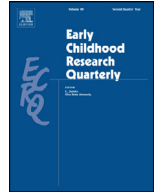




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Understanding the wellbeing of early educators in the wake of the coronavirus pandemic: Lessons from Louisiana

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1. Introduction

Early educators are the key ingredient in high-quality early care and education (ECE) experiences for young children (IOM & NRC, 2015). Their interactions with children—whether in formal child care centers or in school-based pre-kindergarten (pre-k) settings—scaffold children's growth and development and can have lasting impacts on their learning trajectories and life outcomes (Hamre, 2014a). In addition, early educators provide the safe and reliable care necessary for parents to work. Despite their essential role in the lives of young children and their families, early educators in the United States face challenging working conditions and are, on average, paid substantially less than their peers teaching older children (McLean et al., 2021). They oftentimes face considerable economic as well as emotional hardship, particularly if they work in child care centers (Phillips et al., 2016; Whitebook et al., 2014).

These conditions have implications not only for the early educators themselves, but for the children they teach. Early educators' wellbeing has been linked to the quality of their relationships with children, the warmth and content of their interactions with children, and, ultimately, children's development (e.g., Jeon et al., 2014, 2019; Johnson et al., 2019; Kwon et al., 2019; Sandilos et al., 2015; Whitaker et al., 2015). The low wages early educators face likely also lead to high levels of teacher turnover (Whitebook et al., 2014), which is problematic for young children who need stable relationships and families who need stable care. The coronavirus pandemic (COVID) created serious challenges for child care centers

and schools, and in turn may have exacerbated the challenges facing early educators.

Surveys of teachers of young children across varied ECE settings—that is, in both child care centers and school-based pre-k settings—conducted during COVID provide compelling evidence that early educators are struggling, and that emotional and financial wellbeing are very low (Bassok et al., 2020; Hanno et al., 2020; Markowitz et al., 2020; Tulsa SEED Study Team, 2020). These surveys have 2 key limitations for informing recovery efforts, however. First, most surveys provide snapshots of teachers at a single point in time after COVID began. While they demonstrate early educators are struggling, it is difficult to assess how much of the patterns documented reflect post-COVID changes, and how much reflect long-standing challenges faced by early educators even prior to the pandemic. Second, much of the data collected during COVID is drawn from a single setting (e.g. only child care center or only pre-k teachers), precluding setting-based comparisons that could inform targeted policy solutions.

The present study gets around these issues using 2 years of data from Louisiana tracking the same group of early educators before and during the pandemic. We ask 2 questions. First, what were early educators' pre-pandemic (fall 2019) levels of emotional wellbeing, financial wellbeing, and perceived career stability, and did these vary across the 2 largest formal settings receiving public funding to serve young children: child care centers and school-based pre-k settings? Second, how did wellbeing and perceived career stability change from fall 2019 to fall 2020, and did these changes vary by setting? Understanding how the wellbeing of early educators changed over the first year of the pandemic, and how those impacts varied by setting, will allow policymakers to better target recovery dollars and to build better, more stable care for the future.

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1.1. The ECE workforce

Early educators' work—scaffolding young children's learning through the design and implementation of activities and experiences in a safe, warm environment—is complex and challenging (Hamre, 2014b; IOM & NRC, 2015). The promise of early education to improve children's life trajectories and reduce longstanding socioeconomic and racial inequities in the United States (Campbell et al., 2012; Heckman et al., 2010; Phillips et al., 2017; Pianta & Howes, 2009; Yoshikawa et al., 2013) can only be achieved through the work of early educators, who are the crux of high-quality care.

Nonetheless, the ECE workforce in the United States has long faced low wages and corresponding high stress. Nationwide, early educators have median wages under \$12 per hour, limited access to medical benefits, and often struggle to meet basic needs, such as paying for housing, transportation, and medical bills (McLean et al., 2021; Phillips et al., 2016; Whitebook et al., 2014, 2016). The poverty rate of early educators is 7.7 times higher than their peers working in K-8 classrooms (McLean et al., 2021) and pre-pandemic data suggests that about 40% of early educators are food insecure (Bassok et al., 2019; Loh et al., 2020; McLean et al., 2021; Swindle et al., 2018). Unsurprisingly, then, nearly half of early educators make use of means-tested public supports as compared to about a quarter of the workforce in general (Whitebook et al., 2014). These financial realities likely have implications for early educators' emotional wellbeing. For example, pre-pandemic several studies reported high levels of early educator depression, ranging from 20%–40% (Bassok et al., 2019; Jeon et al., 2018; Loh et al., 2020; Whitaker et al., 2013). Other studies have identified high levels of stress in early educators using cortisol data (de Schipper et al., 2009; Groeneveld et al., 2012).

These high levels of financial stress and depression have negative implications for children and for ECE more broadly. Teaching young children requires focus, quick thinking, and patience. Long-standing bodies of research on depression and caregiving (Baker & Kuhn, 2018; Goodman & Garber, 2017; Wachs et al., 2009) and parenting with limited financial resources (Gershoff et al., 2007; Johnson & Markowitz, 2018; Kalil & Ryan, 2020), show that adults who are struggling with depression or facing financial stress are often less able to provide children with responsive, high-quality care. Previous research has linked caregivers' depressive symptoms with the quality of their interactions with children (Buettner et al., 2016; Hamre & Pianta, 2004; Johnson et al., 2019; Kwon et al., 2019; Sandilos et al., 2020, 2015), their relationships with children (Whitaker et al., 2015), children's active engagement (Ota et al., 2013), and global ECE quality (Jeon et al., 2014). This, in turn, has impacts on development. Several studies suggest that having an early educator who is struggling emotionally or financially is negatively linked to children's socioemotional development and their internalizing and externalizing behaviors (Jeon et al., 2014, 2019; Kwon et al., 2019; Roberts et al., 2016), though some studies find mixed associations (Johnson et al., 2020).

Early educators struggling with wellbeing are also not likely to stay in their jobs. High-stress, low-pay jobs often have significant levels of turnover, and ECE is no exception (Bassok et al., 2013, 2021; Grant et al., 2019; Jeon & Wells, 2018; Wells, 2015; Whitebook & Sakai, 2003). For example, in Louisiana, the context for the current study, nearly 40% of early educators turn over each year (Bassok et al., 2021). This churn is a challenge for children and families who rely on stable caregivers, and for ECE leaders, who must expend considerable energy ensuring their site is adequately staffed with qualified educators (Jeon & Wells, 2018; Sorensen & Ladd, 2020; Whitebook & Sakai, 2003).

1.1.1. Child care teachers

Though early educators across settings (e.g., child care centers, publicly-funded state and local pre-kindergarten) face difficult working conditions, among teachers working in formal center-based settings, challenges tend to be more pronounced for teachers in child care centers, who typically receive the lowest wages and have the least access to benefits and professional supports (Austin et al., 2019; McLean et al., 2021). For example, 2019 data from the Bureau of Labor Statistics shows that the average hourly wage for child care workers in 2019 was \$11.65 as compared to \$14.67 for preschool teachers and \$32.80 for kindergarten teachers (McLean et al., 2021). Similarly, 2018 data from Louisiana show that lead teachers in child care centers earn half of what their counterparts in school-based pre-k settings earn annually (Bassok et al., 2019). Recent data from Virginia shows that while 38% of center-based child care teachers report household incomes of \$25,000 or less; this is only true for 1% of lead teachers in schools (Bassok et al., 2020).

Not surprisingly, child care teachers also leave their jobs at higher rates relative to other early educators. For instance, pre-pandemic data from Louisiana show that nearly half (46%) of lead teachers in child care centers left their centers from 1 year to the next, a rate that was roughly twice as large as among school-based pre-k teachers (Bassok et al., 2021). These figures imply that children attending child care centers are more likely to have their early learning experiences interrupted by teacher departure, which has negative impacts on learning and development (Markowitz, 2019; Ronfeldt et al., 2013; Tran & Winsler, 2011).

