Family Complexity and Child Wellbeing: A Descriptive Portrait from the New ECLS-K Cohort
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Extended Abstract

Family complexity is on the rise in the U.S. as family formation patterns continue to diversify (Cherlin 2012). Over the course of recent decades, American families have experienced significant increases in single parenthood, and cohabiting and stepparent families (McLanahan and Percheski 2008). In addition, substantial rises in multipartner fertility (Carlson and Furstenberg 2006), family instability (Cherlin 2012), and the number of same-sex couples raising children (Gates 2012) have contributed to the diversification and expansion of family forms and driven widespread family change. One of the primary questions that has arisen in both political and scholarly spheres in response to these trends, and the question this paper seeks to address, is how are children faring in these increasingly complex family structures? Secondly, if children's outcomes differ across complex family types, are those differences due to differences in socioeconomic status, in family stability, or to family stress processes?

Scholarship from recent decades has done much to advance our understanding of how children fare in families that deviate from what has historically been considered the gold standard, the two biological married parent family, but the family categories under scrutiny have often been conceived somewhat broadly. The overall consensus from the literature indicates, for example, that relative to children in two biological married parent families, children in cohabiting and single parent families tend to do worse on a variety of developmental, health, and achievement outcomes (see Brown 2010 and Freeman and Brewer 2012 for reviews). Yet a

significant gap in the literature remains. For one, until recently the majority of studies on children's outcomes have either excluded or grouped together children in many types of complex families. For example, how outcomes for children in same-sex families compare relative to those in both traditional and other nontraditional family types is a question that remains to be thoroughly investigated from a national standpoint. Additionally, past studies have often drawn comparisons between children across family types but offered little explanation of the family conditions driving divergent (or similar) outcomes. An explicit focus on the mechanisms driving the pattern of outcomes for children in complex families is crucial for understanding how family contexts matter for children. These limitations are magnified by the recent increasing expansion of family configurations in the U.S., as extant research provides limited insight into the experiences of a fast growing number of children in complex and diverse family forms. In other words, one might question whether the inferences drawn from past studies that tended to mask family complexity speak to the experiences of children living in families that have experienced upheaval, repartnering, the addition of step or half siblings, adoption, and/or the societal disapproval of one's same-sex parents?

In this paper we aim to address these concerns on multiple fronts—first, using the new cohort (2010-2011) from the Early Childhood Longitudinal Kindergarten survey, a nationally representative dataset, we examine children in many different family structures by accounting for biological-, adoptive-, and step-parenthood, as well as parents' gender. We compare children in all family types to each other on a number of outcomes which range from development and behavior to academic achievement and health. In doing so we intend to provide the most comprehensive portrait possible of the differences and similarities among children in traditional and complex family structures. Examining children and families in such depth and detail helps

steer us toward a more nuanced understanding the possible family mechanisms driving particular child outcomes. In fact, the primary aim of this paper is to test some of the key proposed mechanisms that explain how family factors influence children—namely, family instability, family stress processes, socioeconomic status, and the presence of step or half siblings or mixed 'sibships' (see Percheski and Bzostek 2013). Our central question is not how children in complex family structures compare with regard to wellbeing, achievement, and health—though we address this—but rather *how* do complex families matter for children in this era of family diversity?

Data and Methods

The Early Childhood Longitudinal Study (ECLS-K), 2010-2011 cohort is a nationally-representative sample of kindergarteners in the academic year 2010-2011. Our analysis sample from the ECLS-K are children with non-missing family structure status in the fall kindergarten wave, and who have valid information on math achievement scores, reading achievement scores, internalizing behaviors (teacher reports), and externalizing behaviors (teacher reports) at either the fall or spring data collection (N = 13,330).

Measures

To classify the children into family structure categories, we utilize information about the biological parents, the household roster, the gender of respondents on the household roster, as well as the reported relationships of each person to each other. We categorize children as living in several family types: Two-biological-parent, married; Two-parent-biological, cohabiting; Single mother; Same-sex Parents; and Other family types. Ultimately, we hope to further classify children into one to two additional family types as well (potentially "single mother, never married" and "single mother, ever married").

Our measures of wellbeing span academic achievement, behavioral outcomes, and child health. To assess academic achievement, we utilize the math and reading cognitive assessments which the ECLS-K administers individually to each child twice per year. We standardize each score to have a mean of zero and a standard deviation of one. Similarly, the measures of internalizing and externalizing behaviors are scales which are standardized. Finally, our measure of child health is a parent-reported measure asking if the child's health is "excellent, very good, good, fair, or poor." Following typical practice when studying child health, we categorize "good, fair, and poor" as poor health in a dichotomous indicator.

Thus far, we control only for a few covariates: Mother's age (in years), child's race/ethnicity, socioeconomic status utilizing the ECLS-K's composite measure (which includes parental income, education, employment status, and occupational prestige in a standardized measure), the number of siblings in the household, and whether the primary caregiver (90% mothers) has work limitations, whether the primary caregiver is likely depressed, and whether the child is adopted.

