APPENDICES: SNAPSHOT OF THE 2018 EARLY HEAD START WORKFORCE

Appendix A: Analytic Sample, Measures, and Methods

Research questions

This brief explores five research questions:

1. What are the characteristics of Early Head Start teachers and home visitors?
2. What professional development do teachers and home visitors receive to support responsive relationships and other Early Head Start goals?
    a. How do key aspects of professional development differ based on the education and experience levels of teachers and home visitors?
3. What leadership support and organizational climate do teachers and home visitors experience, and what is their job satisfaction?
4. What is the extent of retention and turnover among teachers and home visitors?
5. How are professional development, leadership support, and organizational climate associated with teacher and home visitor job satisfaction?

Analytic sample

We used data from the 2018 round of the Early Head Start Family and Child Experiences Survey (Baby FACES 2018). Baby FACES 2018 is a nationally representative descriptive study of Early Head Start programs. It collected data about Early Head Start programs, centers, staff, and families through a series of survey instruments, including a program director survey, center director survey, staff (teacher and home visitor) survey, and parent survey.[1]

For Research Questions 1 through 4, we analyzed data from the following sources:

1. 859 teachers and 586 home visitors who responded to the teacher and home visitor surveys. The survey responses included information about their demographic and professional characteristics, the professional development they received, their job satisfaction, and their perceptions of the organizational climate at their center or program.

    To compare the demographic characteristics of teachers and home visitors to those of children and families, we also used parent survey data from 1,788 children receiving center-based services and 513 families receiving home-based services.

2. 446 centers whose directors responded to the center director survey and 100 programs whose directors responded to the program director survey and reported offering home-based services. The survey responses included information about the professional development these directors provided to their center's teachers and their program's home visitors, along with data on the retention and turnover in their centers and programs.

    In addition, from all 134 programs whose directors responded to the survey, we captured data on the professional development they provided to all of their programs' teachers and home visitors.

[1] Within each of the 137 programs that agreed to participate, Baby FACES 2018 sampled an average of four centers and/or six home visitors, depending on the types of services provided by the program. From each sampled center, Baby FACES sampled two teachers and then up to three children from each teacher. Among the six sampled home visitors per program, Baby FACES subsampled an average of three home visitors and then up to three families from each of these subsampled home visitors.

For Research Question 5, we used the same sample of teachers and home visitors, adding data from the 464 centers and 119 programs linked to at least 1 of the 859 teachers, and from the 105 programs linked to at least 1 of the 586 home visitors.[2] Appendix B provides descriptive statistics for the variables included in the multivariate analysis.

Measures

The findings in this brief are based primarily on data from surveys of Early Head Start teachers and home visitors, and of their center and program directors. For many topics in the teacher and home visitor surveys, we asked teachers about their centers, and asked home visitors the same questions about their programs. Similarly, for many topics in the director surveys, we asked center directors questions about their teachers, and asked program directors the same questions about their home visitors.

Exhibit A.1 describes the scales we used to measure constructs of mental health, teacher beliefs, leaders' supportive behavior, organizational climate, and job satisfaction.

Exhibit A.1. Scales used to measure workforce constructs

Scale	Description	Research question	Respondent
Center for Epidemiologic Studies Depression Scale-Revised (CESD-R) (Eaton et al. 2004)	Measure of depressive symptoms. Total scores range from 0 to 60, with higher scores indicating more frequent occurrence of depressive symptoms in the past week. Five levels of depressive symptoms are defined based on scores: (1) no clinical significance, (2) subthreshold symptoms (below threshold of potential clinical significance), (3) possible major depressive episode, (4) probable major depressive episode, and (5) meets criteria for major depressive episode. We grouped the final three categories as potentially clinically significant.	1	Teachers and home visitors
Teacher Beliefs About Infant and Toddler Care and Education measure (Atkins-Burnett et al. 2017)	Measure of beliefs about (1) the importance of relationships and responsiveness, and (2) the role of adults in children's learning. Some items were reverse coded. Each subscale score is the mean of 10 items rated on a scale of 1 (very strongly disagree) to 6 (very strongly agree). Higher scores indicate stronger beliefs about the importance of responsiveness and recognizing the capabilities of infants and toddlers.	1	Teachers
Supportive Behavior subscale of the Organizational Climate Description Questionnaire-Rutgers Elementary (OCDQ-RE) (Hoy et al. 1991)	Measure of leaders' supportive behavior and is based on combined scores of individual teachers, home visitors, and directors for each center and program. Response scale for each item ranges from 1 (rarely) to 4 (very frequently); the potential total score ranges from 9 to 36. Higher scores indicate more supportive director behavior.	3 5	Teachers, home visitors, and center directors
Survey of Organizational Functioning (TCU SOF) (Institute of Behavioral Research 2005)	Measure of teachers' and home visitors' perceptions of organizational climate. Four subscales: Cohesion, Communication, and Stress at the center or program, and Satisfaction with the respondent's job. Individual reports of Cohesion, Communication, and Stress were combined to the center or program level; Satisfaction remained separate for individual staff. Response scales for each item range from 1 (strongly disagree) to 5 (strongly agree). Potential total scale scores range from 10 to 50. Higher scores for Cohesion, Communication, and Satisfaction mean more positive organizational climate. For Stress, higher scores indicate a more negative organizational climate.	3 5	Teachers and home visitors

Note: Xue et al. (2021) provides more information about these measures, including reliability statistics.

Analytic methods

The first four research questions are primarily descriptive. We calculated means and percentages for teachers and home visitors separately, using analysis weights to account for complex multilevel sampling and nonresponse at particular levels. For all descriptive analyses, we calculated the standard errors based on the weighted estimates.

[2] Besides the director surveys, a few of the center and program characteristics we used were derived from the parent surveys or from sampling data.