Notably these statistics about challenges center-based child care teachers face come from pre-pandemic data. They highlight the precarity of child care teachers, which even before COVID started created major hurdles for providing high-quality ECE in child care centers—the formal settings that serve the largest number of low-income children nationally. Understanding how COVID impacted child care centers is essential for providing effective supports during COVID recovery.

1.2. COVID and early education

The coronavirus pandemic created many unique challenges for early educators across settings (Weiland et al., 2021). For some educators, the shuttering of learning sites meant the loss of work or a reduction in compensation. For others, site closures led to remote teaching and learning, which required not only rapidly developing familiarity with new platforms and systems, but brought on new challenges in managing and engaging the behavior and learning of young children. For early educators who continued working in-person, COVID regulations also made much of their typical work more challenging. Many common routines in ECE—including circle time and choice time—are not well suited to social distancing, and young children who are learning about emotions and self-regulation are often reliant on facial cues that are covered by masks (Austin et al., 2020). Young children's hand washing and other routines must be carefully monitored, particularly during activities such as group meals. Stipulations that limited the number of children staff could interact with upended routines that leveraged floating teachers to provide midday breaks for teachers. Staffing challenges due to the reality of quarantine, sick children, or loss of staff further added difficulty to educators' daily work. And, concerns about health and safety, in particular contacting COVID from the children of frontline workers, were also paramount.

Data from existing COVID surveys underscores the scope of these challenges, and hints at impacts on wellbeing. For example, data from a survey of about 700 early educators in Massachusetts,

(Hanno et al., 2020) finds that 47% of educators were concerned that their work posed a risk to their health. Most caregivers reported substantial concerns about physical and mental wellbeing. Sixty percent of early educators reported that the pandemic had affected their mental health, and many reported moderate to high levels of stress related to finances.

Data from a June 2020 survey of over 1000 early educators in Nebraska tells a similar story. At least seventy percent of teachers reported concerns about contracting COVID in the workplace, and 21% said they had anxiety about COVID “most of the time.” Nearly 80% of early educators reported changes in their sleep, and about half reported trouble concentrating, changes in eating, and feelings of sadness or depression, all of which are indicators of depression. Seventy percent reported feeling anxious about the future (Daro & Gallagher, 2020).

1.2.1. Differences in COVID impacts across settings

The impacts of COVID also varied by ECE setting. At the outset of the pandemic, school-based pre-k settings closed alongside public schools, but continued to pay staff. By the fall of 2020, schools in Louisiana, the context for the present study, were open in a hybrid fashion; many pre-k teachers were teaching both in-person and remote students and juggling new systems for both safety at school and for communicating with children and families through online systems.

In contrast, child care centers—which rely heavily on parent fees alongside their public funds—faced uncertainty at the start of COVID, as many children stopped attending care and costs rose due to COVID safety regulations. Many child care centers struggled to both stay open and to keep staff and children safe. Many centers closed down, at least temporarily. Notably, unlike school-based pre-k, many child care centers were unable to provide teachers with compensation in the absence of parent fees. In the Louisiana parishes that are the context for the present study 75% of child care centers shut down for at least some portion of the pandemic, and more than half of teachers reported a decrease in earnings (Markowitz et al., 2020). Nationwide, there had been a notable loss of child care centers in the first year of the pandemic (Bipartisan Policy Center, 2020; Bureau of Labor Statistics Data, n.d.; NAEYC, 2020), and even in centers that remained open, or that have re-opened, teachers often experienced reduced hours or lost their jobs entirely (Bipartisan Policy Center, 2020; Doocy et al., 2020; NAEYC, 2020).

Data from the present study come from centers that had re-opened by the fall of 2020. While many center-based child care teachers were not managing remote instruction like their school-based pre-k counterparts, they too managed changing routines for interaction with children and communication with parents.

An additional concern for child care centers in particular was managing the impact of illness from coronavirus. A much higher percentage of Black and Brown teachers work in child care centers as compared to school-based pre-k (McLean et al., 2021), and in the United States their communities often had high rates of infection and death from COVID. Some data suggest that Black, Latina, and Native American child care providers were more likely to have tested positive for COVID between May and June of 2020 than White teachers working in the same settings (Gilliam et al., 2021).

Existing findings do suggest center-based child care teachers faced particularly pronounced challenges during the pandemic. For example, data from a survey of about 300 center-based child care teachers in Louisiana conducted in May 2020 found that half of teachers experienced food insecurity in the past 3 months; 75% reported that it was difficult to live on their incomes; and 40% of teachers experienced clinically relevant levels of depressive symptoms (Markowitz et al., 2020).

Unfortunately, very few COVID reports have compared outcomes across settings. One exception is a survey of 1400 early educators in Virginia collected in the early summer of 2020 (Bassok et al., 2020). It shows that about one-third of center-based child care teachers were concerned they would run out of money before they were paid again. About half indicated that they could not afford unexpected events or emergencies, and 20% indicated they could not afford housing-related costs (e.g., rent, utilities, mortgage). Forty percent were food insecure. Across nearly all indicators, center-based child care teachers struggled, on average, at about double the rate of their school-based pre-k peers.

Aside from this report, however, most existing COVID studies of early educators do not make direct comparisons across different types of ECE settings and miss an opportunity to think critically about the breadth of programs serving young children, and how investments should be targeted to have the greatest impact. Comparisons between teachers in center-based child care and school-based pre-k settings offer an opportunity to benchmark longstanding setting-based differences in the experiences of early educators, and provide guidance for targeting future supports.

1.3. Present study

The present study aims to better understand the emotional wellbeing, financial wellbeing, and perceived career stability of early educators working in formal ECE settings in the wake of COVID. We document patterns and cross-setting differences in these constructs both prior to COVID and about 8 months after COVID's arrival. We focus on the 2 largest formal settings receiving public funding to serve children from families with low incomes: subsidized child care centers and school-based pre-k.

Relative to existing reports about early educators' wellbeing during COVID our study has several notable strengths: (1) it uses data from 2 time points including a pre-pandemic survey and therefore can capture COVID-related changes; (2) it allows for direct comparisons across center-based child care and school-based pre-k settings and; (3) it uses surveys with relatively high response rates that may better capture the diverse experiences of early educators than the more ad-hoc samples commonly used during COVID. This more precise understanding of the experiences of early educators across settings both prior to and during the COVID crisis can inform policymakers and other stakeholders looking to promote stable, high-quality early learning experiences for all children.

2. Method

Data were drawn from the fall 2019 and 2020 waves of the Study of Early Education in Louisiana (SEE-LA) Workforce Surveys which were conducted in Jefferson and Rapides parishes. Jefferson is an urban parish near New Orleans, and is Louisiana's second largest parish with respect to population. Rapides is a rural parish in the center of the state, and is 11th in population. In both parishes, about 25% of children lived in poverty prior to the pandemic, and at least one-third of families receive means-tested public services (US Census Bureau, 2019). In 2018, Jefferson was about 53% White, 28% Black, 15.5% Hispanic, and 4% Asian; Rapides was about 61% White, 32% Black, 3% Hispanic, and 2% Asian (US Census Bureau, 2018). Jefferson is more diverse than Louisiana in general, whereas Rapides matches the statewide racial and/or ethnic breakdown. Both parishes have slightly more children living in households experiencing poverty than Louisiana as a whole, though the proportion of families receiving means-tested services matches the state average. Compared to the United States as a whole, our data has more families in low-income households, and fewer families

Table 1
Teacher demographic and work characteristics.

