



Mile High Early Learning Workforce Initiatives: Evaluating a New Teacher Salary Scale, Initial Findings

NORC
at the UNIVERSITY of CHICAGO

 University of Colorado
Denver

**Prepared by Diana Schaack, Vi-Nhuan Le,
Mari Ortega, & Tobiloba Adegbuyi**

Prepared for Mile High Early Learning

January 2020

© 2020 University of Colorado Denver

All rights reserved

University of Colorado Denver
School of Education and Human Development
1380 Lawrence Street
Denver, Colorado 80204

NORC at the University of Chicago
55 E Monroe St # 3000
Chicago, IL 60603

This study was funded by Mile High Early Learning. The views, conclusions, and recommendations presented in this report are those of the authors, and not of the funders of this report.

Special thanks to:

Dr. Pamela Harris, Sonia Bauduy, and Mikayla Martinez of Mile High Early Learning and Lisa Grant. We would also like to especially thank all of the directors, teachers, assistant teachers, and staff aides who generously shared their time and insights.

Suggested citation: Schaack, D., Le, V., Adegbuyi, T, & Ortega, M. (2020). *Mile High Early Learning workforce initiatives: Evaluating a new teacher salary scale, initial findings*. Denver, Colorado: University of Colorado Denver.

TABLE OF CONTENTS

	Page
Chapter 1: Introduction	5
Implementing and Evaluating Teacher Well-being and Retention Strategies.....	7
The Current Report.....	7
Chapter 2: Evaluation Methods	8
Retention Strategy and Evaluation Timeline	8
Current Evaluation	9
Sample	9
Instrumentation	11
Analytic Techniques	13
Chapter 3: Teacher Turnover	14
Teacher Demographic Characteristics	14
Wage Adjustment.....	15
Has Turnover Decreased in the Year Since the Wage Adjustment?.....	15
Has Turnover Decreased as a Function of the Wage Adjustment?.....	17
Chapter 4: Teacher Well-Being, Organizational Climate, and Responsive Caregiving	18
Have There Been Changes in Teachers' Financial Well-being One-Year Post Wage Adjustment?.....	18
Have There Been Changes in Teachers' Emotional Well-being One-Year Post Wage Adjustment?	20
Have There Been Changes in Teachers' Perceptions of Organizational Climate One-Year Post Wage Adjustment?	21
Have There Been Changes in Teachers' Responsive Caregiving One-Year Post Wage Adjustment?....	22
Chapter 5. Conclusion	23
Turnover, Retention, and Movement.....	23
Financial Strain and Economic Vulnerability	23
Emotional Well-Being and Organizational Climate	24
Future Directions.....	25

TABLE OF TABLES AND FIGURES

	Page
Table 1. Wage Adjustment	6
Figure 1. Data Collection and Intervention Schedule	8
Table 2. Teacher Demographic Characteristics by Sampling Group	13
Table 3. Teacher Education by Sampling Group	13
Table 4. Average Wage Adjustment by Position	15
Table 5. Teacher Movement and Turnover	16
Table 6. Assistant Teacher Movement and Turnover	16
Table 7. Staff Aide Movement and Turnover	16
Table 8. Turnover by Teacher Age Group and Position	17
Table 9. Characteristics of Teachers Who Remained at MHEL	18
Table 10. Educational Attainment of Teachers Who Remained at MHEL	18
Table 11. Teacher Financial Strain	19
Table 12. Teacher Economic Vulnerability	19
Table 13. Teacher Emotional Well-being	20
Table 14. Perceptions of Organization Climate	21
Table 15. Emotionally Supportive and Responsive Caregiving	22

CHAPTER 1: INTRODUCTION

Over the past several decades, research has consistently confirmed positive associations between children’s participation in high quality early care and education (ECE) programs and their cognitive, language, and social-emotional skills upon kindergarten entry¹. Research has also described the important role that high-quality ECE can play in narrowing the achievement gap through early elementary school; especially for children who are English language learners and for children residing in lower-income families². Mile High Early Learning (MHEL) is one of Colorado’s oldest organizations providing subsidized ECE, Head Start, Early Head Start, and Colorado Preschool Program services. Annually, they provide center-based early learning opportunities to approximately 623 children birth to age five, many of whom are English language learners, newcomers to the United States, and who live in lower-income households in the Denver metropolitan area. MHEL’s programming has been designed to foster children’s positive social-emotional, language, physical, and cognitive development so that children enter kindergarten with the knowledge, approaches to learning, and skills needed to thrive in elementary school and beyond.

Research has also increasingly recognized that early childhood teachers are the single most important ingredient to high-quality ECE³. Consequently, calls have been made nationally to improve the professional preparation of early childhood teachers to ensure that they have the knowledge and skills essential to supporting the diverse array of children they serve⁴. MHEL has been a leader in responding to these calls. As an organization, they have developed multi-pronged strategies to support the professional preparation and ongoing professional learning of teachers that are targeted to the diverse qualifications of teachers in their organization. For example, MHEL has increased the educational qualifications required for instructional positions, developed partnerships with local universities to provide credit-bearing formal coursework across the educational continuum (e.g., from Child Development Associates to Masters degrees), and as an organization, provides ongoing in-service professional development and employs in-house coaches to support practice-embedded teacher development.

However, like many ECE programs in Colorado and across the United States, MHEL has experienced challenges in recruiting and retaining well-qualified teachers. Nationally, approximately 30% of early childhood teachers leave their jobs each year, a figure four times higher than observed among elementary school teachers⁵. High rates of teacher turnover can undermine an ECE program’s abilities to deliver high quality programming and can make it challenging for children to develop positive and secure relationships with teachers⁶, and can negatively influence children’s school readiness skills⁷. It can also lead to increased workload, stress, and burnout among teachers who remain, prompting many to leave, creating a continuous cycle of teachers exiting a program⁸.

1 Cannon, J. S., Kilburn, M. R., Karoly, L. A., Mattox, T., Muchow, A. N., & Buenaventura, M. (2018). *Investing early: Taking stock of outcomes and economic returns from early childhood programs*. Rand Health Quarterly, 7(4).