For Research Question 2a, we conducted chi-square tests of differences between groups categorized by education (associate degree or lower, and bachelor's degree or higher) and experience (0 to 2, 3 to 5, 6 to 10, and 11 or more years of experience working with infants and toddlers). We did these tests separately for teachers and home visitors. For this sub-question, we conducted these tests for key aspects of professional development that we used later as variables of interest under Research Question 5: frequency of one-on-one and group supervision; frequency of coaching; having an individual PD plan; and being observed and receiving feedback (Exhibit A.2).

To answer Research Question 5, we used a multilevel regression model with multiple imputation to examine the relative strength of associations between job satisfaction and key program processes and functioning related to staff: professional development staff receive, supportive behavior of their center and program directors, and organizational climate at their centers and programs. As with the descriptive analysis, we analyzed teachers and home visitors separately and used the staff weights.

The multilevel models control for characteristics of staff (demographics and qualifications), centers (center size and continuity of care practices), and programs (size, services offered, location, and characteristics of families served). The models also account for the nesting of teachers and home visitors within centers and programs. The Level 1 models include teacher- and home visitor-level variables. The Level 2 models include center-level variables for teachers and program-level variables for home visitors, and the Level 3 models include program-level variables for teachers. Exhibit A.2 lists the variables used in these analyses at each level of the models.

Exhibit A.2. Variables for multilevel analyses of whether and how features of professional development, leadership support, and organizational climate are associated with teachers' and home visitors' job satisfaction

Variable	Description
Dependent variable	
TCU SOF Job Satisfaction score	As reported by teachers and home visitors
Teacher or home visitor variables of interest (Level 1)	
Teacher's or home visitor's frequency of one-on-one supervision meetings	Structured as indicators based on four categories: weekly or more often, a few times a month or once a month (the referent group), a few times a year or once a year, and not having meetings
Teacher's or home visitor's frequency of group supervision meetings	Same structure as one-on-one supervision meetings
Teacher's or home visitor's frequency of coaching	Structured as indicators based on four categories: daily or weekly, a few times a month or once a month (the referent group), more than once a year or once a year or never with an assigned coach, and not having an assigned coach
Teacher or home visitor has an individual professional development plan that is used for decision making	Entered as a binary variable (1 if yes, 0 if no)
Teacher or home visitor has been observed and received feedback from the observation	Entered as a binary variable (1 if yes, 0 if no)
Teacher or home visitor covariates (Level 1)	
Teacher's or home visitor's race/ethnicity	Entered as three indicators denoting Hispanic, non-Hispanic African American, and other race/ethnicity, with non-Hispanic White as the referent group
Years of experience as a teacher or home visitor	Entered as three indicators denoting 2 years of experience or less, 3 to 5 years of experience, and 6 to 10 years of experience, with 11 or more years of experience serving as the referent group
Teacher or home visitor has bachelor's degree or higher	Entered as a binary variable (1 if yes, 0 if no)
Teacher or home visitor has CDA credential	Entered as a binary variable (1 if yes, 0 if no)
Teacher's or home visitor's degree focused on ECE	Entered as a binary variable (1 if yes, 0 if no)
Teacher or home visitor only speaks English	Entered as a binary variable (1 if yes, 0 if no)
Teacher or home visitor has elevated or potentially clinically significant depressive symptoms	The binary variable for having a level of depressive symptoms is based on the CESD-R total score and responses to specific items; entered as 1 if the level is subthreshold depression symptoms, a possible major depressive episode, a probable major depressive episode, or meets the criteria for a major depressive episode, and 0 if the level is no clinical significance

Variable	Description
Center and program variables of interest (Level 2; center level for teachers and program level for home visitors)	
OCDQ-RE Leader Supportive Behavior score	Averaged teachers' ratings of center directors to produce center-level scores; averaged home visitors' and center directors' ratings of program directors to produce program-level scores
TCU SOF Communication score	Averaged teachers' responses to produce center-level scores and home visitors' responses to produce program-level scores
TCU SOF Cohesion score	Same structure as Communication score
TCU SOF Stress score	Same structure as Communication score
Center and program covariates (Level 2; center level for teachers and program level for home visitors)	
Variation in years of experience at center or program	For teachers, used the standard deviation of their years of experience at the center; for home visitors, used the standard deviation of their years of experience in the program
Center covariates (Level 2 for teachers)	
Center size	Defined as the number of children enrolled in the center, based on the Baby FACES 2018 sampling frame
Continuity of Care Scale score	Adapted items from a short instrument used by Ruprecht et al. (2016) to measure continuity of care in Early Head Start classrooms. Higher scores on the measure indicate stronger use of continuity-of-care practices. See Xue et al. (2021) for more details on this scale.
Program covariates (Level 3 for teachers and Level 2 for home visitors)	
Program size	The cumulative enrollment reported by programs in the Office of Head Start's 2015–2016 Program Information Report (PIR)
Program services offered	Entered as "center-based only" for teachers and "home-based only" for home visitors, with "multiple service options" as the referent group in both cases
Program location is urban	Using information in the PIR, categorized programs as urban if their zip code was part of a metropolitan statistical area (MSA), based on census data updated with annual population estimates. An MSA usually includes one city with 50,000 or more inhabitants and the county where the city is located. Nearby counties can be included if they are within commuting distance. All other programs are considered rural or non-MSA.
25 percent or more of families served by program have high demographic risk	See Xue et al. (2021) for a description of the demographic and psychological risk indices.
25 percent or more of families served by program have high psychological risk	See Xue et al. (2021) for a description of the demographic and psychological risk indices.

Note: We standardized all continuous variables and used the *z*-score in the analysis.