	Overall Sample 2019		Child Care 2019		Schools 2019	
	M	SD	M	SD	M	SD
Lead Teacher	0.71		0.81		0.63	
<i>Age Group Served</i>						
3 to 5 years old	0.69		0.39		0.92	
0 to 2 years old	0.25		0.55		0.00	
Serves Multiple Ages	0.07		0.06		0.07	
<i>Highest Level of Education</i>						
High School/GED or Less	0.25		0.42		0.12	
AA/ Some College	0.32		0.43		0.23	
BA or More	0.43		0.15		0.65	
<i>Teacher Race</i>						
White	0.62		0.45		0.75	
Black	0.29		0.44		0.17	
Hispanic Regardless of Race	0.06		0.08		0.05	
Multiracial or Other Race	0.03		0.02		0.03	
Age	43.01	12.77	38.52	13.30	46.55	11.15
Married or Cohabiting	0.56		0.47		0.64	
Household Size	3.15	1.63	3.13	1.65	3.17	1.61
2019 Salary (dollars)	30100	14398	21400	5677	37123	15441
Child Care Center	0.44		1.00		0.00	
Rapides Parish	0.32		0.26		0.36	
N	367		162		205	

Note. Data are drawn from the fall 2019 and fall 2020 waves of the Study of Early Education in Louisiana Workforce Survey. Sample is limited to participants who had all covariates within waves; “Overall Sample” includes educators in both child care centers and school-based pre-k; the subsequent columns stratify by setting. The “Multiple Ages Teachers” category also includes teachers who may teach older children as well as infants and/or toddlers or preschoolers. Salaries are rounded to the nearest 100.

from suburban communities and fewer families from non-White or non-Black backgrounds.

We invited all teachers working with at least some children aged 0 to 5 in 2 types of formal ECE settings—child care centers receiving public funds¹ and school-based pre-k² programs—to participate. This included lead and assistant teachers (e.g., aides, para-professionals, floaters). In 2020, centers and schools were included in our sample if they provided any in-person or virtual and/or remote care between August 2020 and December 2020.

Our local community partners provided teacher rosters and contact information for all teachers. Initial survey invitations were sent directly to teachers via email with periodic reminders from both the research team and our community partners. Paper versions of the surveys were either hand delivered (in 2019) or mailed (in 2020) to child care centers and school-based pre-k sites. Upon receipt of completed surveys, teachers received a \$25 gift card. Response rates were 71% for the first survey (October through December 2019, N~870) and 68% for the second (October through December 2020 N~870). These rates are 2 to 3 times as high as many ECE workforce surveys (Boyd-Swan & Herbst, 2019).

To isolate *changes* in teacher wellbeing and perceived career stability, we restricted our analytic sample to teachers with full data on all outcome variables and covariates ($N = 367$ unique lead or assistant teachers seen in both 2019 and 2020, for a total of 734 observations, Table 1). As expected based on the high levels of

teacher turnover in ECE overall and in child care centers in particular (e.g., Bassok et al., 2021), the analytic sample which required participation in both SEE-LA surveys was different from the full sample of SEE-LA respondents (that is, participated in either SEE-LA survey). The analytic sample was more likely to work in schools, and be White, as well as have a higher level of education and earnings than those excluded from the sample. Teachers in the analytic sample also responded more positively to all 3 perceived career stability items (see Appendix A, Table A1).

We compared each of our outcomes before and during COVID both overall and separately for child care centers and school-based pre-k. We categorized ECE sites using the Louisiana Department of Education’s funding-based categorization. The sample included 162 teachers in child care centers and 205 in school-based pre-k (Table 1).

2.1. Measures

The survey data included detailed information on the emotional wellbeing (depression, self efficacy, and job satisfaction), financial wellbeing (food insecurity and financial stress), and perceived career stability of early educators, as well as a set of demographic controls.

2.1.1. Depression

We used the 7 item short form of the Center for Epidemiological Studies Depression Scale (CESD-SF, Levine, 2013) to assess teachers’ depressive symptoms. Teachers responded to questions assessing how much they experienced each of 7 symptoms in the past week: “rarely or never,” “some or a little,” “occasionally or moderately,” or “most or all of the time.” Symptoms included restless sleep, trouble focusing, poor appetite, feelings of sadness and depression, and teachers’ sense that it is “difficult to get going” and that “everything is an effort.” Responses were coded from 0 to 3 and summed; respondents had to respond to 5 or more items

¹ In Louisiana, 70% of all child care centers are publicly-funded through the child care subsidy program; all school-based public pre-k sites are publicly-funded. The amount of funding child care centers receive varies based on the number of subsidy-receiving families at the site; data do not include information on what share of a site’s funding comes from subsidies as compared to additional parent fees.

² Nearly all school-based pre-k settings were housed in public schools. Across parishes 3 school-based pre-k sites were housed in private schools which receive public dollars through Louisiana’s Nonpublic Schools Early Childhood Development program.

to be included in the scale. Consistent with previous studies, we coded teachers who scored 8 or more as experiencing depression (Levine, 2013).

2.1.2. Self-efficacy

We used 6 items to measure teacher self efficacy (Fantuzzo et al., 2012), including “I am satisfied with the progress of the children in my classroom,” “I can generally deal successfully with behavior problems,” “I feel I can get through to all children, even the ones with the most challenges,” “Teaching children in this age group is very satisfying,” “Most of the parents of the children in my classroom respect and support the things I do,” and “I am making a difference in the lives of the children I teach.” Items were scored on a 5 point Likert from strongly disagree to strongly agree, and Cronbach’s alpha at each year was 0.90 or higher. The final score was calculated as the mean of the 6 items; teachers had to respond to 4 or more items to be included in the scale.

2.1.3. Job satisfaction

Teachers indicated how much they agreed with 2 items related to job satisfaction: “I really enjoy my present teaching job” and “My work with the children at this site is important.” Teachers responded on a 5 point Likert from strongly disagree to strongly agree. Items were coded dichotomously with 1 indicating strong agreement, 0 otherwise.

2.1.4. Food insecurity

Food insecurity is defined as the lack of consistent access to sufficient food needed to fuel a healthy and active life. Teachers were asked to indicate how true each of the following statements were for their household over the past 3 months: “We couldn’t afford to eat balanced meals,” “We worried that our food might run out before we had money to get more,” and “The food we bought just didn’t last, and we didn’t have the money to get more.” Teachers could indicate that this was “never true,” “sometimes true,” or “often true.” Teachers were coded as food insecure if they indicated that any of the 3 statements was either sometimes or often true (Hager et al., 2010). Among those who indicated any food insecurity 84% and 80% responded affirmatively to at least 2 items in 2019 and 2020, respectively.

2.1.5. Financial stress

Teachers were asked “How difficult is it for you to live on your household income right now?” Response options included, “Not at all difficult,” “Somewhat difficult,” “Very difficult,” and “Extremely difficult.” This item was coded into a dichotomous indicator, where 1 indicates “Very difficult” or “Extremely difficult” was selected.

2.1.6. Perceived career stability

Perceived career stability was measured with a set of 3 items about teachers’ beliefs that they will stay in their current job and in their career as an early educator. Teachers indicated how likely it was that they would still be working at their same center or program in May (i.e., about 6 months after they took the survey) and how likely it was that they would be working in their same center or program in 3 years. Items were coded dichotomously to indicate a teacher responded “very likely.”³

Teachers were also asked to indicate how much they agreed with the statement “I view being an early childhood educator as my long-term career.” Teachers could answer on a 5 point Likert

³ Response categories for these 2 items differed slightly across surveys. In 2019, teachers could respond “not likely,” “somewhat likely,” or “very likely;” in 2020, teachers could respond “not likely,” “a little bit likely,” “somewhat likely,” or “very likely.”

from strongly disagree to strongly agree. This item was recoded dichotomously to indicate that a teacher “agreed” or “strongly agreed.”

2.1.7. Covariates

Teachers in child care centers and in school-based pre-k often differ with respect to key demographic characteristics which may also be linked to their wellbeing. To understand whether changes in teacher wellbeing and setting-based differences in these changes may be explained by these differences we control for a set of teacher characteristics including: age of children served (a 3 level variable indicating teachers who only serve infants and toddlers, teachers who only serve preschoolers, or teachers who serve children from multiple age groups (e.g., some combination of infants, toddlers, preschoolers, and school-aged children; preschool is omitted) in order to account for differences in the work of ECE by child age; teacher education level (a 3 level variable indicating a high school diploma, GED, or less; an Associate’s degree (AA) or some college; or a Bachelor’s degree (BA) or more; some college is omitted); teacher race (indicating White, Black, Hispanic regardless of race, or multiracial or other race; White is omitted); teacher age; an indicator for whether a teacher is married or cohabiting with a partner; a continuous variable indicating how many additional people live in the teacher’s household; teacher annual salary; and an indicator for working in Rapides parish.⁴

2.2. Analytic strategy

This study had 2 overarching research questions: (1) what were the levels of early educators’ emotional wellbeing, financial wellbeing and perceived career stability prior to COVID and (2) did they change after the arrival of COVID. We explored both questions overall and tested for differences by setting. By comparing survey responses after the arrival of COVID (fall 2020) with those from a year prior (fall 2019) for a fixed sample of teachers who were teaching at both time points, we were better able to understand the impact of COVID than surveys conducted only in the aftermath of COVID.