2 Duncan, G. J., & Magnuson, K. K. (2013). *Investing in preschool programs*. Journal of Economic Perspectives, 27(2), 109-132.

3 Institute of Medicine/ National Research Council. (2015). *Transforming the workforce for children birth through age 8: A unifying foundation*. Washington, D.C.: National Academies Press.

4 Ibid.

5 Whitebook, M., Phillips, D., & Howes, C. (2014). *Worthy work, STILL unlivable wages: The early childhood workforce 25 years after the National Child Care Staffing Study*. Berkeley, CA: Center for the Study of Child Care Employment.

6 Whitaker, R. C., Dearth-Wesley, T., & Gooze, R. A. (2015). *Workplace stress and the quality of teacher–children relationships in Head Start*. Early Childhood Research Quarterly, 30, 57–69.

7 Markowitz, A. (May, 2019). *Within-year teacher turnover in Head Start and children’s school readiness*. Charlottesville, VA: EdPolicy Works.

8 Whitebook, M., & Sakai, L. (2003). *Turnover begets turnover: An examination of job and occupational instability among child care center staff*. Early Childhood Research Quarterly, 18, 273–293.

The wages teachers earn are also one of the strongest predictors of turnover among early childhood teachers⁹. Recent scans of the workforce reveal that the median hourly wage for early childhood teachers in nearly every state qualify them for public subsidies reserved for low-income individuals and families, making it challenging for teachers to stay in the field¹⁰. Consequently, in May of 2018 MHEL began implementing a set of early childhood teacher retention strategies. The first strategy involved a new wage structure that linked increased wages to teachers' professional qualifications. This new wage structure was introduced to improve the financial well-being and economic self-sufficiency of teachers within the organization, to foster greater retention among teachers, and to recognize and promote professional development to improve the quality of the services teachers provide. Table 1 displays teacher wages for different educational attainment levels prior to the wage adjustment and after the adjustment.

Table 1. MHEL Wage Adjustment

POSITION	EDUCATION REQUIREMENTS	WAGE PRIOR TO THE ADJUSTMENT	WAGE AFTER THE ADJUSTMENT
Staff Aide	High School/GED OR	\$12.00	\$12.50
	Unrelated Associates (AA) or Bachelors (BA)	Not applicable	\$13.00
Center Teachers	Early Childhood Teachers (ECT), OR 3 ECE classes, OR Colorado Early Childhood Credential (Credential) Level III	\$12.25	\$13.00
	Child Development Associate (CDA) OR 5 ECE classes or more	Not applicable	\$13.50
	ECE classes, OR AA or BA in unrelated field		
Teacher Assistants	CDA, Credential Level III, Center Director	\$12.50	\$14.00
	Certification, 5 or more ECE classes	\$12.75	\$14.50
	AA or BA unrelated field AND ECT qualified	Not applicable	\$15.00
Lead Teachers	ECT qualification OR Credential Level III	\$12.50	\$16.00
	CDA or equivalent ECE classes	\$13.00	\$16.00
	Center Director Certificate	\$13.50	\$16.50
	AA unrelated with 5 or more ECE classes	Not applicable	\$16.50
	AA in ECE	\$15.00	\$17.50
	BA unrelated with less than 5 ECE classes	\$15.00	\$17.50
	BA unrelated with 5 to 9 ECE classes or ECE minor	\$16.00	\$18.50
	BA unrelated with major equivalent	\$16.50	\$20.00
	BA in ECE	\$16.75	\$20.00
MA in ECE or unrelated field with equivalent of a ECE minor	\$17.50	\$21.00	

Note: Not applicable indicates there were no guidelines prior to the wage adjustment

9 Schaack, D., Le., V., & Stedron, J. (in press). *When fulfillment is not enough: Early childhood teacher burnout and turnover intentions from a job demands and resources perspective*. Early Education and Development.

10 Whitebook et al., 2014

Implementing & Evaluating Teacher Well-Being and Retention Strategies

In the winter of 2018, prior to the implementation of the wage adjustment, leadership at MHEL approached the research team to conduct an evaluation of the new salary structure. MHEL was also interested in using the results from the recently released *Colorado Early Childhood Workforce Study, 2017*¹¹ to develop additional teacher retention strategies related to factors from the study found to influence teacher turnover and well-being. Collaboratively, MHEL and the research team identified: (1) center-level leadership, (2) organizational capacity to support children with challenging behaviors, and, (3) working conditions as potential high impact areas to aim retention efforts.

MHEL decided to implement the wage adjustment among all teachers across all MHEL centers and evaluate its effectiveness on teacher retention, teacher well-being, and classroom quality indicators one-year post wage adjustment. After understanding the influence of the wage adjustment on key outcomes, MHEL planned to pilot and evaluate three additional retention strategies: (1) training directors on reflective supervision, and providing bi-weekly director led reflective supervision sessions to classroom teams in three centers; (2) providing comprehensive training on trauma-informed care to staff in three different MHEL centers, and (3) changing lead teacher work schedules to decrease their in-class time and increase their out-of-class planning time in one additional MHEL center.

The Current Report

The current report focuses on initial outcomes of MHEL's wage adjustment. The first part of the report concentrates on teacher stability, retention, and turnover within MHEL and examines whether there were significant changes in turnover compared to a control group as a function of the wage adjustment. The second part of this report focuses exclusively on teachers at MHEL and examines changes in key teacher well-being, organizational climate, and classroom quality indices over the year period since the wage adjustment. The report concludes with key recommendations for supporting teacher retention at MHEL and directions for next steps in the evaluation of MHEL's retention efforts.

11 Schaack, D. & Le, V. (2018). *Colorado Early Childhood Workforce Study, 2017*. Denver, CO: University of Colorado Denver.