CDA = Child Development Associate; CESD-R = Center for Epidemiologic Studies Depression Scale-Revised; ECE = early childhood education; OCDQ-RE = Organizational Climate Description Questionnaire-Rutgers Elementary; PIR = Program Information Report; TCU SOF = Survey of Organizational Functioning, published by Texas Christian University's Institute of Behavioral Research.

Addressing missing data

For Research Questions 1 to 4, we calculated all descriptive statistics based on valid responses. For each variable in the multilevel models in Research Question 5, at least 95 percent of respondents (staff, centers, or programs) had valid data. We conducted multiple imputation through chained equations for all missing data (including for the dependent variable) in the multilevel models, using the "mi" suite of commands in Stata.

We closely followed the imputation approach from Xue et al.'s (forthcoming) analysis of quality in Early Head Start classrooms, which also used Baby FACES 2018 data. Before imputation, we converted all special codes for missing data (such as .m, .d, and .r) to system missing (.). We conducted separate multiple imputations within each level: program, center, and teacher and home visitor. We created 20 data sets at each level that we merged to create a complete analytic data set. We imputed missing data for the dependent and independent variables for the analytic models and used the imputed versions of all the variables in the final analyses. The list of variables in our imputation models is in Box A.1. For more details of our imputation approach, including the Stata code used for the imputation, see Xue et al. (forthcoming).

Box A.1. Variables in imputation models

Program

- Program size
- Program services offered
- Program location is urban
- 25 percent of more of families served by program have high demographic risk
- 25 percent or more of families served by program have high psychological risk

Center (for teacher analysis only)

- Center size
- Continuity of Care Scale score

Center or program (for teacher and home visitor analysis, respectively)

- Variation in years of experience at center or program
- Percentage of teachers and home visitors with bachelor's degree or higher
- Percentage of teachers and home visitors with a degree in early childhood education
- Leader's supportive behavior at center or program
- Communication at center or program
- Cohesion at center or program
- Stress at center or program

Teacher or home visitor

- Job satisfaction
- Perception of communication at center or program
- Perception of cohesion at center or program
- Perception of stress at center or program
- Frequency of one-on-one supervision meetings
- Frequency of group supervision meetings
- Frequency of coaching meetings
- Has individual professional development plan used for decision making
- Has been observed and received feedback from the observation
- Race/ethnicity
- Years of experience
- Has bachelor's degree or higher
- Has degree in early childhood education
- Has Child Development Associate (CDA) credential
- Only speaks English
- Has elevated or potentially clinically significant depressive symptoms

Note: For each level of imputation below the program level, we included variables from higher levels, unless they had been aggregated from lower levels. We deleted these variables after imputation was complete.

Limitations of the analysis

The major limitation of these analyses is that they cannot address causality or the direction of the concurrent associations of professional development and organizational climate with job satisfaction. For example, we observed some associations between a stronger organizational climate and greater job satisfaction among staff, but we cannot conclude that a stronger organizational climate caused staff to be more satisfied. Also, given our cross-sectional design, we cannot examine changes in the variables of interest or the outcome over time. In particular, note that we collected the data in spring 2018, before the COVID-19 pandemic and its impacts on the child care and early education field. Findings might not reflect the current state of the Early Head Start workforce.

Another potential issue is that all the variables of interest (professional development, leadership support, organizational climate, and job satisfaction) were drawn from the same teacher or home visitor reports. In addition, many of these measures involved subjective perceptions, and the organizational climate variables in particular came from the same measure (the Texas Christian University Survey of Organizational Functioning [TCU SOF]) as the measure of job satisfaction. This shared method variance could inflate associations between the variables of interest and job satisfaction. To investigate this issue, we estimated the bivariate correlations between the Satisfaction subscale and the other three TCU SOF subscales (Communication, Cohesion, and Stress) used in the multilevel models. As Appendix B describes, these estimates are all 0.51 or below, indicating that shared variance is limited.

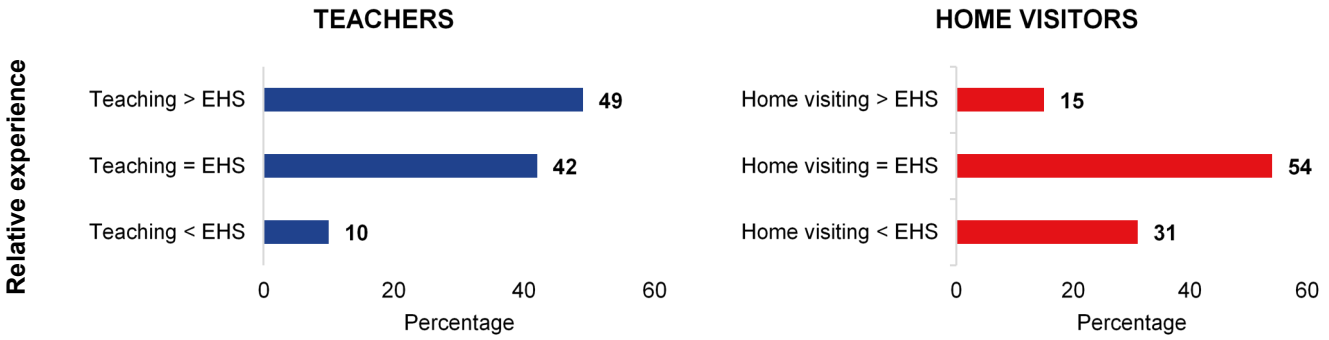
Appendix B: Additional Details on Findings

What are the characteristics of Early Head Start teachers and home visitors?

Experience

More than two-fifths of teachers and more than half of home visitors have the same amount of experience in teaching or home visiting as they do in Early Head Start (Exhibit B.1). This suggests their only experience as a teacher or home visitor might be in Early Head Start. However, almost half of teachers have more years of experience teaching than experience in Early Head Start, indicating they have teaching experience outside of Early Head Start. In contrast, almost one-third of home visitors have more years of experience in Early Head Start than they have as a home visitor, implying that many home visitors have experience in Early Head Start in roles other than home visiting.