We started by describing our 3 main constructs, emotional wellbeing (depression, self efficacy, job satisfaction), financial wellbeing (food insecurity and financial stress), and perceived career stability, at both time points and across settings (Table 2). We ran bivariate regressions with clustered standard errors that account for both repeated individuals and clustering within sites to estimate differences over time, and differences within time across child care centers and school-based pre-k.⁵ In the following paragraphs and in the results we use “child care” to refer to child care centers for brevity.

We then ran 3 regression models to test formally for differences between child care and school-based pre-k.⁶ In model 1, each outcome was regressed on a variable for survey year; a variable indicating that the teacher works in a child care center; and an interaction between these variables. Together, the coefficient on the year variable (labelled “Change btwn 2019 and 2020” in tables) tested whether teacher responses on each outcome variable changed over the 2 time points specifically among school-based pre-k teachers; the coefficient on the child care variable tested whether in 2019 child care and school-based pre-k teachers differed in their responses for each outcome (labelled “CC” in tables);

⁴ Two teachers switch between child care centers and school-based pre-k between 2019 and 2020, and 1 switches parishes.

⁵ Results are not sensitive to the use of logit models for dichotomous outcomes.

⁶ We use linear models for ease of interpretation, but present models estimated using logits for dichotomous outcomes in Appendix B. We find no meaningful differences.

Table 2
Mean teacher emotional wellbeing, financial wellbeing, and perceived career stability 2019 and 2020, overall and by setting.

	Overall Sample			Child Care Centers		School-Based Pre-K			Setting Differences		
	2019	2020	Diff	2019	2020	Diff	2019	2020	2019	2020	
<i>Emotional Wellbeing</i>	M (SD)	M (SD)	Diff	M (SD)	M (SD)	Diff	M (SD)	M (SD)	Diff	Diff	Diff
Depression (CESD)	0.20	0.29	**	0.15	0.23	**	0.23	0.33	*	+	*
Self Efficacy	4.23 (0.63)	4.33 (0.56)	**	4.30 (0.59)	4.24 (0.62)		4.17 (0.66)	4.41 (0.49)	**		*
Enjoy Job	0.49	0.48		0.50	0.43		0.49	0.51			
Work Important	0.67	0.66		0.67	0.55	**	0.68	0.75			**
<i>Financial Wellbeing</i>											
Food Insecurity	0.48	0.39	**	0.61	0.48	**	0.38	0.31	*	**	**
Very/Extr Diff to Live on Inc	0.25	0.30	+	0.29	0.37	+	0.22	0.24			*
<i>Perceived Career Stability</i>											
Still Here in May	0.90	0.77	**	0.83	0.67	**	0.96	0.85	**	**	**
Still Here in 3 Years	0.62	0.55	*	0.55	0.47	*	0.67	0.62		*	**
Long-Term Career	0.83	0.76	**	0.75	0.71		0.89	0.80	**	**	*
N	367	367		162	162		205	205			

Note. Data are drawn from the fall 2019 and fall 2020 waves of the Study of Early Education in Louisiana Workforce Survey. Sample is reduced to participants who had a full set of covariates in either wave of data; “Overall Sample” includes educators in both child care centers and school-based pre-k; the subsequent columns stratify by setting. Diff columns presents the results bivariate random effects models with clustered standard errors comparing 2019 and 2020 in the full sample, child care sample, and school-based pre-k sample; Setting Differences columns presents the results bivariate regression models with clustered standard errors comparing child care and school-based pre-k settings in 2019 and in 2020, respectively. ** $P < 0.01$, * $P < 0.05$, + $P < 0.10$.

and the coefficient on their interaction tested whether the difference between 2019 and 2020 on each outcome was different for child care teachers relative to school-based pre-k teachers (labelled “Change x CC” in tables). In this way model 1 was a formal test of the bivariate associations presented in Table 2.

In model 2 we added the teacher characteristics described above, to test whether differences across settings—at either time point—were eliminated once we accounted for differences in the characteristics of teachers who worked in child care vs school-based pre-k. Models 1 and 2 used a random effects estimator to account for individuals appearing in the dataset twice, and standard errors are clustered by site. In model 3, we added econometric teacher fixed effects. This model estimated within-teacher changes in each outcome variable over the 2 year period. Whereas the first 2 models describe average patterns across the full sample, the fixed-effects models allowed us to formally test whether any changes observed in models 1 and 2 were due to individual changes in wellbeing and perceived career stability in the wake of COVID. Standard errors were again clustered by site.

3. Results

Table 1 Presents descriptive information about the sample, both overall and by ECE setting. Our sample included about 70% lead teachers. About 70% worked with preschool-aged children and about 25% worked with infants and toddlers. Expected setting differences were observed. In the child care sample, most teachers (about 55%) reported working with infants and toddlers, and just under 40% reported working with preschool-aged children. In contrast, in schools nearly all teachers reported teaching at least some preschool-aged children.

Overall, about a quarter of the sample had a high school degree and/or GED or less and about 40% of the sample held a BA or more. As expected based on lead teacher education requirements for schools, teachers in school-based pre-k were more highly educated; while 15% of child care teachers held a BA or more in 2020, 65% of school-based pre-k teachers did so.

For the full sample, teacher race and/or ethnicity was similar to the overall racial breakdown in Louisiana, but again patterns differed by setting. Teachers in child care were far more likely to be Black and Hispanic compared to in school-based pre-k. While about 55% of child care teachers were Black, Hispanic or from an-

other racial group excluding White, this was true for only about a quarter of teachers in school-based pre-k.

Consistent with national data, early educators made relatively low wages overall—about \$30,000 per year. Disaggregation reveals substantial differences across setting, however. On average child care teachers earned about \$21,000 a year, an amount that falls below the federal poverty line for a family of 3 in 2019. In contrast, school-based pre-k teachers earned about \$37,000.

Table 2 Presents descriptive information on each of the emotional wellbeing, financial wellbeing, and perceived career stability variables, both overall and by setting. It also presents the results of statistical tests assessing the bivariate relationship between each variable and time, and between each variable and setting type. In 2019, 20% of teachers were categorized as depressed by the CESD; by 2020 this had risen to 29%. Child care and school-based pre-k teachers both experienced statistically significant 8 and 10 percentage point increases in depression, respectively. Child care teachers reported, on average, lower levels of depression than school-based pre-k teachers in both 2019 ($P < 0.10$) and 2020 ($P < 0.05$).

Self efficacy increased from 2019 to 2020, but this increase was only observed among school-based pre-k teachers, who, in 2020 only, had higher self efficacy than child care teachers ($P < 0.05$).

The percentage of teachers that strongly agreed they enjoyed their job was about 50% both overall, and across all settings and time periods. There was no change in enjoyment across time or by setting.

Changes in the percentage of teachers who strongly agreed their work is important differed based by setting. While in 2019 teachers in child care and school-based pre-k showed similar levels of agreement that their work was important, there was a 12 percentage point decrease in the number of teachers who strongly agreed that their work was important between 2019 and 2020 among child care teachers and a 7 percentage point increase among school-based pre-k teachers, resulting in a 20 percentage point statistically significant setting difference in 2020 ($P < 0.01$).