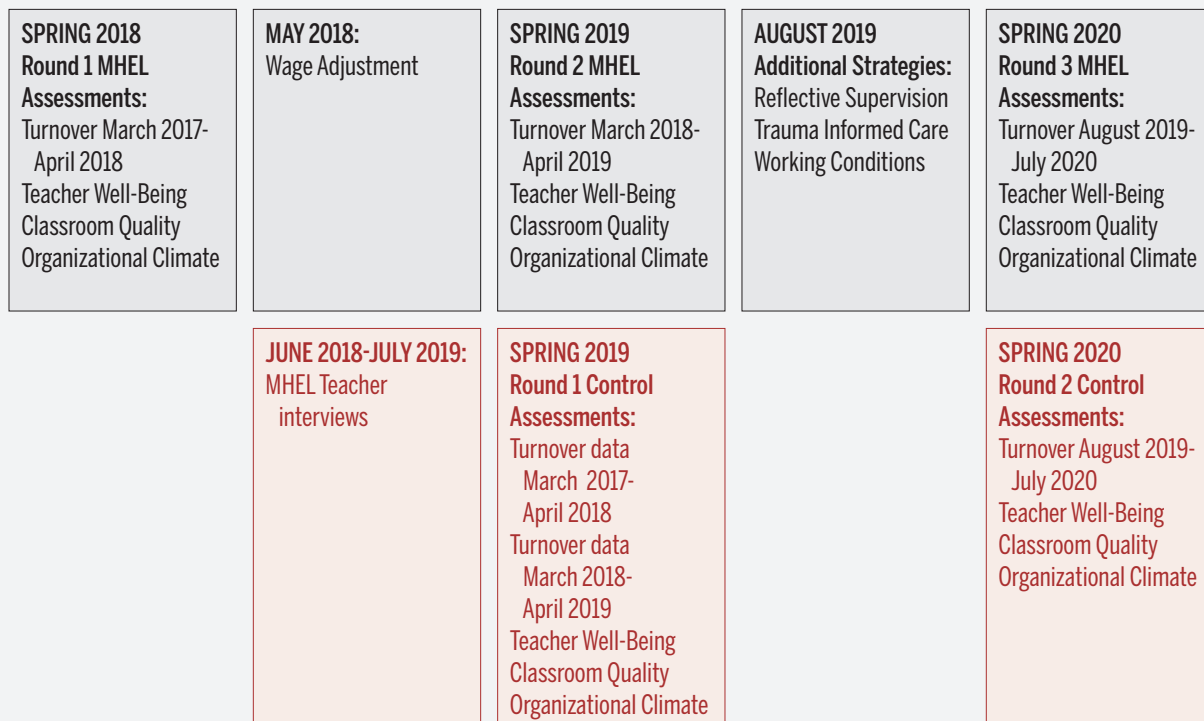
CHAPTER 2: EVALUATION METHODS

This chapter begins with a description of MHEL's teacher retention strategies and evaluation timeline. It follows with the research questions examined in this portion of the evaluation and a general description of the two different samples used to address the evaluation questions. It concludes with an overview of the measures and analytic techniques used to examine the data.

Retention Strategy and Evaluation Timeline

The original evaluation and teacher retention strategy timelines are displayed in black in Figure 1. In May of 2018, MHEL implemented the new salary scale and increased teacher wages linked to their education levels for all teachers in all centers within the organization. In year 2 of the project MHEL, in addition to maintaining the wage increase, began implementing additional teacher retention pilot strategies that included reflective supervision in three centers, trauma-informed care in three centers, and improved working conditions in a final center. Figure 1 also shows the data collection timeline for the evaluation of these strategies. The first round of data collection (described in more detail below) occurred immediately before the wage adjustment; the second round of data collection occurred one-year post-wage adjustment and just prior to the implementation of the additional pilot teacher retention strategies. The final round of data collection is planned for late spring of 2020; approximately 10-months after implementing the additional teacher retention strategies.

Figure 1. Data Collection and Intervention Schedule



Two changes have been made to the original evaluation design that are displayed in red in Figure 1. The first involved adding a qualitative component to the evaluation to provide a more nuanced examination of factors that weigh in to teachers' turnover and retention decisions at MHEL. The second and more

significant change occurred in the fall of 2018. Upon receiving additional funding for the evaluation, MHEL and the research team decided to add a control group to the evaluation after the MHEL wage adjustment had been in effect for four months. We were able to identify one Head Start grantee in Denver that ran multiple ECE centers in urban areas of Colorado, that served children of a similar demographic group as MHEL, and that set teacher salaries that did not exceed MHEL's adjusted salaries. This organization, including teachers in six of their centers, was recruited into the evaluation to serve as a control group. Given the timing of their inclusion into the study, the research team decided to only collect two rounds of teacher and classroom data, and three years of turnover data on the control group. These data will serve as a comparison group when evaluating the effectiveness of MHEL's wage enhancements, and as a comparison group when evaluating the effectiveness of the pilot retention strategies.

Current Evaluation Questions

This report specifically focuses on MHEL's wage adjustment and addresses the following questions:

1. To what extent has turnover decreased at MHEL one year after the wage adjustment?
2. Was there a significant reduction in teacher turnover at MHEL in comparison to the control group as a function of the wage adjustment?
3. Have there been changes in MHEL teachers' financial and emotional well-being indices in the year since the wage adjustment?
4. Have there been changes in teachers' perceptions of the organizational climate at MHEL in the year since the wage adjustment?
5. Have MHEL teachers' emotional responsiveness to children changed in the year since the wage adjustment?

Sample

Overall Sample

The overall sample for this evaluation includes teachers who work in 63 classrooms in 13 different ECE centers overseen by two different Head Start grantee agencies. The treatment sample includes teachers who work in 31 classrooms within seven ECE centers located in Denver, Colorado, whose governing organization, MHEL, provided teachers with hourly wage increases linked to their educational qualifications. Of these classrooms, 18 serve preschool-aged children, nine serve toddlers, and four serve infants. Most classrooms, approximately 78%, are open year-round, from 6:45 am to 6:00 pm daily; while approximately 22% are open on an academic schedule. Preschool classrooms are ideally staffed with a lead teacher, an assistant teacher, and a classroom aide; while infant and toddler classrooms are ideally staffed with two co-teachers and an assistant teacher. All classrooms serve children residing in lower-income families who receive Colorado Child Care Assistance Program (CCCAP), Head Start or Early Head Start, and/or Colorado Preschool Program funding to subsidize their tuition. Together, these classrooms served approximately 373 children; of which majority reside in lower-income households.