Exhibit B.1. Many teachers have teaching experience outside of Early Head Start; many home visitors have other experience within Early Head Start



Source: Spring 2018 Baby FACES Staff (Teacher and Home Visitor) Surveys.

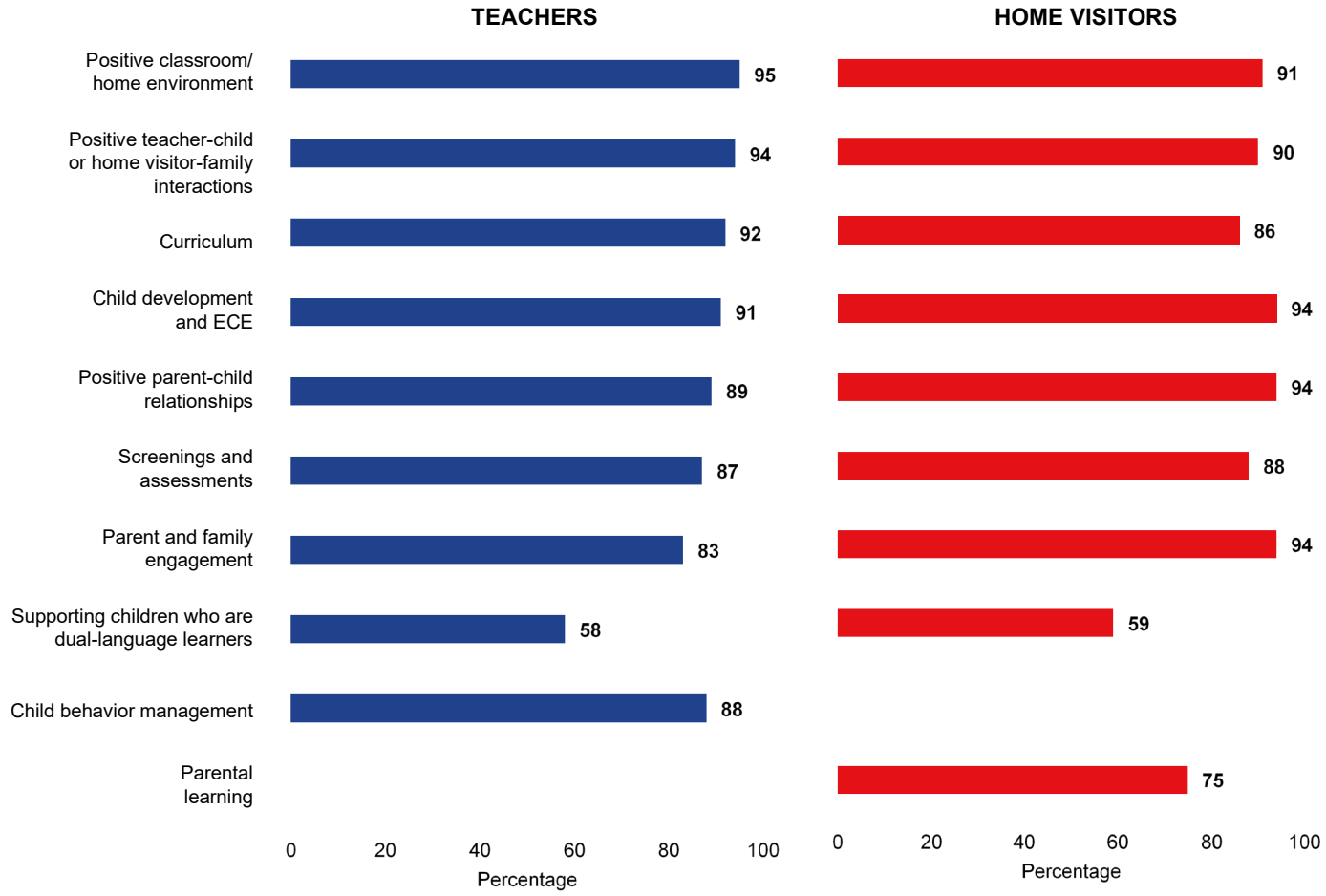
Note: Teachers were asked how many years they had taught infants and toddlers. Home visitors were asked how many years they had worked as a home visitor serving families with infants and toddlers. All staff were separately asked how many years they had worked in Early Head Start. This figure shows percentages of staff with more years of experience as a teacher or home visitor than years of experience in Early Head Start (Teaching/Home visiting > EHS); the same amount of experience (Teaching/Home visiting = EHS); or fewer years of experience as a teacher or home visitor than in Early Head Start (Teaching/Home visiting < EHS).

EHS = Early Head Start.

What professional development do teachers and home visitors receive to support responsive relationships and other Early Head Start goals?

Training

Exhibit B.2. Large majorities of teachers and home visitors have received training on most topics