Testing Mechanisms

One of the strengths of the new ECLS-K cohort for family complexity research is its rich set of potential mechanism measures which might explain differences in child wellbeing by family structure. For example, for PAA, we plan to assess whether accounting for family instability, family stress processes, and a comprehensive set of socioeconomic characteristics mediate some of the observed differences in child wellbeing by family structure.

Analysis

For this extended abstract, we assess bivariate differences in our child wellbeing and control measures by family structure; we present preliminary regression models predicting child

wellbeing; and we generate adjusted predictions of the child wellbeing measures to assess whether each family type differs from each other across our outcomes.

Results (In Brief!)

When we compare two-biological parent, married families to all other family types in Table 1, as expected, children in other family types fare worse across all outcomes in bivariate analyses. Children in two-biological parent, cohabiting families; in single mother families; in same-sex families; and in other family types score lower on math and reading tests; and higher on internalizing and externalizing behavior assessments. Children outside of two-biological parent married families also have lower rates of poor health relative to children in cohabiting and children in single mother families. When we look at how the control measures compare across family types, we see some suggestion that accounting for differences in SES across family types may reduce differences in child wellbeing. Children in two-biological parent, married households are more likely to be white; have older mothers; live in higher SES households, and are less likely to have primary caregivers with physical or mental health problems.

Table 2 presents very preliminary nested regression models which account for our covariates. Despite accounting for SES and several other factors (in the second model for each outcome), significant differences between children in two-biological parent, married households and children in all other family types persist. In our revised version of the paper for PAA, we plan to add successive models with our potential mechanisms to explain these family structure differences in child wellbeing.

Finally, Table 3 presents adjusted predicted values (for the linear wellbeing outcomes) and predicted probabilities (for child's poor health) for each family type, as well as pairwise comparisons of each estimate, so that we may compare each family type to all of the others.

With the exception of poor health, children in two-biological parent, married households fare best and are significantly better than children in other family types. Children in two-biological parent, cohabiting households have significantly higher wellbeing from those same-sex parent households across each measure (with the exception of poor health). They also fare better than children in single-mother household on externalizing behaviors. Children in single-mother households fare better than those in same-sex households across all outcomes except poor health. We don't focus on children in "other" family types here, because they are a heterogeneous group, but they tend to fare somewhat better than children in same-sex households but worse than children in other types of households.

It is important to note that these are preliminary results only adjusted for a few factors. Once we are able to take the parents' relationship history and stability into account, as well as family stress mechanisms and a richer array of socioeconomic factors, we expect to see much smaller differences in child wellbeing across family types, and we hope that the paper will contribute to the literature on family complexity and child wellbeing in several ways. First, by utilizing the newly-available ECLS-K 2010-2011, we can provide estimates from a large, nationally-representative sample with a wide array of child wellbeing measures and take advantage of the excellent family structure information to explore child wellbeing across complex family types. And most importantly, we can account for a variety of potential mechanisms which may explain the observed differences in child wellbeing across family types.

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Table 1: Selected Descriptive Statistics, ECLS-K 2010-2011 Kindergarten Cohort, by Child's Family Type										
		Family Type								
	Full Sample	Two Biological Parents - Married	Two Biological Parents - Cohab		Single		Samesex		Other	
	N = 13,370	N = 8,300 (59%)	N = 850 (7%)		N = 2,950 (22%)		N = 200 (1.5%)		N = 1,080 (8%)	
	Mean (SD) or %	Mean (SD) or %	Mean (SD) or %		Mean (SD) or %		Mean (SD) or %		Mean (SD) or %	
Child Wellbeing Outcomes										
Reading Scores (standardized)	.03 (.99)	.24 (.93)	-.39 (1.03)	***	-.30 (.98)	***	-.33 (1.06)	***	-.20 (.98)	***
Math Scores (standardized)	.04 (.99)	.22 (.99)	-.37 (.96)	***	-.26 (.91)	***	-.23 (.91)	***	-.20 (.90)	***
Externalizing Behaviors (standardized)	-.02 (.99)	-.15 (.89)	-.01 (.98)	***	.22 (1.11)	***	.55 (1.22)	***	.28 (1.13)	***
Internalizing Behaviors (standardized)	-.02 (.99)	-.08 (.92)	.06 (1.06)	***	.09 (1.07)	***	.31 (1.13)	***	.05 (1.03)	***
Good/Fair/Poor Health (dichotomous)	0.10	0.09	0.13	***	0.12	***	0.12		0.10	
Child and Family Characteristics										
Child is male	0.51	0.51	0.52		0.51		0.54		0.51	
Child's age (in months)	74.7 (4.6)	74.5 (4.5)	74.2 (4.6)		74.9 (4.7)	***	75.4 (5.6)	**	75.5 (4.9)	***
Race/ethnicity										
Non-Hispanic White (ref)	0.51	0.59	0.3	***	0.33	***	0.52		0.51	**
Non-Hispanic Black	0.13	0.06	0.12	***	0.32	***	0.16	***	0.16	***
Hispanic	0.23	0.20	0.48	***	0.25	**	0.21		0.23	
Other	0.06	0.05	0.05		0.07	***	0.11	**	0.08	**
Mother's age (in years)	34.3 (6.8)	35.5 (5.6)	31.3 (6.0)	***	31.7 (6.7)	***	42.1 (11.0)	***	32.0 (9.1)	***
Socioeconomic status (composite, std)	-.04 (.81)	.23 (.78)	-.57 (.57)	***	-.49 (.69)	***	-.24 (.70)	***	-.39 (.59)	***
Number of siblings in household	1.47 (1.12)	1.55 (1.06)	1.54 (1.23)		1.25 (1.15)	***	.73 (.94)	***	1.43 (1.26)	**
Primary caregiver has work limitations	0.06	0.04	0.07	**	0.08	***	0.17	***	0.10	***
Primary caregiver likely depressed	0.06	0.05	0.08	***	0.10	***	0.09	***	0.09	**
Child is adopted	0.02	0.02	0.00	**	0.01	**	0.02		0.00	
***p<.001; **p<.01; *p<.05										
Note: Significance tests represent significant differences from two-parent biological families.										