Consistent with differences in earnings, child care teachers, on average, have higher levels of food insecurity and financial stress than school-based pre-k teachers. For instance, in 2019, 61% of child care teachers were food insecure compared to 38% of school-based pre-k teachers. From 2019 to 2020 food insecurity decreased overall (from 48% to 39%) and for both settings. In contrast, there

Table 3
Change in emotional wellbeing from 2019 to 2020, by setting.

	CESD			Self Efficacy			Enjoy Job			Work Important		
	Raw	Controls	FE	Raw	Controls	FE	Raw	Controls	FE	Raw	Controls	FE
Change btwn. 2019 & 2020	0.11* (0.04)	0.11** (0.04)	0.11+ (0.06)	0.24** (0.05)	0.25** (0.05)	0.24** (0.07)	0.03 (0.04)	0.04 (0.04)	0.03 (0.05)	0.07 (0.04)	0.08+ (0.04)	0.07 (0.06)
Child Care	-0.07+ (0.04)	-0.03 (0.07)		0.12 (0.08)	0.03 (0.10)		0.01 (0.06)	-0.06 (0.08)		-0.01 (0.05)	-0.12+ (0.07)	
Change x CC	-0.03 (0.05)	-0.04 (0.05)	-0.03 (0.07)	-0.30** (0.08)	-0.32** (0.08)	-0.30** (0.11)	-0.10+ (0.05)	-0.11+ (0.06)	-0.10 (0.08)	-0.19** (0.06)	-0.21** (0.06)	-0.19* (0.09)
Constant	0.23** (0.03)	0.37** (0.12)	0.20** (0.02)	4.17** (0.05)	4.34** (0.18)	4.23** (0.03)	0.48** (0.04)	0.52** (0.12)	0.49** (0.02)	0.68** (0.03)	0.80** (0.10)	0.67** (0.02)
Unique N	367	367	82	367	367	112	367	367	112	367	367	86
Model N	734	734	164	734	734	224	734	734	224	734	734	172

Note. Data are drawn from the fall 2019 and fall 2020 waves of the Study of Early Education in Louisiana Workforce Survey, individual N at each wave= 367. Sample is reduced to participants who provided full dependent and covariate information across both waves of data. Child Care indicates persons working in child care centers. Raw models include no other variables; Controls model includes age of children served, role (e.g., lead or assistant teacher), teacher education, race, age, marital status, household size, average salary, and parish (Rapides vs. Jefferson); FE model includes person fixed effects, which estimate within person change in each outcome. Because person fixed effects models include only individuals who have variability in each dependent variable across time, effective Ns in these models are 82, 112, 112, and 86 for CESD, Self Efficacy, Enjoy Job, and Work Important, respectively. All modes include standard errors clustered by site. ** $P < 0.01$, * $P < 0.05$, + $P < 0.10$.

was a 5 percentage point increase in the overall percentage of teachers that reported that it was “very difficult” or “extremely difficult” to live on their income from 2019 to 2020, a difference that was centered in child care teachers ($P < 0.10$).

Finally, teachers’ perceived career stability decreased between 2019 and 2020 across all 3 measures. For instance, in 2019, 90% of teachers agreed or strongly agreed that they were likely to still be at their site 6 months later. In 2020, this figure fell to 77% ($P < 0.01$). Decreases were observed in both child care and school-based pre-k ($P < 0.01$). There were also large setting-based differences in perceived career stability in both 2019 and 2020 such that school-based pre-k teachers reported more stability.

Tables 3–5 Present results from models that formally tested whether changes over time differed across settings, and examined whether the patterns documented above hold when accounting for differences in teacher characteristics across settings (model 2) or looking at within-teacher differences (model 3). As noted above, coefficients presented in Tables 3–5 represent the average change in each outcome from 2019 to 2020 for school-based pre-k teachers (“Change btwn 2019 and 2020”), the average difference in each outcome for child care teachers as compared to school-based pre-k teachers in 2019 (“Child Care”), and the interaction between these terms (“Change x CC”), which represents the average difference in the change from 2019 to 2020 for teachers in child care as compared to school-based pre-k.

Table 3 Presents results for teachers’ emotional wellbeing. Consistent with Table 2, teacher depression increased by 11 percentage points from 2019 to 2020 across both regression adjusted (models 1 and 2, $P < 0.05$) and fixed effects models (model 3, $P < 0.10$). This relationship did not differ by setting; that is, estimated increase in depression were the same for child care and school-based pre-k teachers. For teacher self efficacy, the change from 2019 to 2020 was positive across all 3 models ($b \sim 0.24$, $P < 0.01$), but the statistically significant interaction coefficient indicates that this increase occurred only among school-based pre-k teachers. For child care teachers, self efficacy ultimately decreased from 2019 to 2020 ($b = -0.30$, $P < 0.01$ on the interaction coefficient, resulting in an overall decrease of about -0.06 across models).

Teachers’ enjoyment of their job did not show strong evidence of change across time for teachers in child care or school-based pre-k. Point estimates for interaction between child care and 2020 were negative and significant at the 0.10 level in the OLS models; in the fixed effects model the point estimate remained the same but was no longer marginally significant (model 3). In contrast, models predicting teachers’ belief that their work is important sug-

gested a decrease between 2019 and 2020 among child care teachers only ($b = -0.19$, $P < 0.05$ in the fixed effects model).

Table 4 Presents estimates from regression analyses exploring financial wellbeing. We find that in uncontrolled models, there was a decrease in food insecurity between 2019 and 2020 ($P < 0.05$); this decrease retained its size but statistical significance was marginal once teacher covariates were added and in fixed effects models ($P < 0.10$). There was no evidence that teachers in either child care or school-based pre-k experienced a change in financial stress.

Table 5 Presents estimates from regression analyses exploring perceived career stability. Consistent with Table 2, there was a decrease in teachers’ report that they would remain in their site by May that persisted in models that included sociodemographic controls ($b = -0.11$, $P < 0.01$) and teacher fixed effects ($b = -0.12$, $P < 0.01$). Additionally, child care teachers reported that they were less likely to remain in their site in May, including in models that included covariates ($b = -0.12$, $P < 0.05$). Although child care teachers, on average, were less likely to report they intended to remain in their site until May in 2019, there was no difference across settings in the size of the decrease from 2019 to 2020.

While there was no clear pattern of findings across models predicting teachers’ report that they would remain at their site for 3 years, consistent with Table 2, teachers reported less agreement that ECE was their long-term career from 2019 to 2020 across all 3 models ($b = -0.08$, $P < 0.05$ in fixed effects model). Child care teachers were less likely to agree ECE was their long-term career in both uncontrolled ($b = -0.13$, $P < 0.01$) and controlled models, ($b = -0.12$, $P < 0.10$). Notably, although child care teachers, on average, reported lower perceived career stability across outcomes, declines in perceived career stability did not differ by setting.

4. Discussion

Early educators are the key ingredient in high quality ECE experiences, and their ability to do this work is related to their own wellbeing. The arrival of the coronavirus pandemic and its challenges to early educators in both child care centers and school-based pre-k gave rise to real concerns about educator wellbeing. To best understand how COVID may have impacted ECE teachers, this study documented early educators’ pre-COVID emotional wellbeing, financial wellbeing, and perceived career stability, assessed the extent to which these measures differed across center-based child care settings and schools, and explored whether changes in wellbeing in the wake of COVID differed across settings.

Table 4
Change in financial wellbeing from 2019 to 2020, by setting.