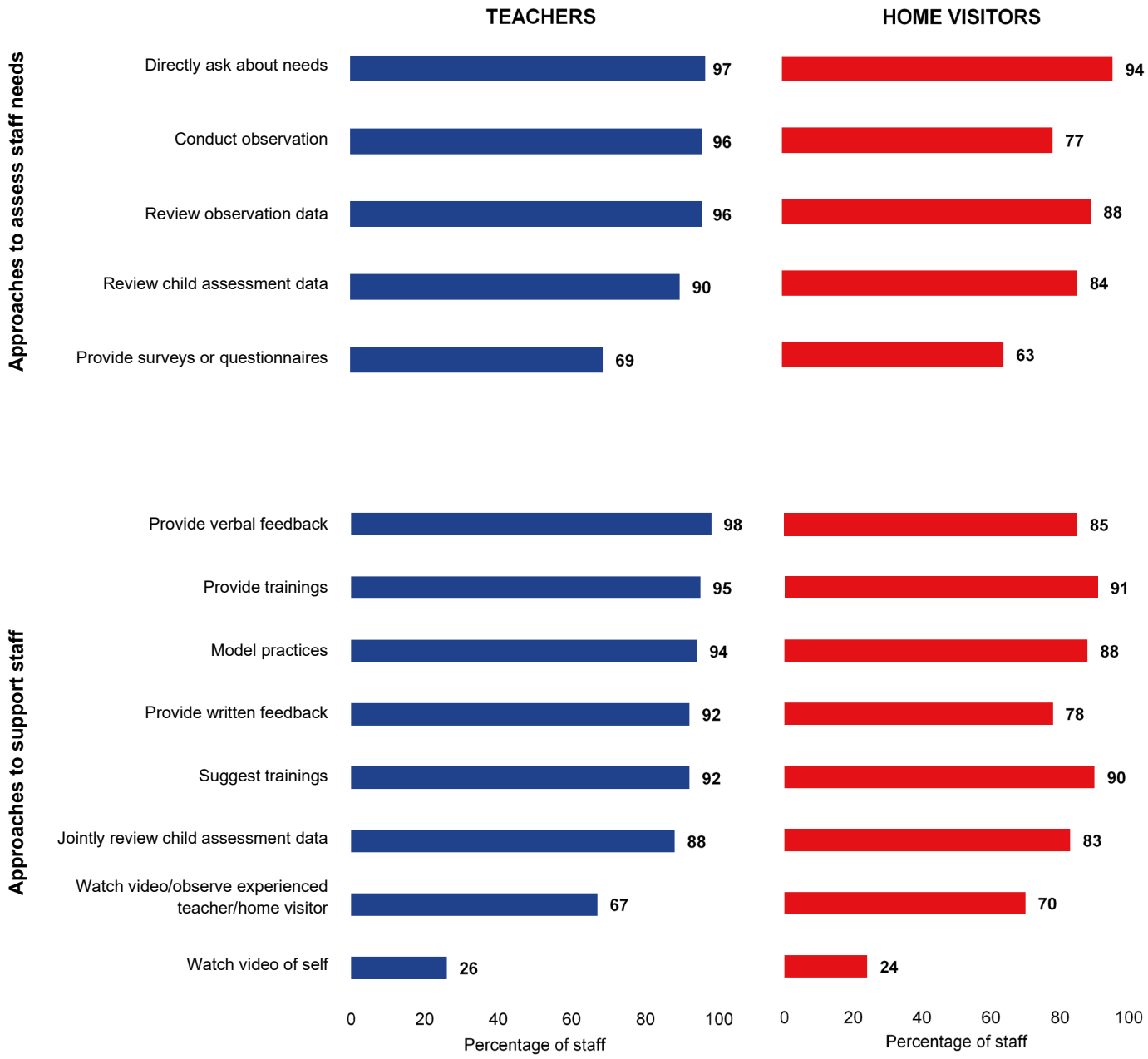
Source: Spring 2018 Baby FACES Staff (Teacher and Home Visitor) Surveys.

Note: Teachers (but not home visitors) were asked about training on child behavior management, and home visitors (but not teachers) were asked about training on parental learning.

ECE = early childhood education.

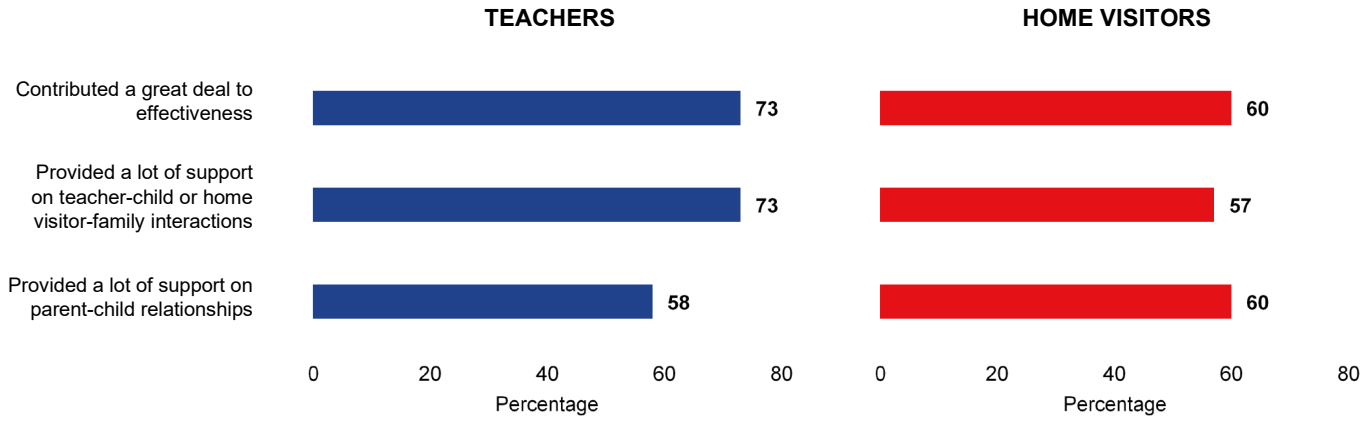
Coaching

Exhibit B.3. Coaches use a variety of approaches to assess needs and support teachers and home visitors



Source: Spring 2018 Baby FACES Staff (Teacher and Home Visitor) Surveys.
Note: Percentages are based on teachers or home visitors who have a coach.

Exhibit B.4. Most staff reported high levels of support from their coach



Source: Spring 2018 Baby FACES Staff (Teacher and Home Visitor) Surveys.

