Childcare Instability and Maternal Depressive Symptoms: Exploring New Avenues for Supporting Maternal Mental Health

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ABSTRACT

OBJECTIVE: We investigated links between childcare experiences—specifically, care instability and mothers' perceptions of care access—and maternal depressive symptoms in an effort to illuminate policy-amenable mechanisms through which childcare experiences can support maternal mental health.

METHODS: Data were taken from the nationally representative Early Childhood Longitudinal Study−Birth Cohort. We used regression models with lagged dependent variables to estimate associations between aspects of childcare instability and perceptions of care availability and maternal depressive symptoms. We did so on the full sample and then on subgroups of mothers for whom childcare instability may be especially distressing: mothers who are low income, working, single, or non-native speakers of English.

RESULTS: Childcare instability—length in months in the longest arrangement and number of arrangements—was not associated with maternal depressive symptoms. However, mothers' perceptions of having good choices for care were associated with a reduced likelihood of clinical depressive symptoms, even after controlling for prior depressive symptoms and concurrent parenting stress; this latter association was observed both in the full sample (adjusted odds ratio [AOR] = 0.77; 95% confidence interval [CI] = 0.63−0.96) and among subgroups of employed mothers (AOR = 0.71; CI = 0.57−0.87) and single mothers (AOR = 0.72; CI = 0.52−0.99).

CONCLUSIONS: Although dimensions of care instability did not associate with maternal depressive symptoms, mothers' perceptions of available care options did. If replicated, findings would highlight a previously unconsidered avenue—increasing care accessibility and awareness of available options—for promoting maternal mental health in a population likely to experience depression but unlikely to be treated.

KEYWORDS: childcare availability; childcare choices; childcare instability; maternal depression

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WHAT'S NEW

Maternal depression negatively impacts family and child well-being. This study finds that mothers' perceptions of available childcare options for their young children are associated with reduced maternal depressive symptoms, pointing to new potential pathways for supporting maternal mental health.

MATERNAL DEPRESSION JEOPARDIZES healthy child development. Depressed mothers tend to be less responsive, less stimulating, and more hostile than non-depressed mothers,[1−4] which places their children at risk for more behavior problems and poorer cognitive skills.[1,3,5−7] Maternal depression experienced during early childhood (birth to age 5) may be especially detrimental because this is a period of rapid brain development that gives rise to children's foundational cognitive and social-emotional functioning.[8] Unfortunately, depression rates among mothers of young children are sizable (8% to 24%),[9,10] and only about 38% of depressed mothers are likely to receive treatment.[11−13]

The link between maternal depression and impaired parenting practices and child outcomes, against the backdrop of high rates of maternal depression and low rates of treatment, has directed public health professionals to champion prevention.[14,15] However, many prevention strategies focus on individuals' behaviors rather than on population-wide causes of maternal depression that reside further upstream[16] and are modifiable by programs and policies. We propose that childcare instability and mothers' perceptions of limited care availability may be some of those upstream, policy-amenable causes.

In theory, childcare instability and mothers' perception of limited care availability may increase mothers' stress and lead to depression for at least 4 reasons. First, selecting a new childcare provider is stressful, both because it can be difficult to identify a provider who meets a mother's criteria (eg, quality, affordability, location, hours) and because the selected provider may not have an opening available. Second, implementing a new childcare arrangement is stressful because it requires a change in family routines and the child's adaptation to a new environment. Third, the reason a childcare arrangement ends may itself be a source of stress, such as residential or employment instability or the birth of a new child. Fourth, instability, measured as both changes in care over time and multiple concurrent arrangements, has been found to result in child behavior problems,[17–21] which in turn cause maternal stress.[22] Given that maternal parenting stress links to increased depressive symptoms,[23,24] it is plausible that childcare instability increases maternal stress *and* depressive symptoms.

It is encouraging that childcare instability and knowledge of available care options are amenable to policy and program intervention, which is particularly relevant for groups of mothers most likely to experience unplanned care instability. For instance, pediatricians could provide parents of young children with lists of licensed childcare settings and other neighborhood resources for locating care during well-child visits. Childcare program directors and staff can work with families to ensure continuous enrollment, which is especially important for low-income families, who are more likely to experience changes in residential or economic status, which could trigger a childcare exit. Thus, in the absence of formal mental health treatment, increasing the stability of childcare and informing mothers of available care options might help to reduce or prevent depressive symptoms.

