,906, 50,132 person-years)

	United States		United Kingdom	
Family Structure				
Stable cohabiting	0.018		0.044	*
Stable single	0.290	**	0.063	
Non-married to married	-0.232	***	0.073	***
Single parent to stepfamily	-0.04		0.182	***
Single parent to biological cohabiting	-0.094		0.042	
Single parent to social family	0.046		0.090	**
Non-single to single	0.068		0.121	**
Household Income				
Second	-0.028		-0.035	*
Third	-0.064	*	-0.067	***
Fourth	-0.090	**	-0.094	***
Top	-0.126	***	-0.121	***
State Benefits	-0.358	***	0.050	*
Stressors Scale	0.090	***	0.162	***
Parental Efficacy	-0.266	***	-0.193	***

Note: Model includes controls for residential mobility, parent employment, homeownership, household size, parent education, mother's age at birth, immigration status, child race, child age, and child gender. *p<.05 **p<.01 ***p<.001

Table 2. GEE Results with Moderating Effects of Resources, Stressors, and Efficacy in the United States (n=9,604, 48,020 person-years) and United Kingdom (n=14,906, 50,132 person-years)

	US		UK		US		UK		US		UK		US		UK	
Family Structure																
Stable cohabiting	0.028		-0.072		0.018		0.054	**	0.017		0.061	**	0.003		0.035	
Stable single	0.433	***	0.082		0.283	***	0.122		0.292	***	0.071		0.321	***	0.084	
Non-married to married	-0.116		0.226	***	-0.254	***	0.067	***	-0.228	***	0.068	***	-0.192	***	0.068	**
Single parent to stepfamily	0.002		0.319	***	-0.049		0.172	***	-0.037		0.209	***	-0.014		0.259	***
Single parent to biological cohabiting	-0.064		0.045		-0.101		0.047		-0.098		0.046		-0.079		0.039	
Single parent to social family	0.173	*	0.206	***	-0.016		0.083	**	0.051		0.091	**	0.064		0.112	**
Non-single to single	0.174	**	0.148	**	0.041		0.149	***	0.073		0.112	**	0.111	*	0.155	***
Second quintile *	0.064		-0.019													
Stable cohabiting	-0.041		0.136	*												
Stable single	-0.197	**	0.005													
Non-married to married	-0.102		-0.166	**												
Single parent to stepfamily	-0.065		-0.167													
Single parent to biological cohabiting	-0.008		-0.039													
Single parent to social family	-0.062	*	-0.162	*												
Non-single to single	-0.162		0.035													
Third quintile*	0.027		-0.045													
Stable cohabiting	-0.003		0.103													
Stable single	-0.216	*	0.043													
Non-married to married	-0.131		-0.141	*												
Single parent to stepfamily	-0.064		-0.079													
Single parent to biological cohabiting	-0.114		0.082													

Single parent to social family	-0.234	*	-0.197	**			
Non-single to single	-0.097		-0.054				
Fourth quintile *	-0.011		-0.072	*			
Stable cohabiting	0.081		0.171	**			
Stable single	-0.187		0.042				
Non-married to married	-0.152		-0.179	**			
Single parent to stepfamily	-0.012		-0.257	**			
Single parent to biological cohabiting	0.168		0.042				
Single parent to social family	-0.187		-0.045				
Non-single to single	-0.059		-0.078				
Fifth quintile *	-0.037		-0.093	**			
Stable cohabiting	0.273		0.165	*			
Stable single	-0.293	*	-0.046				
Non-married to married	-0.173	*	-0.205	**			
Single parent to stepfamily	-0.042		-0.309	**			
Single parent to biological cohabiting	-0.007		0.049				
Single parent to social family	-0.204		-0.159	*			
Non-single to single	-0.129		-0.066				
State support *					-0.563	***	0.206	
Stable cohabiting					-0.101	*	-0.256	*
Stable single					-0.189	*	-0.235	**
Non-married to married					-0.229		0.132	
Single parent to stepfamily					-0.157		0.006	
Single parent to biological cohabiting					0.135		-0.141	
Single parent to social family					-0.623	***	-0.061	
Non-single to single					-0.341	***	-0.198	**

	Model 1		Model 2	
Stressors	0.074	***	0.175	***
Stable cohabiting	0.012		-0.047	**
Stable single	0.037		0.011	
Non-married to married	0.073	**	-0.033	*
Single parent to stepfamily	-0.005		0.056	
Single parent to biological cohabiting	0.053		-0.025	
Single parent to social family	0.009		0.007	
Non-single to single	0.014		-0.028	
Efficacy	-0.195	***	-0.182	***
Stable cohabiting	-0.143	***	-0.057	**
Stable single	-0.166	***	0.067	**
Non-married to married	-0.123	**	0.009	
Single parent to stepfamily	-0.094	**	-0.124	**
Single parent to biological cohabiting	-0.113	***	0.019	
Single parent to social family	-0.148	***	-0.039	
Non-single to single	-0.134	***	-0.055	**

Note: Model includes controls for residential mobility, parent employment, homeownership, household size, parent education, mother's age at birth, immigration status, child race, child age, and child gender. *p<.05 **p<.01 ***p<.001