Note: Percentages are based on teachers or home visitors who have a coach. Figure shows percentages of teachers and home visitors who reported their coach contributed "a great deal" to their effectiveness (as opposed to contributing somewhat, a little, or not at all) or that their coach provided "a lot of support" for their interactions with children/families or for encouraging positive parent-child relationships (as opposed to some support, a little support, or no support).

Different levels of education and experience

Exhibit B.5. Professional development received by teachers and home visitors with different levels of education and experience

	Percentage of teachers or home visitors					
	Education: Highest degree earned		Experience: Years as a teacher or home visitor			
	Associate's degree or lower	Bachelor's degree or higher	0–2 years	3–5 years	6–10 years	11 or more years
TEACHERS						
Has one-on-one supervision meetings	85.4	82.9	87.0	86.7	80.1	84.8
Frequency of one-on-one supervision meetings						
Weekly or more often	12.3	18.5	16.7	14.5	9.1	15.0
A few times a month or once a month	61.7	51.7	62.5	59.7	54.9	58.2
A few times a year or once a year	26.0	29.7	20.8	25.8	36.0	26.8
Has group supervision meetings	91.5	86.6	94.5	89.4	88.4	89.8
Frequency of group supervision meetings						
Weekly or more often	12.3	13.6	14.6	8.8	13.5	14.8
A few times a month or once a month	71.0	71.3	69.6	72.3	70.3	71.3
A few times a year or once a year	16.8	15.1	15.8	19.0	16.2	13.9
Has a coach	68.3	58.8	71.5	63.9	68.1	62.4
Frequency of coaching meetings	*					
Daily or weekly	36.2	24.6	35.1	26.0	32.2	39.3
A few times a month or once a month	49.7	61.9	53.1	61.9	50.1	47.1
More than once a year, once a year, or never	14.1	13.6	11.8	12.0	17.7	13.6
Has an individual PD plan that is used for decision making	84.6	84.5	82.2	80.6	86.9	87.7
Has been observed and received feedback	85.2	79.2	79.1	83.1	82.5	86.7
HOME VISITORS						
Has one-on-one supervision meetings	92.8	90.3	89.3	94.6	92.4	89.5
Frequency of one-on-one supervision meetings			*			
Weekly or more often	10.7	18.4	22.7	12.2	7.7	12.6
A few times a month or once a month	74.0	65.2	65.1	67.2	71.6	78.0
A few times a year or once a year	15.4	16.3	12.3	20.6	20.8	9.5
Has group supervision meetings	86.0	82.3	85.1	88.6	85.5	72.5
Frequency of group supervision meetings						
Weekly or more often	12.8	12.9	9.6	15.6	15.9	11.4
A few times a month or once a month	79.0	75.0	79.1	72.8	77.3	78.1
A few times a year or once a year	8.1	12.1	11.3	11.6	6.8	10.5
Has a coach	59.6	51.9	57.5	60.2	46.1	55.4
Frequency of coaching meetings			*			
Daily or weekly	20.2	20.2	30.3	16.0	16.9	10.4
A few times a month or once a month	58.8	65.0	60.6	53.7	68.7	73.0
More than once a year, once a year, or never	21.1	14.8	9.1	30.2	14.4	16.6
Has an individual PD plan that is used for decision making	82.7	81.7	78.5	84.9	82.0	85.5
Has been observed and received feedback	67.5	62.4	60.1	63.9	67.7	71.0

Note: Table shows percentages of teachers or home visitors receiving professional development activities by level of education (highest degree earned) or experience (years of experience as a teacher or home visitor). Chi-square tests examine the differences across the two subgroups for education or the four subgroups for experience listed in this table. **Asterisks in the associate degree or lower column** indicate difference between education subgroups; **asterisks in the 0–2 years column** indicate differences among all of the experience subgroups.

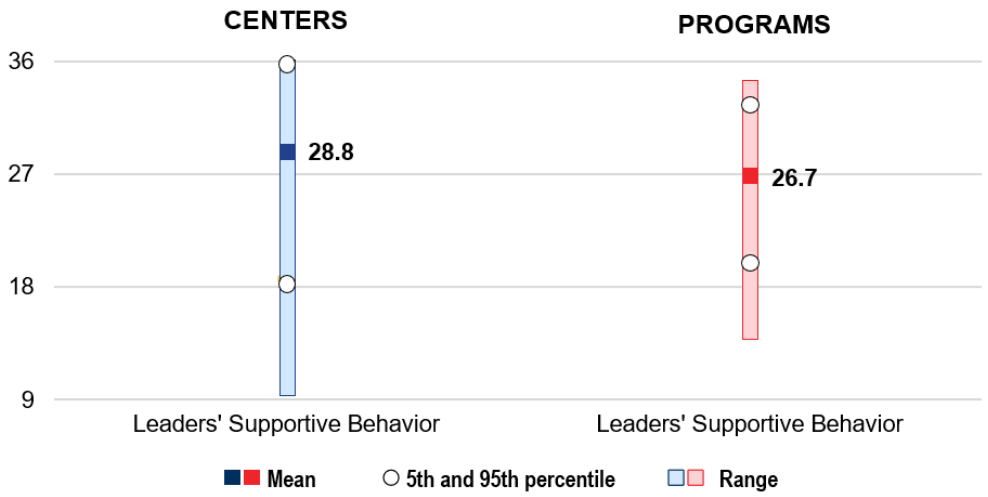
* $p < 0.05$.

PD = professional development.

What leadership support and organizational climate do teachers and home visitors experience, and what is their job satisfaction?

Leaders' supportive behavior

Exhibit B.6. Staff report frequent supportive behavior from center and program directors



Source: Spring 2018 Baby FACES Staff (Teacher and Home Visitor) Surveys and Center Director Surveys.