Despite the risk that childcare instability poses to maternal mental well-being, little empirical evidence exists to address this question. Only 2 studies have explored the association between childcare instability and maternal mental health, and both examined whether parenting stress mediated the link between instability and child behavior problems.[18,21] In 1 study, there was no evidence that parenting stress mediated the association between instability (defined as multiple concurrent arrangements) and child behavior problems.[18] In the other, authors found that stress partially mediated the link between instability (defined as the number of arrangements a child experienced between ages 1 and 3) and behavior problems but that any significant associations between instability and stress disappeared when a prior measure of parenting stress was controlled for.[21] These results suggest that rather than stress resulting in childcare instability, mothers who were more stressed to begin with were more likely than less stressed mothers to later experience instability. In subsequent subgroup analyses, authors found that for single-mother and low-income families, another measure of instability—needing to use back-up arrangements—was associated with small increases in parenting stress even after controlling for earlier stress levels. These findings point to the need to explore multiple aspects of instability and care availability and to consider subgroups of mothers for whom instability might matter most, as patterns might differ by these factors. Furthermore, it is possible that these findings are specific to maternal stress and do not characterize links to other aspects of maternal mental health, such as depression.

The current study used data from a nationally representative sample of mothers with young children to assess links between childcare instability (between the ages of 2 and 4) and maternal depressive symptoms. Specifically, we asked whether 2 dimensions of childcare instability are associated with increased depressive symptoms among mothers with young children, considering both care duration as well as number of concurrent care arrangements (multiplicity). We defined care duration as the length of time (in months) of the child's longest care arrangement between 2 and 4 years.[25–27] Consistent with prior studies,[18,21,28,29] we defined multiplicity as the number of concurrent care arrangements used. Reasoning that there may be differences in depressive symptoms depending on both aspects of childcare stability, we also examined whether there was an interaction between them in predicting maternal depressive symptoms. For example, if 2 mothers each had 3 concurrent arrangements—one of whom had at least one very long arrangement and one whose arrangements were all shorter—we might consider the first to have greater overall stability and therefore be less at risk for high depressive symptoms.

We also considered the possibility that mothers' perceptions of care availability (ie, having good childcare choices in the community) might predict depressive symptoms. We reasoned that regardless of whether a mother's care is unstable or not, it could be that her perception that she has more available options might reduce the risk of increased depressive symptoms, because if one arrangement falls through she could theoretically easily secure another. We tested these theories on the full sample of mothers and then on 4 subsamples of mothers for whom childcare instability and perceptions of care options may be particularly strongly associated with mental health: 1) low-income mothers, who may be in greatest need of the income from employment and thus might find instability to be most stressful;[21] 2) working mothers, because they need stable childcare to be able to work;[30] 3) single mothers, because their back-up care options (other adults) may be limited;[31] and 4) non–English-speaking mothers, because they may have more constraints to finding suitable care and thus instability may be particularly harmful for them.[32–34]

METHOD

DATA AND SAMPLE

The Early Childhood Longitudinal Study–Birth Cohort (ECLS-B) is a nationally representative study of 10,700 children born in the United States in 2001. Mothers were interviewed and children were assessed in 2001 (9 months

old; wave 1); in 2003 (2 years old; wave 2); in 2005−2006 (4 years old; wave 3); and in 2006−2007 (kindergarten). The current study uses data from the first 3 waves, for which response rates were 74%, 93%, and 91%, respectively.

For our main analysis, we limited the sample to mothers in the ECLS-B who 1) had a child in a regular nonparental care arrangement for 10 or more hours per week, and 2) had complete data on self-reported depressive symptoms at the 2- and 4-year waves. This yielded a sample size of N $\approx$ 6800 (all sample numbers rounded to the nearest 50 per ECLS-B data security requirements). In subsequent analyses examining subgroups of mothers theoretically most at risk for depression arising from childcare instability, we further limited our sample to mothers who were 1) low-income, defined as having household incomes at or below 185% of the federal poverty line at 4 years (n $\approx$ 2850); 2) working, defined as being employed full-time (35 hours or more per week) or part-time (fewer than 35 hours per week), participating in some nonwork activity, or looking for work at 4 years (n $\approx$ 5300); 3) single at 4 years, which excludes married mothers (n $\approx$ 2000); and 4) non-English speaking, defined as mothers who self-report that their primary home language is not English (n $\approx$ 1200).