Table 2: Preliminary OLS Regression Results[1] for Five Child Wellbeing Outcomes (N = 13,370)																				
	Math Scores				Reading Scores				Externalizing Behaviors				Internalizing Behaviors				Child in Poor Health (logit)			
	Model 1a		Model 1b		Model 2a		Model 2b		Model 3a		Model 3b		Model 4a		Model 4b		Model 5a		Model 5b	
	b		b		b		b		b		b		b		b		log odds		log odds	
																	coef.		coef.	
Child is male	-0.04	*	-0.02		-0.16	***	-0.15	***	0.41	***	0.41	***	0.07	***	0.07	***	0.13	*	0.13	*
Child's age (mos)	0.05	***	0.05	***	0.04	***	0.04	***	0.00		0.00		0.00		0.00		0.00		0.01	+
Family Structure																				
Two biological parents, married (ref)																				
Two biological parents, cohat	-0.61	***	-0.16	***	-0.58	***	-0.17	***	0.14	***	0.09	*	0.14	***	0.13	**	0.40	***	0.19	
Single mother	-0.55	***	-0.13	***	-0.49	***	-0.14	***	0.37	***	0.23	***	0.17	***	0.15	***	0.30	***	0.11	
Same-sex parents	-0.61	***	-0.53	***	-0.48	***	-0.49	***	0.69	***	0.71	***	0.39	***	0.35	***	0.30		0.14	
Other family type	-0.48	***	-0.09	**	-0.45	***	-0.11	**	0.43	***	0.36	***	0.13	***	0.10	*	0.06		-0.10	
Race/ethnicity																				
Non-Hispanic White (ref)																				
Non-Hispanic Black			-0.20	***			0.08	*			0.10	**			-0.14	***			0.13	
Hispanic			-0.25	***			-0.13	***			-0.07	*			-0.08	**			0.52	***
Other			0.10	***			0.19	***			-0.05	+			-0.08	*			0.45	***
Mother's age (years)			0.01	***			0.01	***			0.00				0.00	*			0.01	
SES (composite)			0.42	***			0.43	***			-0.08	***			-0.04	**			-0.46	***
Number of siblings in household			-0.06	***			-0.09	***			-0.05	***			0.01				0.02	
Primary caregiver has work limitations			-0.11	**			-0.10	**			0.05				0.12	**			0.33	**
Primary caregiver likely depressed			-0.12	***			-0.10	**			0.12	***			0.12	**			0.55	***
Child is adopted			-0.33	***			-0.34	***			0.41	***			0.14	+			-0.32	
Constant	-3.16	***	-3.48	***	-2.40	***	-2.88	***	-0.21		-0.11		-0.19		-0.19		-2.61	***	-3.63	***
1 - Child in poor health is modeled with logistic regression.																				

Table 3: Predicted Values for Child Wellbeing Outcomes, Adjusted for Covariates, by Family Type										
	Math		Reading		Extern.		Intern.		Poor Health	
Two biological parents, married	0.16	b,c,d,e	0.16	b,c,d,e	-0.13	b,c,d,e	-0.09	b,c,d,e	0.12	-
Two biological parents, cohabiting	0.00	a,d	-0.01	a,d	-0.04	a,c,d,e	0.04	a,d	0.13	-
Single mother	0.03	a,d	0.02	a,d	0.10	a,b,d,e	0.06	a,d,e	0.13	-
Same-sex parents	-0.37	a,c,d,e	-0.33	a,b,c,e	0.58	a,b,c,e	0.26	a,b,c,d	0.13	-
Other family type	0.07	a,d	0.05	a,d	0.23	a,b,c,d	0.01	a,d	0.11	-
Note: Poor Health values are predicted probabilities of poor health.										
All significant differences from pairwise comparison tests and p<.05										
a = sig. different from two biological parents, married										
b = sig. different from two biological parents, cohabiting										
c = sig. different from single mother family										
d = sig. different from same-sex family										
e = sig. different from other family type										