Note: The Leaders' Supportive Behavior subscale in the OCDQ-RE contains items about the respondent's perception of the frequency of supportive behaviors from their center director or program director. These scores are based on combining teacher scores into center averages and combining home visitor and center director scores into program averages. Programs without home visitors are excluded from the results for programs because the only scores came from center directors.

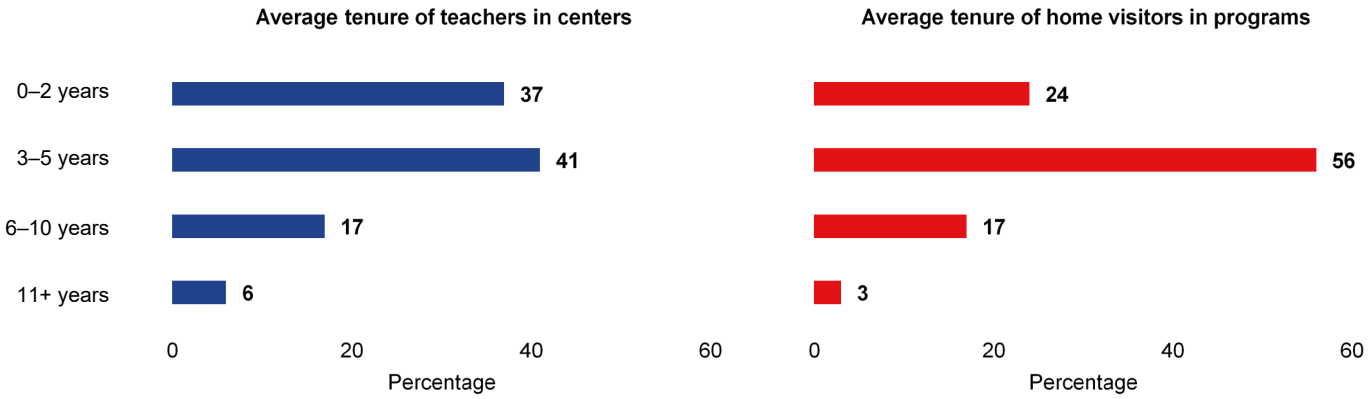
The Leaders' Supportive Behavior subscale has a possible range of 9 to 36. Scores of 9, 18, 27, or 36 correspond to consistently responding "rarely," "sometimes," "often," or "very frequently," respectively, to statements about the frequency of leaders' supportive behavior. Higher scores indicate more frequent supportive behavior.

OCDQ-RE = Organizational Climate Description Questionnaire-Rutgers Elementary.

What is the extent of retention and turnover among teachers and home visitors?

Tenure

Exhibit B.7. Some center and program directors reported low levels of staff tenure, whereas others reported greater staff stability



Source: Spring 2018 Baby FACES Center Director and Program Director Surveys.

Note: Center directors were asked about the average length of time a teacher stays at their center. Program directors were asked the same question about the home visitors in their program.

How are professional development, leadership support, and organizational climate associated with teacher and home visitor job satisfaction?

Exhibit B.8 shows correlations between the variables of interest, and correlations between those variables and the outcome used in the multivariate analysis.

- The professional development indicators are weakly related to each other, with the correlation coefficients not exceeding 0.22.
- Similarly, most professional development indicators are weakly related to organizational climate scores, with the strongest correlation estimate only 0.26.
- Organizational climate scores are moderately to strongly correlated for both groups of staff, with magnitudes ranging from 0.41 to 0.67 for teachers and 0.38 to 0.74 for home visitors. This reflects the fact that three of these four variables are scales from a single measure (the Texas Christian University Survey of Organizational Functioning [TCU SOF]) and based on responses from the same reporter. We found that communication, cohesion, and stress from the TCU SOF are significantly associated with job satisfaction in the regression models (Exhibit B.9), suggesting multicollinearity is less of a concern.
- The outcome (job satisfaction) is more strongly correlated with organizational climate scores than with professional development indicators, again reflecting the fact that job satisfaction is also part of the TCU SOF measure. The magnitudes of the correlations of job satisfaction with the other TCU SOF scales and the Organizational Climate Description Questionnaire-Rutgers Elementary (OCDQ-RE) Leader Supportive Behavior scale (none higher than 0.51) are evidence that they are measuring different constructs, and that shared method variance is limited.

Exhibit B.8. Correlations between variables of interest and the job satisfaction outcome in the multivariate analysis: separately for teachers (top estimate) and home visitors (bottom estimate)

	1	2	3	4	5	6	7	8	9
1. Teacher or home visitor frequency of one-on-one supervision meetings									
2. Teacher or home visitor frequency of group supervision meetings	0.185*** 0.061								
3. Teacher or home visitor frequency of coaching	0.181*** 0.078	0.102* 0.067							
4. Teacher or home visitor has an individual professional development plan that is used for decision making	0.167*** 0.217***	0.104** 0.202***	0.094* 0.160***						
5. Teacher or home visitor has been observed and received feedback from the observation	0.184*** 0.175**	0.076 -0.015	0.184** 0.177**	0.208*** 0.165**					
6. Center or program OCDQ-RE Leader Supportive Behavior score	0.151*** 0.256***	0.070 0.064	0.074 0.016	0.173*** 0.139*	0.156* 0.064				
7. Center or program TCU SOF Communication score	0.194*** 0.226***	0.184*** 0.056	0.191*** 0.116	0.223*** 0.239***	0.225*** 0.188*	0.641*** 0.737***			
8. Center or program TCU SOF Cohesion score	0.134** 0.207**	0.118** -0.064	0.071 0.051	0.241*** 0.155*	0.116 0.175*	0.412*** 0.381**	0.651*** 0.705***		
9. Center or program TCU SOF Stress score	-0.120* -0.184**	-0.141** 0.002	-0.061 -0.038	-0.188*** -0.119*	-0.113* -0.094	-0.493*** -0.502***	-0.669*** -0.712***	-0.588*** -0.619***	
10. Teacher or home visitor TCU SOF Job Satisfaction score	0.204*** 0.262***	0.198*** 0.045	0.152*** 0.206***	0.239*** 0.157*	0.169** 0.095	0.418*** 0.322***	0.506*** 0.430***	0.476*** 0.396***	-0.452*** -0.317***

Note: For these correlations, frequency of one-on-one supervision, group supervision, and coaching are organized as categorical variables for which the highest values correspond to more frequent meetings. Having an individual plan and receiving feedback on an observation are binary variables. The OCDQ-RE and TCU SOF scores are continuous variables.