	Food Insecurity			Very/Extr Diff Live on Inc		
	Raw	Controls	FE	Raw	Controls	FE
Change btwn 2019 & 2020	-0.07* (0.03)	-0.06+ (0.03)	-0.07+ (0.04)	0.02 (0.03)	0.02 (0.03)	0.02 (0.05)
Child Care	0.23** (0.06)	0.13 (0.09)		0.07 (0.05)	-0.11 (0.07)	
Change x CC	-0.06 (0.05)	-0.06 (0.05)	-0.04 (0.07)	0.06 (0.05)	0.05 (0.05)	0.06 (0.08)
Constant	0.38** (0.03)	0.77** (0.14)	0.48** (0.02)	0.22** (0.03)	0.85** (0.12)	0.25** (0.02)
Unique <i>N</i>	367	367	86	367	367	77
Model <i>N</i>	734	734	172	734	734	154

Note. Data are drawn from the fall 2019 and fall 2020 waves of the Study of Early Education in Louisiana Workforce Survey, individual *N* at each wave= 367. Sample is reduced to participants who provided full dependent and covariate information across both waves of data. Child Care indicates persons working in child care centers. Raw models include no other variables; Controls model includes age of children served, role (e.g., lead or assistant teacher), teacher education, race, age, marital status, household size, average salary, and parish (Rapides vs Jefferson); FE model includes person fixed effects, which estimate within person change in each outcome. Because person fixed effects models include only individuals who have variability in each dependent variable across time, effective *N*s in these models are 86 and 77 for Food Insecurity and Difficulty Living on Income, respectively. All modes include standard errors clustered by site. ** *P* < 0.01, * *P* < 0.05, + *P* < 0.10.

Table 5
Change in perceived career stability from 2019 to 2020, by setting.

	Stay Here Until May			Stay Here 3 Years			Long-Term Career		
	Raw	Controls	FE	Raw	Controls	FE	Raw	Controls	FE
Change btwn 2019 & 2020	-0.11** (0.03)	-0.11** (0.03)	-0.12** (0.04)	-0.05 (0.04)	-0.06 (0.04)	-0.05 (0.05)	-0.08** (0.02)	-0.09** (0.03)	-0.08* (0.03)
Child Care	-0.13** (0.03)	-0.12* (0.06)		-0.12* (0.06)	-0.12 (0.09)		-0.13** (0.04)	-0.12+ (0.07)	
Change x CC	-0.04 (0.05)	-0.04 (0.05)	-0.04 (0.08)	-0.03 (0.05)	-0.03 (0.06)	-0.03 (0.07)	0.04 (0.04)	0.04 (0.04)	0.04 (0.06)
Constant	0.96** (0.01)	0.75** (0.08)	0.90** (0.02)	0.67** (0.04)	0.36* (0.13)	0.62** (0.02)	0.89** (0.02)	0.81** (0.12)	0.83** (0.01)
Unique <i>N</i>	367	367	88	367	367	97	367	367	70
Model <i>N</i>	734	734	176	734	734	194	734	734	140

Note. Data are drawn from the fall 2019 and fall 2020 waves of the Study of Early Education in Louisiana Workforce Survey, individual *N* at each wave= 367. Sample is reduced to participants who provided full dependent and covariate information across both waves of data. Child Care indicates persons working in child care centers. Raw models include no other variables; Controls model includes age of children served, role (e.g., lead or assistant teacher), teacher education, race, age, marital status, household size, average salary, and parish (Rapides vs. Jefferson); FE model includes person fixed effects, which estimate within person change in each outcome. Because person fixed effects models include only individuals who have variability in each dependent variable across time, effective *N*s in these models are 88, 97, and 70 for Stay Here Until May, Stay Here 3 Years, and Long-Term Career, respectively. All modes include standard errors clustered by site. ** *P* < 0.01, * *P* < 0.05, + *P* < 0.10.

Consistent with other pre-pandemic data (Bassok et al., 2019; Phillips et al., 2016; Whitebook et al., 2014), we found that many early educators struggled prior to the arrival of COVID. About 1 in 4 early educators were depressed, and about 1 in 2 were food insecure. A quarter reported it was very or extremely difficult to live on their income. These rates of emotional and financial distress are consistent with other research on the ECE workforce (e.g., Loh et al., 2020; McLean et al., 2021; Swindle et al., 2018; Whitebook et al., 2014), though may be somewhat higher than the United States average because of Louisiana’s economic context.

Financial wellbeing and perceived career stability were often lower for teachers working in child care centers relative to those in school-based pre-k. Consistent with the observed wage differential—child care teachers earned just over half of what their peers in school-based pre-k earned in this sample—rates of food insecurity and financial distress were much higher among child care teachers. For example, over 60% of child care teachers were food insecure in 2019 as compared to 38% of school-based pre-k teachers. These data highlight the disparity between the working conditions faced by ECE teachers doing very similar work but

in different settings. Given these disparities, it is perhaps not surprising that center-based child care teachers were less likely to agree they would remain at their position, either in the short or medium-term. Center-based child care teachers were also about fifteen percentage points less likely to say that ECE was their long-term career than school-based pre-k teachers. In contrast, rates of depression, though high in both ECE settings, were higher among school-based pre-k teachers.

Our data also provide evidence that COVID compounded these challenges. The 2 most striking changes we document relate to rates of depression and perceived career stability, and are evident for teachers in both child care centers and school-based pre-k. First, rates of depression in 2020 were 23% for child care teachers and 33% for school-based pre-k teachers—more than a 40% increase from the already high 2019 base rates in both settings. Though there were large increases in depression in the United States and globally during COVID (Center for Disease Control CDC, 2020), these rates of depression remain high relative to those of Americans more broadly. The high rates of depression among school-based pre-k teachers in particular may indicate the specific chal-

lenges they had supporting development in online and hybrid classroom settings, and warrants future research (Markowitz et al., 2021).

These changes in emotional wellbeing are important for children currently enrolled in ECE programs. Previous research has linked early educators' wellbeing to their ability create high-quality environments where children feel safe and cared for as well as engaged and challenged academically (Buettner et al., 2016; Hamre & Pianta, 2004; Johnson et al., 2019; Kwon et al., 2019; Sandilos et al., 2020; Sandilos et al., 2015). Data suggest that children's development is negatively impacted in classrooms where educators are struggling with stress and depression (Jeon et al., 2014, 2019; Kwon et al., 2019; Roberts et al., 2016). The changes in wellbeing observed in our data suggest that at a time when young children are in greater need of stable, safe, and high-quality caregiving (Bartlett et al., 2020; Benner & Mistry, 2020; Prime et al., 2020), their educators may be less able to meet their needs.

Second, we observed a universal decrease in perceived career stability between 2019 and 2020. For example, in 2019, 90% of teachers agreed they would remain at their site over the next 6 months; this dropped 13 percentage points in 2020. These patterns were evident across both settings. That center-based child care teachers had a lower base rate of perceived career stability is meaningful, however. Ultimately, in 2020 only about two-thirds of center-based child care teachers thought it was very likely that they'd still be working at their site in 6 months compared to 85 percent of school-based pre-k teachers. Less than half thought it very likely that they would be there in 3 years. Teachers' agreement that working in ECE was their long-term career decreased by 7 percentage points over a 1 year period.

Given high base rates of teacher turnover prior to the pandemic (e.g., Bassok et al., 2021), these numbers are concerning for the long-term viability of the ECE sector. Data suggest that pandemic-related challenges have resulted in the closure of many child care centers as they struggled with decreased revenue due to distancing requirements and enrollment drops, and increased costs due to new cleaning and personal protective equipment needs (Bipartisan Policy Center, 2020; Doocy et al., 2020; Jessen-Howard & Workman, 2020; Maryland Family Network, 2020; NAEYC, 2020; Workman & Jessen-Howard, 2020). For teachers these changes have resulted in changes in work hours and compensation alongside the challenges and frustrations of teaching during a pandemic. Teachers in both child care centers and school-based pre-k have also struggled with balancing remote components and in-person teaching, helping children with new safety routines, and the stress of providing ECE during a global health crisis. The roughly 20% reduction in short-term perceived career stability among child care centers and an 11% reduction among school-based pre-k teachers in our data raises concerns about immediate teacher turnover and the negative implications for young children currently enrolled (Markowitz, 2019; Ronfeldt et al., 2013; Tran & Winsler, 2011); the 8% reduction in long-term career intentions raises concerns about retaining a stable, experienced workforce able to provide high-quality early learning experiences in the future. Data from the Bureau of Labor Statistics shows that more than 165,000 fewer people reported working in child care in December of 2020 than in December 2019 (Bureau of Labor Statistics Data, n.d.); early educators who left during COVID may not return to the field.