The control group sample includes teachers in 32 classrooms within five ECE centers in Denver, Colorado and one in another urban area of the state. Of these classrooms, all 32 serve preschool aged children. All classrooms are open six hours daily on an academic calendar year; with 9% of classrooms operating with morning and afternoon sessions. Preschool classrooms are ideally staffed similarly to MHEL's preschool classrooms, with a lead teacher, one assistant teacher, and one classroom aide. All classrooms serve children who receive Head Start and CCCAP funding to subsidize their tuition. Together, these classrooms serve approximately 378 children; of whom 90% reside in families whose income falls at or below the federal poverty line.

There were several considerations that guided the selection of the control group into the study, with the most important being the selection of an organization whose teacher wage structure did not exceed MHEL's new wage scale. Consequently, the control group was selected because it was the only Head Start grantee identified that had not already raised their teacher wages to levels that were comparable to or above MHEL's new wage structure, operated multiple centers, and enrolled children with similar characteristics to MHEL. There are, however, several important differences between the organizations that may influence study findings. The first is that the control group does not include classrooms that serve infants and toddlers; which could influence required professional qualifications, hourly pay¹², and particular job demands that may prompt turnover decisions. In addition, the classrooms in the control group operate on an academic schedule, which may decrease annual pay but also allows for teachers with time to re-energize, which could influence dimensions of teacher's well-being, turnover and retention decisions¹³. Finally, one center in the control group is located outside of Denver in another urban area of Colorado that may have different cost of living and job market conditions as compared to Denver that may influence teachers' willingness to stay in or leave their jobs differently. Nonetheless, the collective sample represents an important segment of teachers serving children in subsidized ECE in urban areas of Colorado.

Samples in the Current Report

To address the specific evaluation questions in this report, we drew from two different teacher samples. To address the first two research questions that examined teacher turnover, we relied on human resource data from MHEL and the control group. Both organizations provided information on the total population of teachers employed in their centers, by position, from March 2017 to April 2018; and from May 2018 to April 2019; which included 114 teachers at MHEL and 94 teachers from the control group. More information about the sample used for these analyses is provided in Chapter 3.

Research questions three through five drew from a sample of 48 lead teachers and 18 assistant teachers/staff aides at MHEL who were employed with the organization during the first round of data collection prior to the wage adjustment, and who remained employed at MHEL one-year after the wage adjustment and completed the second round of data collection. More information about this sample is provided in Chapter 4.

12 Whitebook et al., 2014

13 Schaack & Le, 2018

Instrumentation

This evaluation included both primary and secondary data collection. Below we describe the types of data collected from MHEL and from the control group used in this portion of the evaluation.

MHEL Data

Workforce Survey. In April 2018 and again in April 2019, teachers at MHEL were asked to complete an online or paper survey that queried teachers about the following information:

Background characteristics: Teachers completed questions on key demographic variables about themselves including their position, their tenure in their position and their tenure in the ECE field.

Organizational Climate: To assess the organizational climate of MHEL, teachers were administered 39 items drawn from the *Comprehensive Organizational Health Assessment (COHA)*¹⁴. Using data from wave 1 MHEL teacher surveys, we subjected these items to an exploratory factor analysis to understand how the items grouped together to form underlying factors. Results of the initial exploratory factor analysis suggest that items grouped into four factors. We then split negatively loaded items from one factor into a fifth factor. The first factor, *Clarity and Innovation* (14 items) measured the extent to which the organization is clear in their expectation of teachers, open to feedback, and engages in ongoing organizational improvement. The second factor focused on the *Learning Community* (7 items) the organization fosters. This scale assessed the extent to which staff within an organization work collaboratively and cohesively to improve services for young children and families. The third factor, *Lack of Job Control* (5 items) assesses the extent to which staff perceives that they have a lack of control in their work and that the organization has too many rules and unclear leadership structures. The fourth scale, *Caring and Equitable* (10 items) measures the extent to which teachers feel that the organization and leadership care about them and are fair, transparent, and collaborative in decisions that are made that affect teachers. The final scale, *Professionalized Labor* (3 items), measures the extent to which teachers feel that their job requires important skills, that the organizations understands the skills needed for the job, and the organization supports the professionalism of the workforce.

Teacher Financial Well-Being: Teachers were asked about their economic situation, including whether they had a second job or received any public benefits. They also completed an adapted version of the *Perceived Economic Pressure Survey*¹⁵, which included two subscales. The first, *Can't Make Ends Meet*, assessed teachers' ability to pay monthly bills. The indicator was composed of two items. One item asked if the teacher could pay bills at the end of each month and the second item asked if the teacher had any remaining money at the end of each month. Both items are rated on a 1-4 Likert scale and averaged, with lower scores indicating greater ability to make ends meet. The second subscale, *Financial Cutbacks*, assessed whether teachers had to make significant cutbacks in daily expenditures because of limited financial resources. There were a maximum of 17 cutbacks and the higher the score, the more cutbacks the teacher made over the prior 12-month period.

14 Leach, R. (212). *Comprehensive Organizational Health Assessment*. Denver, CO: Butler Institute for Families, Graduate School of Social Work, University of Denver.

15 Conger, Conger, Elder, Lorenz, Simons, & Whitbeck (1992). *A family process model of economic hardship and adjustment of early adolescent boys*. *Child Development*. 63:526–541.

Teacher Emotional Well-Being: Teachers completed a nine-item shortened version of the *Maslach Occupational Burnout Inventory*¹⁶. This inventory assessed the extent to which teachers felt emotional exhaustion derived from their work, were depersonalizing their work as a result of job stress, and felt a sense of personal fulfillment in their work. Each item was rated on a 7-point scale reflecting frequency of occurrence from “Never” (scored as zero) to “Every day” (scored as six), and items within scales were summed, with higher scores reflecting greater feelings of *Emotional Exhaustion, Depersonalization, and Personal Fulfillment* derived from work.

Teachers were also administered a 10-item, shortened version of the *Center for Epidemiology Studies Depression Scale*¹⁷ assessing their symptoms of depression. Teachers were asked to rate how frequently a symptom applied to them over the course of the past week. Ratings were based on a 4-point Likert scale ranging from 0 (rarely or none of the time [less than 1 day]) to 3 (most or all of the time [5–7 days]) and scores were summed to achieve a continuous score of between 0 and 30. Scores above 10 are considered symptomatic of clinical levels of depression.