This research was exempt from Georgetown University Institutional Review Board review because it used previously collected, de-identified data and is thus not considered research with human subjects.

MEASURES

INDEPENDENT VARIABLES

The key independent variables in the current study are dimensions of childcare instability. Following prior studies,[21,25,29,35] this includes care duration, the number of months the child spent in their longest arrangement, as well as multiplicity, the number of distinct arrangements the child experienced at the 4-year wave. At 2 and 4 years, mothers were asked about all current childcare arrangements and how many hours the child spent in each arrangement. Of each type of care (non−Head Start center-based care, Head Start, relative home-based care, nonrelative home-based care), a primary arrangement was determined based on the number of hours in each arrangement. Of these primary arrangements, mothers were asked how old the child was when he or she started. Care duration is drawn from 4 years and is a continuous variable that represents the length, in months, of the primary arrangement that the child had been in for the longest at that time. We did not include any months that began before the 2-year wave to ensure proper temporal ordering of our measure and depression at the 4-year wave. Multiplicity is a count of concurrent arrangements of any type that children experienced at 4 years and was coded as a binary variable representing 1 or 2 or more arrangements. We also experimented with 3 indicator variables representing whether the child experienced 1, 2, or 3 or more arrangements, and results were unchanged.

As mentioned earlier, we also hypothesized that mothers' perceptions of available care might be associated with maternal depressive symptoms. Thus we included a measure of maternal report of whether she believed there were good choices for care where she lived, measured at 4 years.

DEPENDENT VARIABLE

Maternal depressive symptoms, the key dependent variable, was measured using the Center for Epidemiological Studies Depression Scale (CES-D) at 4 years. The CES-D included 12 items asking mothers to assess, for instance, how often they had lost their appetite, felt blue, or felt that everything was an effort in the past 7 days (0 [rarely/never], 1 [some/a little], 2 [occasionally/moderately], or 3 [most/all the time]), and items were summed. We then dichotomized these scores using the CES-D clinical cutoff, considering those with raw scores greater than 9 to have clinically significant, or "high," depressive symptoms. We also experimented with coding depression as a continuous variable indicating the number of depressive symptoms mothers reported experiencing, and results were nearly identical to those presented here. All results from models with alternative coding schemes are available from the first author on request.

COVARIATES

Given that our analysis sought to identify correlations between childcare experiences and maternal depressive symptoms, we controlled for other plausible pathways between childcare experiences and maternal mental health, such as parenting stress. Specifically, we controlled for a measure of mothers' self-reported parenting stress index[36] from 4 years. Additionally, all models controlled for a prior measure of maternal depressive symptoms, drawn from 2 years, when the ECLS-B used the Composite International Diagnostic Interview−Short Form to assess maternal depressive symptomology. The inclusion of this lagged outcome reduces omitted variable bias by accounting for time-invariant family characteristics via adjustment for unobserved variables associated with prior depressive symptoms,[37] thus isolating our estimates to what occurred during the 2- and 4-year waves only. Finally, we included a comprehensive set of 17 household economic and demographic variables theoretically or empirically linked with maternal depressive symptoms, childcare experiences, or both, including the type of care the child attended at 4 years. Except where noted, all covariates were drawn from baseline, when children were 9 months old (though when available, we include descriptive statistics on these variables from the 9-month, 2-year, and 4-year waves in Table 1). All covariates are listed in Table 2.

STATISTICAL ANALYSES

Across all analyses, missing data on covariates were multiply imputed using the imputation for chained equations procedure in Stata14; estimates were combined across 20 imputed datasets using MIM. The *svy* command was used in all regression analyses to accommodate constructed survey weights, which account for the study's complex design and survey nonresponse and maintain the