The top correlation in each cell is for teachers, and the bottom correlation in each cell is for home visitors.

For the TCU SOF Stress score, higher scores mean a weaker (more stressful) organizational climate, so negative correlations with other variables indicate expected relationships.

*p < .05; **p < .01; ***p < .001.

OCDQ-RE = Organizational Climate Description Questionnaire-Rutgers Elementary; TCU SOF = Survey of Organizational Functioning, published by Texas Christian University's Institute of Behavioral Research.

Exhibit B.9 shows the standardized regression coefficients and standard errors from the multilevel models, which we implemented in SAS. Separate columns provide the results for the sample of teachers and the sample of home visitors.

Exhibit B.9. Standardized regression coefficients (and standard error in parentheses) from multilevel models that examine whether and how features of professional development, leadership support, and organizational climate are associated with teachers' and home visitors' job satisfaction

	Teacher analysis	Home visitor analysis
Level 1 variables of interest: Teacher or home visitor professional development		
Frequency of one-on-one supervision meetings		
Weekly or more often	0.021 (0.100)	0.223 (0.110)*
A few times a month or once a month (referent)	--	--
A few times a year or once a year	-0.064 (0.070)	-0.075 (0.110)
Never (no one-on-one supervision meetings)	-0.193 (0.090)*	-0.357 (0.140)**
Frequency of group supervision meetings		
Weekly or more often	-0.012 (0.100)	0.367 (0.120)**
A few times a month or once a month (referent)	--	--
A few times a year or once a year	-0.246 (0.090)**	0.178 (0.130)
Never (no group supervision meetings)	-0.352 (0.100)***	0.005 (0.100)
Frequency of coaching		
Daily or weekly	0.045 (0.080)	0.114 (0.120)
A few times a month or once a month (referent)	--	--
More than once a year, once a year, or never	-0.097 (0.110)	-0.291 (0.130)*
Never (no assigned coach)	-0.105 (0.070)	-0.257 (0.080)**
Has an individual professional development plan that is used for decision making	0.224 (0.080)**	0.013 (0.100)
Has been observed and received feedback from the observation	0.063 (0.080)	-0.075 (0.080)
Level 2 variables of interest: Center or program organizational climate		
OCDQ-RE Leader Supportive Behavior score	0.152 (0.040)***	0.056 (0.060)
TCU SOF Communication score	0.112 (0.050)*	0.257 (0.090)**
TCU SOF Cohesion score	0.219 (0.040)***	0.199 (0.070)**
TCU SOF Stress score	-0.133 (0.040)**	0.106 (0.060)
Level 1 covariates (teacher or home visitor level)		
Race/ethnicity		
White, non-Hispanic (referent)	--	--
African American, non-Hispanic	-0.118 (0.070)	-0.213 (0.160)
Hispanic/Latino	-0.057 (0.090)	-0.134 (0.110)
Other, non-Hispanic[c]	-0.348 (0.140)*	-0.410 (0.200)*
Years of experience as a teacher or home visitor		
2 years or less (referent)	--	--
3–5 years	0.027 (0.090)	0.004 (0.090)
6–10 years	0.035 (0.100)	-0.095 (0.100)
11 years or more	0.203 (0.090)*	0.067 (0.110)
Has bachelor's degree or higher	-0.063 (0.070)	-0.077 (0.080)
Has CDA credential	-0.039 (0.060)	-0.049 (0.080)
Has degree in ECE field	-0.072 (0.070)	0.057 (0.080)
Only speaks English	0.013 (0.070)	-0.034 (0.100)
Has elevated or potentially clinically significant depressive symptoms	-0.199 (0.120)	-0.571 (0.120)***
Level 2 covariates (center level for teachers and program level for home visitors)		
Variation in years of experience at center or program	0.032 (0.030)	0.013 (0.050)
Center size	-0.039 (0.020)	n.a.
Continuity of Care Scale score	-0.004 (0.030)	n.a.

	Teacher analysis	Home visitor analysis
Program covariates (Level 3 for teachers and Level 2 for home visitors)		
Program size	0.014 (0.030)	-0.098 (0.050)*
Program services offered		
Center-based only	-0.001 (0.070)	n.a.
Home-based only	n.a.	0.138 (0.110)
Multiple service options (referent)	--	--
Program is in urban location	-0.089 (0.080)	0.052 (0.100)
25 percent or more of families served by program have high demographic risk[a]	0.041 (0.100)	-0.052 (0.140)
25 percent or more of families served by program have high psychological risk[a]	0.015 (0.100)	-0.005 (0.120)

Note: Standardized regression coefficients are reported. Standard errors are provided in parentheses.
Statistics are weighted to represent Early Head Start teachers and home visitors.
n.a. = not applicable.

[a] See Xue et al. (2021) for a description of the demographic and psychological risk indices.

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

CDA = Child Development Associate; ECE = early childhood education; OCDQ-RE = Organizational Climate Description Questionnaire-Rutgers Elementary; TCU SOF = Survey of Organizational Functioning, published by Texas Christian University's Institute of Behavioral Research.

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