Finally, teachers completed five items from the COHA that measured teachers’ feelings of self-efficacy in the workplace. Each item was rated on a 1-5 Likert scale, with items averaged to achieve a self-efficacy score of 1.00 to 5.00, with 5 indicating stronger feelings of self-efficacy in the workplace.

Administrative Data. In April 2018, MHEL provided the research team with key human resource data that included the following teacher variables: classroom assignment, position, education level, degree type, hourly wage pre-adjustment, hourly wage post-adjustment, and tenure in the organization. They also provided key classroom data that was linked to teachers, including classroom age group, ratio, number of children with Individualized Family Service Plans, and number of English language learners in the classroom. Updated information was provided to the research team in June 2019 for new teachers who joined MHEL after April 2018.

Turnover Data. In the spring of 2018, monthly human resource reports for each classroom were reviewed with leadership at MHEL covering the period of May 2017 to April 2018. These reports were used to calculate, for each classroom, the number of teachers by position who voluntarily left MHEL, who were asked to leave, who remained in the classroom, and who left the classroom but remained at MHEL. In the spring of 2019, monthly human resource reports for each classroom were again reviewed with leadership at MHEL covering the period of May 2018 to April 2019. These reports were again used to calculate, for each classroom, the number of teachers by position who voluntarily left MHEL, who were asked to leave, who remained in the classroom, and who left the classroom but remained at MHEL in the year during the implementation of the wage adjustment. Turnover rates for each position in each center were then calculated by summing the total number of staff in a particular position who left voluntarily and dividing it by the total number of positions for the job role in the center. For example, a center might have five lead teacher positions, and have experienced 7 teachers who left teacher positions over the course of a year. This would be calculated as a 140% turnover rate among lead teachers in the center. Turnover rates for each position were then averaged across centers in the organization.

16 Maslach, C., Jackson, S. E., Leiter, M. P. (1997). Maslach Burnout Inventory: 3rd edition. In Zalaquett, C. P., & Wood, R. J. (Eds), *Evaluating stress: A book of resources*, 191-218. Lanham, MD: Scarecrow Press Inc.

17 Radloff LS (1977) *The CES-D scale: A self-report depression scale for research in the general population*. Applied Psychological Measurement 1: 385–401.

Classroom Quality. *The Classroom Assessment and Scoring System (CLASS)* family of tools is used to provide an overall rating of the quality of teacher-child interactions in early childhood classrooms. As part of the Head Start Re-designation System, all classrooms at MHEL were observed using the CLASS by a trained and reliable rater at three time points each year. The research team collected secondary CLASS data for administrations that occurred in March and April of 2018; and for administrations that occurred in March and April of 2019. These time points coincided to just prior to the wage adjustment and one-year post wage adjustment. For the purposes of this evaluation, we included CLASS subscales focused on the emotional tone and responsiveness of teachers to children. For classrooms serving three to five-year olds, we included the Emotional Support scale, for classrooms serving toddlers, we included the Emotional and Behavioral Support scale, and for classrooms serving infants, we included the Responsive Caregiving scale. For all three scales, items within scales are each rated on a 1-7 Likert scale and averaged, with higher scores indicating higher quality emotionally responsive caregiving.

Control Group Data

Administrative Data. For each teacher in the control group who completed a round 1 teacher workforce survey, leadership in the control group organization provided the research team with key human resource data for the teacher that included: classroom assignment, position, education level, degree type, teacher hourly wage as of April 2018, teacher hourly wage as of April 2019, and tenure in the organization. They also provided key classroom variables linked to each teacher, including classroom ratio, number of children with Individualized Family Service Plans, and number of English language learners.

Turnover Data. In May 2019, monthly human resource reports for each classroom were reviewed with leadership at each of the centers in the control group from March 2017 to April 2019. For each turnover event that occurred, leaders were asked the teacher position, and whether the event occurred as a function of teachers: (1) being asked to leave, (2) teachers voluntarily leaving, (3) teachers being reassigned to another classroom in the center, or (4) teachers being reassigned to another position within the organization. The data were used to calculate the classroom and organizational turnover rates, by position, between March 2017 and April 2018 (one year prior to MHEL's wage adjustment); and between May 2018 and April 2019 (the year during MHEL's initial implementation of the wage adjustment).

Analytic Techniques

To address the evaluation questions, we used measures of central tendency to describe the sample on key indices, and used t-tests and Fisher's exact tests to compare group mean differences within and across time. In addition, we used correlational analyses to examine relationships between turnover rates and the magnitude of the wage increases.

CHAPTER 3: TEACHER TURNOVER

This chapter begins by providing descriptive information on the two samples used in this part of the evaluation: (1) teachers who worked in one of seven centers at MHEL, and (2) teachers who worked in one of six centers in the control group organization. It proceeds by describing teacher movement and turnover at MHEL in the 12-months before and after the wage adjustment and continues by exploring whether there were statistically significant reductions in turnover at MHEL in comparison to the control group.

Teacher Demographic Characteristics

Tables 1 and 2 provide information about key background characteristics of teachers employed at MHEL and in the control group collected during the first round of data collection for each organization. For the purposes of these analyses, we combined assistant teachers and staff aides into one position, “assistant teachers” because of their small sample sizes¹⁸.

Table 2. Teacher Demographic Characteristics by Sampling Group

GROUP	POSITION	TOTAL	MEAN YEARS IN POSITION (SD)	HOURLY WAGES (SD)
MHEL	Teacher	49	6.45 (6.66)	\$15.95 (\$2.00)
Control	Teacher	26	10.28 (11.62)	\$15.84 (\$0.87)
MHEL	Assistant Teacher	18	3.77 (6.50)	\$12.67 (\$0.88)
Control	Assistant Teacher	42	4.08 (5.96)	\$12.38 (\$1.08)

Table 3. Teacher Education Levels by Sampling Group

EDUCATION LEVEL	MHEL TEACHER	CONTROL GROUP TEACHER	MHEL ASSISTANT TEACHER	CONTROL GROUP ASSISTANT TEACHER
High School	0%	0%	18%	11%
CDA	14%	0%	29%	37%
Some College	16%	12%	24%	15%
Associates	16%	56%	6%	30%
Bachelors	51%	28%	24%	7%
Masters	2%	4%	0%	0%

The tables show that the control group tends to hire more assistant teachers than lead teachers in comparison to MHEL. This may be because MHEL employs two co-teachers per classroom in infant and toddler classrooms and the control group does not serve infants and toddlers. When considering the average teacher experience levels between the groups, teachers in the control group organization averaged 10.28 years of tenure within the organization, while teachers at MHEL averaged 6.45 years. However, these differences were not significant, likely because of the high variability in teacher tenure observed among teachers working in the control group. In addition, there were no differences in experience levels for assistant teachers between the two groups.