Table 1. Descriptive Statistics

	Full Sample (n ≈ 6800)		Low Depressive Symptoms (n ≈ 5000)		High Depressive Symptoms (n ≈ 1800)		*P*
	Mean/%	SD	Mean/%	SD	Mean/%	SD	
Maternal mental health							
Mother has high depressive symptoms (CES-D; 4 years)	25.70%		0.00%		100.00%		
Low-income mothers	34.44%		0.00%		100.00%		
Working mothers	26.44%		0.00%		100.00%		
Single mothers	34.64%		0.00%		100.00%		
Non−English-speaking mothers	22.38%		0.00%		100.00%		
Mother has high depressive symptoms (CIDI-SF; 2 years)	9.76%		6.46%		19.32%		***
Maternal parenting stress (range: 5−20; 4 years)	9.93	3.28	9.42	3.04	11.40	3.49	***
Childcare characteristics							
Care duration (in months)	19.58	10.75	19.58	10.69	19.57	10.92	
Child was in 1 care arrangement	70.08%		71.42%		66.19%		**
Child was in 2+ arrangements	29.92%		28.57%		33.81%		**
Child was in center-based care	71.95%		72.89%		69.25%		
Mother reported having good choices for child care	78.95%		80.70%		73.89%		***
Maternal characteristics							
Maternal education							
Less than high school	16.04%		13.98%		22.01%		***
High school/GED	27.56%		26.02%		32.00%		**
Some college	28.59%		28.95%		27.55%		
BA+	27.81%		31.05%		18.44%		***
Race							
White	59.10%		60.91%		53.89%		***
Black	14.66%		12.40%		21.17%		***
Hispanic	20.31%		20.88%		18.66%		
Asian/other	5.93%		5.81%		6.27%		
Mother is married							
9 months	66.80%		70.40%		56.38%		***
2 years	68.20%		71.97%		57.27%		***
4 years	68.68%		72.45%		57.81%		***
Mother is an immigrant	18.42%		19.22%		16.14%		
Home language is not English							
9 months	11.88%		12.53%		9.97%		*
2 years	16.19%		16.89%		14.17%		
4 years	15.91%		16.61%		13.86%		
Mother older than 20 years at time of child's birth	89.06%		90.08%		86.09%		**
Number of children under age 6 in household	0.64	0.76	0.63	0.75	0.64	0.78	
Number of children over age 7 in household	0.44	0.83	0.40	0.78	0.54	0.95	***
Live in urban area	73.94%		74.72%		71.70%		
Mother works							
9 months	71.35%		71.09%		72.12%		
2 years	71.92%		71.23%		73.92%		
4 years	77.02%		76.28%		79.16%		
Average income across waves	$57,738.24	$44,556.57	$62,818.22	$45,605.63	$43,049.49	$37,191.27	***
Family below 185% of FPL							
9 months	43.99%		39.55%		56.82%		***
2 years	41.94%		37.20%		55.63%		***
4 years	42.44%		37.45%		56.87%		***
Household receives some benefits	52.40%		47.89%		65.42%		***
Child characteristics							
Child has a disability	6.65%		6.42%		7.31%		
Child is male	51.63%		52.08%		50.32%		
Child age (months)	52.50	3.99	52.50	3.92	52.49	4.20	

CES-D indicates Center for Epidemiological Studies Depression Scale; CIDI-SF, Composite International Diagnostic Interview−Short Form; FPL, federal poverty level; GED, general equivalency diploma; NCES, National Center for Education Statistics; SD, standard deviation.

All estimates are weighted by NCES replicate weights W3R1−90. All sample numbers are rounded to the nearest 50 per NCES requirements.

*$P < .05$.

**$P < .01$.

***$P < .001$.

Table 2. Weighted Logit Regression Models Predicting High Maternal Depressive Symptoms as a Function of Childcare Stability, Controlling for 2-Year Maternal Depressive Symptoms and All Covariates—Full Sample