Notably, we did not find evidence that financial wellbeing decreased since the advent of COVID. Fewer teachers were food insecure, though these differences were not consistently statistically significant at conventional levels. This is a somewhat surprising pattern given the understood impact of COVID on financial wellbeing. One possible explanation for this is that by design, we fixed our sample to those teachers we could observe at both time points. What this means is that those teachers who lost their jobs or quit

their jobs due to caregiving responsibilities or other concerns were not in our sample. Our sample may include the most economically stable ECE workers (e.g., Appendix Table A1). If this is the case we may somewhat overestimate financial wellbeing, and underestimate changes. Beyond this issue, it may be due to additional public financial supports or other factors, for example teachers' households receiving COVID unemployment supplements or other government support payments, though our data cannot speak to this possibility.

We did not find strong evidence that changes during the COVID period were systematically larger among teachers working in child care relative to schools. However, it does appear the school-based pre-k teachers had more positive feelings about their jobs during COVID. We document increases in self-efficacy among school-based pre-k teachers only, and decreases in the percentage of teachers who viewed their work as important among child care teachers only. We cannot say why school-based pre-k teachers seemed to have more positive feelings than child care teachers in the wake of COVID, though public support for school teachers and messaging about their work as essential may play a role. Understanding why some teachers viewed their work more positively during a crisis while others did not could be helpful in designing interventions that support teachers in challenging times, and warrants further study.

4.1. Implications

This study has 2 key insights. First, the overall levels of wellbeing and disparities across ECE settings in our pre-COVID demonstrate that efforts to return ECE to its pre-pandemic stasis are not likely to create a stable, supportive ECE system, particularly in child care centers. Second, we see clear decreases in emotional wellbeing and perceived career stability in the wake of the COVID crisis. The challenges facing early educators have been exacerbated, and policies that address the new challenges the pandemic created are indeed needed. However, prior studies and the data presented here make it clear that the challenges early educators face are not a pandemic-specific phenomenon.

The Build Back Better Plan, designed to address challenges created or revealed by the COVID pandemic, proposed dramatic investments in both child care centers and school-based state pre-k. The plan proposed 2 years of federally supported public pre-k, and requires that teachers be paid equivalently to elementary school teachers with matching credentials. BBB also proposed an overhaul of the child care subsidy system that would base public funding for sites based on the actual cost of providing care—with a living wage for teachers and a salary ladder included as essential components. It also proposed expanding subsidies to a much higher proportion of the population to help ease uncertainties around enrollment. Required engagement with quality systems and other technical assistance for improvement offered further supports for teacher development. Though not funded, BBB provides a menu of investments likely to make meaningful change for all early educators. Its systematic approach is likely essential for addressing the longstanding staffing challenges which have been so salient in ECE.

Finally, such efforts should be designed with equity in mind; Black early educators currently make 78 cents for every dollar their White peers earn and are more likely to work in child care than in school-based pre-k (Austin et al., 2019). These teachers contribute much-needed diversity to our ECE workforce. Many parents value having a teacher who shares their racial or ethnic identity when searching for care for their very young children (Fuller et al., 1996). And, data are starting to suggest that there are tangible benefits for teacher-child racial ethnic match even among very young children, including increases in parental engagement (Markowitz et al., 2020), teacher ratings of children's skills and competencies (Bates

& Glick, 2013; Downey & Pribesh, 2004), and children's academic performance (Dee, 2004; Downer et al., 2016; Wright et al., 2017). Policymakers designing supports for ECE in the wake of COVID have an opportunity to support the diversity of the ECE workforce in part by targeting center-based child care settings.

4.2. Limitations

A key strength of our analysis is that we focused on a fixed sample that allowed us to explore changes in teacher outcomes following the start of the COVID pandemic. This decision also leads to limitations in generalizability however. The teachers in our data were more likely to be White, work in schools, and hold a BA, and they earned more than their counterparts who we did not observe at both time points (Appendix Table A1). Our focus on these teachers means almost understate the average wellbeing of this workforce, and may also understate COVID changes.

Thinking of generalizability more broadly, we also note that our comparison focused exclusively on teachers in formal ECE settings receiving some public funds. We did not survey teachers working in family child care or home-based settings, or those not receiving public dollars. These sites are an essential part of the ECE ecosystem, and will likely be even more so as families continue to navigate return to work without vaccines for children under 5. Efforts to build a more stable ECE system, will need to target all settings, and future research should document the specific challenges and needs of these providers.

Additionally, our data are specific to the Louisiana context, and likely underrepresent suburban centers, non-White and non-Black teachers, and teachers who live in families with moderate to high incomes. Moreover, COVID's impacts were highly localized. More research documenting changes in workforce training, compensation, and wellbeing across the United States will be necessary in the coming years. Particularly as states rollout policies designed to support early educators in the wake of COVID, targeted data collection could generate a large new body of evidence on how to best support early educators in their essential work.

Finally, our Perceived Career Stability items are used to understand whether the challenges early educators faced during COVID will have long-term implications for the stability of the workforce. It is essential to understand whether COVID difficulties will lead to educators seeking other career opportunities. It is likely, however, that educators answering questions about staying at their specific sites (e.g., How likely is it that you will stay at your site through May; for the next 3 years) more heavily weighted issues around site stability in 2020 than 2019. That is, their answers in 2020 may be more reflective of the general upheaval in ECE rather than their particular intention to remain in their role. This is less likely to be the case for the item which asks teachers about ECE as a long-term career. Nonetheless, both tracking teacher turnover over time in the coming years, and identifying factors that may change teach-

ers' commitment to the ECE profession are key areas for future research.

4.3. Conclusion

The coronavirus pandemic has highlighted the essential nature of early care and education for children's development, family wellbeing, and economic functioning. Calls to bailout ECE have come from both parents' experiences during the pandemic and employers' realization that the availability of ECE is foundational for maintaining their workforce. Data from our survey provide some of the first evidence about the extent to which COVID changed early educators' wellbeing and their perceptions of career stability. In addition, they highlight both the precarity of early educators overall and the stark differences between how early educators working in child care centers are supported and compensated as compared to their peers in school-based pre-k. COVID has put ECE in crisis in part because it has long been under-supported, and this is particularly true for center-based child care, which still serves the largest number of children from birth to age 5. The working conditions of early educators are not sustainable. A bailout to pre-pandemic conditions will not create the kind of stable, high-quality care that children and families need; instead, policymakers should consider bold investments, like those in the BBB plan, that create sustainable supports for living wages, adequate benefits, and professional experiences for the early educators who keep the system afloat.

Credit author statement

The first author led all analyses, drafting, and revision. The second author assisted in conceptualization, supported analyses and drafting, and provided edits and feedback on writing.

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Appendix A

Table A1

Appendix B. Main models estimated using logit models

Tables B1–B3

Table A1
 Mean teacher emotional wellbeing, financial wellbeing, and perceived career stability 2019 and 2020, full sample compared to analytic sample.