¹⁸ At the time of the first round of data collection for each organization, MHEL employed five floater teachers and the control group employed two floater teachers. These teachers were not included in analyses because their sample sizes were very low and since their jobs are structurally very different from teachers assigned to a classroom, they could not be included in another teacher group.

Significant differences between the organizations were, however, found with respect to teacher education levels, with MHEL more likely to employ teachers holding a bachelor's degree in comparison to the control group. In turn, the control group was more likely to employ teachers with an associate's degree in comparison to MHEL. No differences in education levels were found in assistant teacher education levels between the organizations. Additionally, differences in teacher and assistant teacher wages were observed even after controlling for differences in teacher educational attainment between the organizations. MHEL teachers and assistant teachers earned significantly higher hourly wages than teachers and assistant teachers in the control group prior to the wage adjustment.

The Wage Adjustment

Table 4 displays the average increase in hourly wages experienced by MHEL teachers with the implementation of the new salary scale in May 2018. The table shows that, on average, teachers received an hourly wage increase of \$1.89 an hour, or an increase of approximately \$3,931.20 annually for full-time teachers. On average, assistant teachers earned approximately \$1.81 more an hour, or an increase of approximately \$3,764.80 annually full-time assistant teachers.

Table 4. Average Wage Adjustments by Position

POSITION	PRE-ADJUSTMENT					POST-ADJUSTMENT				
	Mean Wage	Median Wage	SD	Min.	Max.	Mean Wage	Median Wage	SD	Min.	Max.
Teacher	\$15.95	\$15.84	\$2.00	\$12.75	\$23.45	\$17.91	\$17.76	\$1.78	\$14.00	\$23.92
Assistant Teacher	\$12.67	\$12.63	\$0.88	\$11.83	\$14.79	\$13.75	\$14.00	\$0.92	\$12.50	\$15.09

Has teacher turnover decreased at MHEL as a function of the wage adjustment?

This section of the report focuses on teacher turnover and movement within MHEL in the year prior to and just after the wage adjustment. For the analyzes that focus specifically on MHEL teachers, we distinguish between teachers, assistant teachers, and staff aides to help MHEL better understand different types of movement and turnover among positions. For each position, we describe the percentages of teachers who left MHEL voluntarily (e.g., quit), who were asked to leave (e.g., were terminated), who stayed in their center, but changed classrooms, and who moved centers but stayed in the organization (including those who moved to the central office) in the year prior to the wage adjustment and in the year post-wage adjustment. Table 5 provides information on teachers, Table 6 provides information on assistant teachers, and Table 7 provides information on staff aides.

The figures presented in these tables suggest sizable change in turnover among teachers at MHEL between the time periods of March 2017 and April 2018, the year prior to the wage adjustment, and May 2018 and April 2019, the year post wage adjustment. We observed an 80% reduction in teacher turnover, a 79% reduction in assistant teacher turnover, but no change in staff aide turnover.

When comparing these figures to the control group over the same period of time, we observed increases in teacher turnover and in assistant teacher turnover of 128% and 41% respectively, but no change in staff aide turnover. Despite the apparently large difference, statistical tests showed that the change in assistant teacher turnover between MHEL and the control group was not statistically significant ($t = 1.24$, $p\text{-value} = 0.24$). This result was probably due to the small sample sizes. However, the change in teacher turnover between MHEL centers and the control group was statistically significant ($t = 2.38$, $p = 0.04$).

Table 5. Average Percent TEACHER Turnover and Movement

MOVEMENT TYPE	12-MONTHS PRIOR TO WAGE ADJUSTMENT		12-MONTHS POST WAGE ADJUSTMENT	
	MHEL	Control	MHEL	Control
Voluntarily Left	66%	17%	13%	39%
Terminated	5%	14%	3%	0%
Changed Classes in Center	20%	13%	21%	13%
Left Center; Stayed at MHEL	4%	N/A	18%	N/A

Table 6. Average Percent ASSISTANT TEACHER Turnover and Movement

MOVEMENT TYPE	12-MONTHS PRIOR TO WAGE ADJUSTMENT		12-MONTHS POST WAGE ADJUSTMENT	
	MHEL	Control	MHEL	Control
Voluntarily Left	36%	26%	7%	37%
Terminated	4%	0%	2%	0%
Changed Classes in Center	17%	2%	2%	17%
Left Center; Stayed at MHEL	4%	N/A	17%	N/A

Table 7. Average Percent STAFF AIDE Turnover and Movement

MOVEMENT TYPE	12-MONTHS PRIOR TO WAGE ADJUSTMENT		12-MONTHS POST WAGE ADJUSTMENT	
	MHEL	Control	MHEL	Control
Voluntarily Left	19%	26%	19%	26%
Terminated	0%	0%	0%	0%
Changed Classes in Center	0%	5%	6%	3%
Left Center; Stayed at MHEL	21%	N/A	6%	N/A

To obtain a more nuanced view of turnover at MHEL, we examined turnover and movement among preschool and infant/toddler teachers. Due to the small sample size, we combined assistant teachers and staff aides for these analyses. Table 8 shows that among the MHEL centers, the largest reduction in turnover occurred among preschool staff, where we observed an 88% reduction in turnover among teachers and a 63% decrease in turnover among assistant teachers/staff aides in the year post-wage adjustment. As a point of comparison, for the preschool staff within the control group, there was a

128% increase in teacher turnover and a 42% increase in assistant teacher/staff aide turnover. Mirroring the trend observed with the overall population of centers, the change in teacher turnover was statistically significant between MHEL and control centers ($t = 3.08$, $p = 0.01$), but the change in assistant teacher/staff aide turnover was not ($t = 2.06$; $p\text{-value} = 0.07$).