	Model 1				Model 2			
	AOR	95% CI		*P*	AOR	95% CI		*P*
Childcare characteristics								
Length of longest arrangement (months)	1.00	0.99	1.00		1.00	0.99	1.01	
Child was in 2+ care arrangements	1.18	0.95	1.46		1.53	0.91	2.57	
Childcare stability* 2+ arrangements					0.99	0.97	1.01	
Child was in center-based care	0.94	0.76	1.16		0.95	0.77	1.17	
Mother reported having good choices for childcare	0.77	0.62	0.95	*	0.77	0.63	0.96	*
Maternal mental health								
2-year maternal depression	2.78	2.15	3.59	***	2.78	2.15	3.60	***
Maternal parenting stress	1.19	1.16	1.23	***	1.19	1.16	1.23	***
Maternal characteristics								
Maternal education								
High school (ref.)								
High school/GED	0.94	0.69	1.28		0.94	0.69	1.28	
Some college	0.89	0.65	1.22		0.89	0.65	1.22	
BA+	0.67	0.46	0.97	*	0.66	0.46	0.97	*
Race								
White (ref.)								
Black	1.19	0.93	1.53		1.19	0.93	1.53	
Hispanic	0.80	0.60	1.06		0.80	0.60	1.06	
Asian/other	1.04	0.77	1.42		1.04	0.77	1.41	
Mother is married	0.92	0.73	1.14		0.92	0.73	1.14	
Mother is an immigrant	0.83	0.59	1.17		0.83	0.59	1.17	
Mother older than 20 years at time of child's birth	1.18	0.91	1.53		1.17	0.90	1.53	
Number of children under age 6 in household	0.90	0.82	1.00	*	0.90	0.82	1.00	*
Number of children over age 7 in household	1.14	1.04	1.24	**	1.14	1.04	1.24	**
Live in urban area	1.06	0.84	1.34		1.06	0.84	1.34	
Mother works	1.06	0.86	1.29		1.06	0.86	1.30	
Family below 185% of FLP (2-year wave)	0.90	0.72	1.14		0.91	0.72	1.14	
Family below 185% of FLP (4-year wave)	1.41	1.10	1.81	**	1.41	1.10	1.81	**
Household receives some benefits	1.28	0.98	1.67		1.28	0.98	1.67	
Mother is fluent in English	0.85	0.60	1.19		0.85	0.61	1.20	
Child characteristics								
Child has a disability	1.05	0.76	1.44		1.05	0.76	1.44	
Child is male	0.95	0.81	1.11		0.95	0.81	1.11	
Child age (months)	1.00	0.97	1.02		1.00	0.97	1.02	

AOR indicates adjusted odds ratio; FPL, federal poverty level; GED, general equivalency diploma; NCES, National Center for Education Statistics.

N ≈ 6800. All estimates are weighted by NCES replicate weights W3R1–90. All sample numbers are rounded to the nearest 50 per NCES requirements. Model 1 predicts high maternal depressive symptoms from childcare instability (in both length and number of arrangements); whether the child was in center-based care; whether the mother reported having good choices for care; 2-year depressive symptoms; and maternal stress and all covariates. Model 2 estimates this relationship and adds an interaction term between the 2 aspects of childcare instability.

*$P < .05$.

**$P < .01$.

***$P < .001$.

nationally representative nature of the estimates. The *subpop* command was applied so that standard errors account for cases excluded from the analytic sample because children were not in any nonparental care or, for the various subgroup analyses, the mother did not meet the respective sample selection criteria.

We fit logit regression models separately for the full sample and each subsample to estimate whether our 2 features of childcare instability, as well as their interaction, are associated with clinically significant maternal depressive symptoms after controlling for a lagged measure of maternal depressive symptoms and all household and demographic variables referred to previously. We report adjusted odds ratios to reflect the inclusion of covariates in each model.

RESULTS

Descriptive statistics for all study variables are presented in Table 1. At 4 years, approximately 26% of mothers in the full sample reported clinical levels of depressive symptoms. The average length of children's longest care arrangement was about 19.67 months (SD = 10.76), and about 30% of children were in 2 or more childcare arrangements. Most (78.79%) mothers reported having good choices for childcare.

Logit regression results are shown in Tables 2 and 3. In Table 2, model 1 predicts high maternal depressive symptoms from childcare instability (in both care duration and multiplicity), whether the child was in center-based care, whether the mother reported having good childcare

Table 3. Weighted Logit Regression Models Predicting Maternal Depression Status as a Function of Child Care Stability, Controlling for 2-Year Maternal Depressive Symptoms and All Covariates for the Full Sample and Each Subgroup

	Full Sample (n ≈ 6800)				Low-Income (n ≈ 2850)				Working (n ≈ 5300)				Single (n ≈ 2000)				Non−English-Speaking (n ≈ 1200)			
	AOR	95% CI		P	AOR	95% CI		P	AOR	95% CI		P	AOR	95% CI		P	AOR	95% CI		P
Childcare characteristics																				
Length of longest arrangement (months)	1.00	0.99	1.01		1.01	0.99	1.02		0.99	0.99	1.00		1.00	0.98	1.01		1.00	0.98	1.03	
Child was in 2+ care arrangements	1.53	0.91	2.57		2.16	1.12	4.15	*	1.59	0.93	2.70		1.38	0.60	3.16		1.86	0.55	6.34	
Childcare stability* 2+ arrangements	0.99	0.97	1.01		0.97	0.95	1.00	*	0.98	0.96	1.01		0.99	0.96	1.02		0.98	0.94	1.03	
Child was in center-based care	0.95	0.77	1.17		1.01	0.79	1.29		0.96	0.77	1.19		1.13	0.83	1.54		0.84	0.47	1.49	
Mother reported having good choices for childcare	0.77	0.63	0.96	*	0.68	0.58	1.05		0.71	0.57	0.87	**	0.72	0.52	0.99	*	0.56	0.30	1.05	
Maternal mental health																				
2-year maternal depression	2.78	2.15	3.60	***	2.56	1.84	3.56	***	2.58	1.91	3.50	***	2.43	1.63	3.64	***	3.43	1.05	11.25	*
Maternal parenting stress	1.19	1.16	1.23	***	1.15	1.11	1.19	***	1.21	1.17	1.25	***	1.20	1.15	1.26	***	1.15	1.08	1.21	***