2019 Teacher Job Characteristics	Full Sample		Analytic Sample		Diff
	Mean	SD	Mean	SD	
Lead Teacher	0.67		0.71		
Pre-k Teacher	0.48		0.69		**
Infant/Toddler Teacher	0.39		0.25		**
Multiple Ages Teacher	0.13		0.07		**
<i>Teacher Education 2019</i>					
HS/GED or less	0.35		0.25		**
Some College	0.36		0.32		
BA or More	0.28		0.43		**
<i>Teacher Race 2019</i>					
White	0.50		0.62		**
Black	0.40		0.29		**
Hispanic	0.07		0.06		
Other Race	0.03		0.03		
Age	41.28	14.81	43.01	12.77	+
Married or Cohabiting	0.50		0.56		+
Household Size	3.02	1.54	3.15	1.63	
Annual Salary	25461	11094	30139	14398	**
Worked in Child Care Center	0.63		0.44		**
Rapides Parish	0.37		0.32		
<i>2020 Teacher Job Characteristics</i>					
Lead Teacher	0.67		0.74		+
Pre-k Teacher	0.37		0.63		**
Infant/Toddler Teacher	0.41		0.26		**
Multiple Ages Teacher	0.23		0.11		**
<i>Teacher Education 2020</i>					
HS/GED or less	0.36		0.25		**
Some College	0.36		0.31		
BA or More	0.28		0.44		**
<i>Teacher Race 2020</i>					
White	0.49		0.62		**
Black	0.39		0.29		**
Hispanic	0.06		0.06		
Other Race	0.05		0.03		+
Age	39.08	14.21	43.91	12.73	**
Married or Cohabiting	0.48		0.56		*
Household Size	2.88	1.49	3.04	1.60	
Annual Salary	25533	11108	31196	13816	**
Worked in Child Care Center	0.66		0.44		**
Rapides Parish	0.30		0.32		
<i>2019 Dependent Variables</i>					
CESD Depression	0.23		0.20		
Self Efficacy	4.20	0.60	4.23	0.63	
Enjoy Job	0.44		0.49		
Work Important	0.56		0.67		**
Food Insecurity	0.50		0.48		
Very/Extr Difficult	0.30		0.25		
Stay Until May	0.79		0.90		**
Stay 3 Years	0.48		0.62		**
Long Term Career	0.75		0.83		**
<i>2020 Dependent Variables</i>					
CESD Depression	0.28		0.29		
Self Efficacy	4.25	0.72	4.33	0.56	+
Enjoy Job	0.51		0.48		
Work Important	0.61		0.66		
Food Insecurity	0.49		0.39		**
Very/Extr Difficult	0.31		0.30		
Stay Until May	0.67		0.77		**
Stay 3 Years	0.45		0.55		**
Long Term Career	0.70		0.76		+

Note. Data are drawn from the fall 2019 and fall 2020 waves of the Study of Early Education in Louisiana Workforce Survey. The Full Sample includes all educators who responded to either SEELA survey (e.g., 2019 or 2020); the Analytic Sample was used for our main analyses, and includes educators who responded to both SEELA surveys (e.g., 2019 and 2020). Diff columns presents the results of bivariate tests comparing the full set of respondents to those included in the analytic sample. ** $P < 0.01$, * $P < 0.05$, + $P < 0.10$.

Table B1
Change in emotional wellbeing from 2019 to 2020, by setting, dichotomous outcomes estimated using logit models.

	CESD (OR)			Self Efficacy			Enjoy Job (OR)			Work Important (OR)		
	Raw	Controls	FE	Raw	Controls	FE	Raw	Controls	FE	Raw	Controls	FE
Change btwn 2019 & 2020	2.52** (0.77)	2.65** (0.82)	2.38** (0.71)	0.24** (0.05)	0.25** (0.05)	0.24** (0.07)	1.24 (0.32)	1.30 (0.33)	1.25 (0.32)	1.63+ (0.44)	1.74* (0.46)	1.61+ (0.42)
Child Care	0.43+ (0.20)	0.69 (0.48)		0.12 (0.08)	0.03 (0.10)		1.04 (0.36)	0.71 (0.38)		0.93 (0.31)	0.52 (0.25)	
Change x CC	0.90 (0.43)	0.87 (0.42)	1.05 (0.54)	-0.30** (0.08)	-0.32** (0.08)	-0.30** (0.11)	0.52+ (0.20)	0.50+ (0.19)	0.51+ (0.20)	0.28** (0.11)	0.26** (0.10)	0.28** (0.11)
Unique N	367	367	82	367	367	112	367	367	112	367	367	86
Model N	734	734	164	734	734	224	734	734	224	734	734	172

Note. Data are drawn from the fall 2019 and fall 2020 waves of the Study of Early Education in Louisiana Workforce Survey, individual N at each wave= 367. Sample is reduced to participants who provided full dependent and covariate information across both waves of data. Child Care indicates persons working in child care centers. Raw models include no other variables; Controls model includes age of children served, role (e.g., lead or assistant teacher), teacher education, race, age, marital status, household size, average salary, and parish (Rapides vs. Jefferson); FE model includes person fixed effects, which estimate within person change in each outcome. Because person fixed effects models include only individuals who have variability in each dependent variable across time, effective Ns in these models are 82, 112, 112, and 86 for CESD, Self Efficacy, Enjoy Job, and Work Important, respectively. Self-efficacy is continuous and estimated with linear random and econometric fixed effects models; CESD, Enjoy Job, and Work Important are estimated using random and econometric fixed effects logit models; coefficients are presented as odds ratios. ** P < 0.01, * P < 0.05, + P < 0.10.

Table B2
Change in financial wellbeing from 2019 to 2020, by setting, dichotomous outcomes estimated using logit models.

	Food Insecurity (OR)			Very/Extr Diff Live on Inc (OR)		
	Raw	Controls	FE	Raw	Controls	FE
Change btwn 2019 & 2020	0.51* (0.16)	0.55+ (0.17)	0.46* (0.16)	1.23 (0.40)	1.32 (0.44)	1.27 (0.44)
Child Care	7.69** (3.83)	3.86+ (2.75)		2.11 (0.97)	0.40 (0.27)	
Change x CC	0.69 (0.31)	0.67 (0.31)	0.88 (0.41)	1.63 (0.76)	1.46 (0.69)	1.47 (0.69)
Unique N	367	367	86	367	367	77
Model N	734	734	172	734	734	154

Note. Data are drawn from the fall 2019 and fall 2020 waves of the Study of Early Education in Louisiana Workforce Survey, individual N at each wave= 367. Sample is reduced to participants who provided full dependent and covariate information across both waves of data. Child Care indicates persons working in child care centers. Raw models include no other variables; Controls model includes age of children served, role (e.g., lead or assistant teacher), teacher education, race, age, marital status, household size, average salary, and parish (Rapides vs. Jefferson); FE model includes person fixed effects, which estimate within person change in each outcome. Because person fixed effects models include only individuals who have variability in each dependent variable across time, effective Ns in these models are 86 and 77 for Food Insecurity and Very/Extr Difficult to Live on Income, respectively. Models are estimated using random and econometric fixed effects logit models; coefficients are presented as odds ratios. ** P < 0.01, * P < 0.05, + P < 0.10.

Table B3
Change in perceived career stability from 2019 to 2020, by setting, dichotomous outcomes estimated using logit models.

	Stay Here Until May			Stay Here 3 Years			Long-Term Career		
	Raw	Controls	FE	Raw	Controls	FE	Raw	Controls	FE
Change btwn 2019 & 2020	0.19** (0.09)	0.20** (0.09)	0.15** (0.08)	0.64 (0.18)	0.60+ (0.17)	0.65 (0.19)	0.33** (0.13)	0.29** (0.11)	0.32** (0.13)
Child Care	0.16** (0.08)	0.18** (0.10)		0.37* (0.15)	0.36 (0.22)		0.19** (0.09)	0.24+ (0.18)	
Change x CC	1.88 (0.98)	1.84 (0.96)	2.63 (1.61)	0.82 (0.34)	0.85 (0.36)	0.83 (0.35)	2.09 (1.06)	2.14 (1.10)	2.13 (1.12)
Unique N	367	367	88	367	367	97	367	367	70
Model N	734	734	176	734	734	194	734	734	140

Note. Data are drawn from the fall 2019 and fall 2020 waves of the Study of Early Education in Louisiana Workforce Survey, individual N at each wave= 367. Sample is reduced to participants who provided full dependent and covariate information across both waves of data. Child Care indicates persons working in child care centers. Raw models include no other variables; Controls model includes age of children served, role (e.g., lead or assistant teacher), teacher education, race, age, marital status, household size, average salary, and parish (Rapides vs. Jefferson); FE model includes person fixed effects, which estimate within person change in each outcome. Because person fixed effects models include only individuals who have variability in each dependent variable across time, effective Ns in these models are 88, 97, and 70 for Stay Here Until May, Stay Here 3 Years, and Long-Term Career, respectively. Models are estimated using random and econometric fixed effects logit models and coefficients are presented as odds ratios. ** P < 0.01, * P < 0.05, + P < 0.10.

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