With respect to infant/toddler staff, we observed a doubling in the turnover rates among MHEL teachers, but a reduction to zero turnover among assistant teachers and staff aides. These figures suggest that prior to the wage adjustment, most of the turnover was due to preschool teachers, whereas after the wage adjustment, most of the turnover was due to infant/toddler teachers. This may be because many infant/toddler teachers have not attained the same education levels as many preschool teachers and are thus not experiencing as high of an adjustment to their wages as preschool teachers.

Table 8. Average Percent Turnover by Teacher Age Group and Position

TEACHER TYPE	PRE-WAGE ADJUSTMENT: VOLUNTARY LEFT		POST WAGE ADJUSTMENT: VOLUNTARILY LEFT	
	MHEL	Control	MHEL	Control
Preschool Teacher	82%	17%	10%	39%
Preschool Assistant Teacher/Staff Aide	45%	21%	17%	29%
Infant/Toddler Teacher	13%	N/A	25%	N/A
Infant/Toddler Assistant Teacher/Staff Aide	6%	N/A	0%	N/A

CHAPTER 4: TEACHER WELL-BEING, ORGANIZATIONAL CLIMATE, AND RESPONSIVE CAREGIVING

This section of the report focuses specifically on changes in MHEL teachers post wage-adjustment. It begins by exploring changes in dimensions of teachers' financial well-being and proceeds by exploring changes in aspects of teachers' emotional well-being, including occupational burnout, depression, and self-efficacy. It continues by examining changes in teachers' perceptions of the organizational climate at MHEL and concludes by exploring changes in teachers' emotional responsiveness to children. For analyses in this section of the report, it is important to note that we do not yet have a second round of data on these indices from teachers in the control group. Consequently, we cannot attribute any changes observed to the wage adjustment and as such, these analyses should be treated as preliminary.

Sample

The sample used for this section of the evaluation drew from 48 teachers and 18 assistant teachers (including staff aides) who were employed at MHEL as of April 2018 during the first data collection period and who remained employed at MHEL as of May 2019, during the second round of data collection. Of these teachers, approximately 45% worked in preschool classrooms, 34% worked in toddler classrooms, and 21% work in infant classrooms. Of the assistant teachers, approximately 93% worked in preschool classrooms and 7% worked in toddler classrooms. Table 9 displays additional demographic characteristics of the sample and Table 10 displays their educational backgrounds.

Table 9. Characteristics of Teachers who Remained at MHEL

POSITION	N	MEAN YEARS IN JOB	MEAN YEARS IN FIELD	MEAN HOURLY WAGE PRE-ADJUSTMENT	MEAN HOURLY WAGE POST-ADJUSTMENT
Teacher	48	6.56	15.0	\$16.02	\$17.95
Assistant Teacher	18	3.77	6.08	\$12.67	\$13.75

Table 10. Educational Attainment of Teachers who Remained at MHEL

	TEACHER	ASSISTANT TEACHER
High School	0%	18%
CDA	15%	47%
Some College	15%	24%
Associates	17%	6%
Bachelors or higher	54%	24%

Have there been changes in teachers' financial well-being one-year post wage adjustment?

To assess the financial strain MHEL teachers are under and whether any changes in their financial stress have occurred post-wage adjustment, we administered a two-item scale that measured teachers' perceptions of their abilities to make ends meet. Scores of one indicate little difficulty making ends meet while scores of four indicate substantial difficulty. Teachers were also asked to report on how many financial cut-backs they needed to make over the prior 12-months, selecting from a set of 17 choices. Cut-backs included, for example, reducing or eliminating different insurance policies, forgoing medical or dental treatments, dipping into savings to pay bills, or having to rely on credit for living expenses. Table 11 shows the results of measures assessing teachers' abilities to make ends meet and the average number of cut-backs they have to make in the year prior to the wage adjustment and in the year following the wage adjustment.

Table 11. Teachers' Financial Strain

	PRE-WAGE ADJUSTMENT			POST-WAGE ADJUSTMENT			T-TEST	P-VALUE
	MEAN	SD	RANGE	MEAN	SD	RANGE		
T: Can't Make Ends Meet	3.20	0.93	1.00 - 4.00	3.03	0.85	1.00 - 4.00	-0.84	0.407
AT: Can't Make Ends Meet	3.67	0.57	3.00 - 4.00	3.33	0.82	2.00 - 4.00	-1.00	0.363
T: Mean Cut-Backs	4.42	3.42	0.00 - 13.00	3.42	3.29	0.00 - 13.00	2.98	0.005*
AT: Mean Cut-Backs	5.08	2.11	1.00 - 8.00	3.33	4.23	0.00 - 12.00	2.80	0.017*

Table 11 shows that prior to the wage adjustment, the average teacher experienced moderate to significant difficulties in making ends meet and that most assistant teachers had significant difficulties paying their bills. Post wage adjustment, we observed a 5.3% improvement in teachers' perceptions of their abilities to make ends meet and a 9.3% increase in assistant teachers' perceptions of their abilities to make ends meet. However, these changes were not statistically significant. We also observed a 22.6% reduction in the number of financial cut-backs teachers needed to make post wage adjustment and a 34.4% reduction in financial cut-backs assistant teachers needed to make. These changes were both statistically significant. Changes in dimensions of financial strain were not related to the amount of the wage adjustment teachers received ($r = .067$ to $.278$, with none significant).

To better understand teachers' financial situations and their economic vulnerability, we also asked them whether they had a second job and whether they received any public benefits reserved for low-income children or families, including: the Supplemental Nutrition Assistance Program, Temporary Assistance for Needy Families, Section 8 or housing vouchers, Medicaid, Child Health Insurance Plans, and/or free or reduced lunch rates for their children. Table 12 shows remarkable stability in the percentages of teachers who held second jobs and received public subsidies pre-and post-wage adjustment. The table shows no reduction post-wage adjustment in the percentage of teachers or assistant teachers who held second jobs or in percentages of teachers and assistant teachers who received public subsidies. These results could reflect the fact that it likely takes longer than a year with a pay raise for teachers to achieve a degree of financial stability that could enable them to stop

working a second job. It could also reflect the fact that the wage adjustment was not sizable enough to change teachers overall financial picture to make them income ineligible for public subsidies.