AOR indicates adjusted odds ratio; CI, confidence interval; FPL, federal poverty level; NCES, National Center for Education Statistics.

All estimates are weighted by NCES replicate weights W3R1−90. All sample numbers are rounded to the nearest 50 per NCES requirements. Controls include the following maternal and child characteristics: maternal education, race, employment, and marital status; whether the mother was an immigrant or a teen mother; maternal English fluency; whether she lived in an urban area; number of children under 6 and over 7 in the household; poverty status (at waves 2 and 3); whether the household receives any benefits; and child disability status, gender, and age.

*$P < .05$.
**$P < .01$.
***$P < .001$.

choices, 2-year depressive symptoms, maternal stress, and all covariates; and model 2 estimates this relationship and adds an interaction term between the 2 aspects of childcare instability.

Among those in the full sample of mothers (Table 2), the strongest predictor of 4-year maternal depressive symptoms was 2-year depressive symptoms. Model 1 indicates that mothers who previously had high depressive symptoms were 2.78 times more likely to have high depressive symptoms than mothers who did not (95% confidence interval [CI] = 2.15−3.59). Neither care duration nor multiplicity was associated with high maternal depressive symptoms. Along with 2-year depressive symptoms, parenting stress was a significant predictor of 4-year depressive symptoms; for every unit increase in parenting stress, the adjusted odds of mothers reporting high depressive symptoms increased by about 19% (95% CI = 1.16−1.23). Model 1 also indicates that mothers who reported having good choices for care were 22% less likely to report high depressive symptoms (adjusted odds ratio [AOR] = 0.77; 95% CI = 0.62−0.95). Model 2 shows that the interaction between care duration and multiplicity was not significant.

For ease of presentation and because the inclusion of the interaction term in model 2 did not substantively change the pattern of results from model 1, only model 2 is presented for each subgroup in separate panels in Table 3 (the first panel displays results from the full sample for ease of comparison). Consistent with results for the full sample and for working, single, and non−English-speaking mothers, neither feature of childcare instability (nor their interaction) was significantly associated with high depressive symptoms. For low-income mothers, a statistically significant interaction emerged between care duration and multiplicity ($P = .044$), suggesting that using 2 or more concurrent arrangements is more strongly associated with a higher probability of high depressive symptoms when arrangements are shorter in length for this group.

Results for each subsample indicate that, as in the full sample, maternal parenting stress was consistently associated with high depressive symptoms; for every unit increase in parenting stress, the adjusted odds of mothers reporting high depressive symptoms increased by 15% to 21% (95% CIs = 1.08−1.21 and 1.17−1.25). These models also indicate that, as in the full sample, working and single mothers who reported having good choices for care were 29% (AOR = 0.71; 95% CI = 0.57−0.87) and 28% (AOR = 0.72; 95% CI = 0.52−0.99) less likely to report high depressive symptoms, respectively. There was no association between perceptions of good choices for care and depressive symptoms among low-income and non−English-speaking mothers.

DISCUSSION

This study explored for the first time whether childcare instability is associated with increased depressive symptoms in a nationally representative sample of mothers

with young children. Results produced several notable patterns, which raise directions fruitful for additional research. First, our indicators of childcare instability were not independently or jointly associated with clinically significant depressive symptoms; this was true for the full sample as well as for most of our subgroups of vulnerable mothers with young children, with the exception of low-income mothers.

Of course, it is possible that we did not detect associations between childcare instability and maternal depressive symptoms because our measures of instability are not actually related to depressive symptoms. This could arise for 2 reasons: First, our measure of instability is blunt, only capturing changes that occurred between the 2-year and 4-year interviews. If an arrangement began after the 2-year survey and ended before the 4-year survey, it was not observed. Second, not all instability is negative and thus may not be expected to contribute to depressive symptoms. For instance, planned changes in care arrangements designed to meet the family's needs or the child's changes across developmental stages may actually support rather than detract from maternal mental health.[38] In fact, as our descriptive results suggest, many families change arrangements as their children age from 2 years old to 4 years old. This is consistent with other data[39] and may explain why instability is not necessarily damaging to maternal mental health. Future research with data collected at more frequent intervals would shed light on this question.

Nevertheless, we did observe strong and consistent associations between mothers' perceptions of having good choices for care and the reduced likelihood of reporting clinically significant depressive symptoms. These associations persisted even after controlling for prior depression and parenting stress, the 2 other most consistent predictors of depression. This is an important finding. If what predicts reduced depressive symptoms among mothers of young children is not the actual experience of instability but rather the feeling of flexibility via plentiful alternative options for care, this suggests that, rather than targeting policies to keep families in their care arrangements or reduce the number of arrangements a family uses, a better policy investment may be to expand the supply of care and reduce its cost so that families have multiple available options. Another fruitful approach might be to increase awareness of current care availability and public programs that subsidize the cost of care. It is important to note that the association between mothers' perceptions of good care options and reduced maternal depressive symptoms remained strong among 2 subgroups of mothers for whom having sufficient alternative care options is theoretically very important: mothers who work and thus may lose a job without childcare and single mothers, who rely on nonparental childcare in the absence of a spouse or partner.

Finally, it was notable that rates of high maternal depressive symptoms in our national sample ranged from 26% in the full sample to 23% to 35% in our subgroups of mothers according to different vulnerability factors. This underscores the prevalence of high depressive symptomology among these subgroups of mothers with young children, many of whom rely on available and stable childcare, and heightens the urgency of calls for future research to further untangle predictors and consequences of childcare instability for these populations.

LIMITATIONS

This study is not without its limitations. As mentioned earlier, our measures of instability were only gathered roughly every 2 years. Thus it is entirely possible that we missed additional changes in childcare arrangements that constitute instability. Furthermore, given that mothers were only asked about regular childcare arrangements, it is possible that our measure is also missing irregular or back-up arrangements, which have been linked with maternal parenting stress and child behavior problems.[21] If our study has underestimated childcare instability, then the lack of association between instability and depressive symptoms could be due to this blunt measurement. Additionally, our measure of maternal depression is not based on a comprehensive diagnostic interview with a clinician. Thus it is possible that mothers underreport their own depressive symptoms, which would also attenuate any possible association between instability and depression. It is also possible that our analyses suffer from a lack of power to detect significant associations in our subgroup analyses. This concern is illustrated by the fact that the AORs for whether the mother reported having good childcare choices were large for low-income and non–English-speaking mothers, but the CIs were also large, suggesting that the lack of a significant association for these subgroups may be due to low power. We also note that although ECLS-B survey weights adjust for survey nonresponse, attrition analyses revealed that mothers excluded from the sample for missing data did not differ from mothers in the sample on maternal mental health or childcare characteristics, but the excluded mothers were more disadvantaged (eg, had lower levels of education, were more likely to be unemployed, had lower average household incomes). Finally, the ECLS-B is representative of children born in 2001, and thus our sample characteristics may not be reflective of children and families today (although the association between instability and depressive symptoms should theoretically not be different for mothers today). Future research should seek to replicate these analyses, ideally with data collected from clinicians and families multiple times per year over the entirety of early childhood, when mothers are most vulnerable to childcare-related stress and mental health disruptions.

CONCLUSIONS

Consistent with prior literature examining links between childcare instability and maternal parenting stress, this study found no association between childcare

instability as traditionally defined in the literature and maternal depressive symptoms. Yet, mothers' perceptions of care availability emerged as a strong predictor of depressive symptoms, even after controlling for parenting stress and prior depressive symptoms. Future research should investigate other aspects of perceived and actual care availability, both in conjunction with care stability and independently, to understand more comprehensively how childcare experiences can support or undermine maternal mental health. If findings are replicated, expanding care access and availability for mothers with young children who are at risk for increased depression may be a viable avenue through which public health officials and pediatricians can enhance maternal and child well-being.

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