Table 12. Teacher Economic Vulnerability

POSITION	PRE-WAGE ADJUSTMENT: SECOND JOB	POST-WAGE ADJUSTMENT: SECOND JOB	PRE-WAGE ADJUSTMENT: PUBLIC SUBSIDY	POST-WAGE ADJUSTMENT: PUBLIC SUBSIDY
Teacher	19.36%	19.36%	6.45%	6.45%
Assistant Teacher	0.00%	0.00%	14.29%	14.29%

Have there been changes in teachers' emotional well-being one-year post wage adjustment?

To address this evaluation question, teachers completed a survey assessing their occupational burnout, including their emotional exhaustion, their depersonalization from children as a result of work stress, and their personal fulfillment with the work. Teachers also completed a survey in which they reported on the frequency of specific depressive symptomologies that they experienced in the past week, and completed survey items that assessed their feelings of occupational self-efficacy. For these analyses, we combined teachers and assistant teachers to increase our sample size and because there were no notable differences in scores on these indices between teacher groups. Table 13 displays results. For all measures, higher scores reflect greater feelings of emotional exhaustion, depersonalization, personal fulfillment, depression, and occupational self-efficacy.

Table 13. Teacher Emotional Well-Being

SCALE	PRE-WAGE ADJUSTMENT			POST-WAGE ADJUSTMENT			T-TEST	P-VALUE
	MEAN	SD	RANGE	MEAN	SD	RANGE		
Emotional Exhaustion	3.02	1.83	0.00 - 6.00	3.07	1.73	0.00 - 6.00	0.17	0.86
Depersonalization	1.09	1.22	0.00 - 6.00	1.25	1.39	0.00 - 6.00	0.64	0.53
Personal Fulfillment	4.23	1.49	0.67 - 6.00	4.41	1.58	0.50 - 6.00	0.66	0.51
Self-Efficacy	4.01	0.60	1.80 - 5.00	4.09	0.51	2.80 - 5.00	0.73	0.47
Depression	9.29	6.73	0.00 - 29.00	7.41	5.74	0.00 - 20.00	-2.05	0.05*

Table 13 shows that pre- and post-wage adjustment, teachers reported moderate levels of emotional exhaustion, low levels of depersonalizing from the work as a result of work stress, and moderate to high levels of personal fulfillment with the work and occupational self-efficacy. The table also shows no statistically significant changes were observed in dimensions of occupation burnout and in occupational self-efficacy post wage adjustment. There was, however, a significant decrease of approximately 20 percentage points in depression scores found among MHEL teachers in the year after the wage adjustment. Conversely, we also observed a high percentage of teachers at MHEL who reported clinical levels of depression both pre- (38%) and post (41%) wage adjustment. Further analyses also revealed that the size of the wage adjustment was unrelated to changes in occupational burnout, self-efficacy, or depression in this sample ($r = .051$ to $.228$ with none significant).

Have there been changes in teachers' perceptions of the organizational climate at MHEL one-year post-wage adjustment?

To assess changes in teachers' perception of MHEL's organizational health and workplace climate, we administered a 39-item *Comprehensive Organizational Health Assessment (COHA)*¹⁹. Based on teachers' initial responses to the survey, items were grouped into the following scales. The first, *Clarity and Innovation* (14 items) measured the extent to which teachers feel that MHEL, as an organization, has clear expectations for teachers, is open to feedback, and engages in ongoing organizational improvement. The second focused on the *Learning Community* (7 items) MHEL fosters and assessed team cohesion and the extent to which teachers and directors work collaboratively to improve services for young children and families. The third factor, *Lack of Job Control* (5 items) assessed the extent to which teachers perceive that they have a lack of control and autonomy in their work and the extent to which they believe the organization has too many rules and supervisors telling them what to do. The fourth scale, *Caring and Equitable* (10 items) measured the extent to which teachers feel that leadership at MHEL cares about them and are fair, transparent, and collaborative in decisions that are made that effect teachers. The final scale, *Professionalized Labor* (3 items) measured the extent to which teachers feel as if their jobs require skill, that MHEL recognizes and values their skills, and the extent to which the organization invests in teachers' ongoing growth and learning. Table 14 shows changes in teachers' perception of MHEL's organizational climate pre- and post-wage adjustment; with scores of five reflecting high levels of organizational health across dimensions measured.

Table 14. Teachers' Perceptions of MHEL Organizational Climate

	PRE-WAGE ADJUSTMENT			POST-WAGE ADJUSTMENT			T-TEST	P-VALUE
	MEAN	SD	RANGE	MEAN	SD	RANGE		
Clarity and Innovation	3.57	0.71	1.45 - 4.64	3.64	0.55	2.18 - 4.55	0.68	0.50
Caring and Equitable	3.34	0.68	1.67 - 4.36	3.43	0.64	1.92 - 4.33	1.10	0.28
Learning Community	3.10	1.01	1.00 - 4.71	3.02	0.95	1.14 - 4.71	-0.44	0.66
Lack of Job Control	2.75	0.72	1.00 - 4.00	2.68	0.71	1.00 - 4.40	-0.82	0.42
Professionalized Labor	4.06	0.59	2.75 - 5.00	4.01	0.54	2.25 - 5.00	-0.58	0.56

The results in Table 14 show that teachers perceive the organizational climate of MHEL to be similar pre- and post-wage adjustment and that most teachers perceive moderate levels of organizational health across dimensions of workplace climate at MHEL. The highest scoring scale, *Professionalized Labor*, indicates that most teachers view themselves as professionals and believe that MHEL views teachers in this light as well and makes efforts to invest in their teachers. The lowest scoring scale, *Lack of Job Control*, indicates that many teachers feel as if there is top-heavy hierarchy in the organization where they have too many bosses and that they do not feel as if they have decision-making abilities concerning their jobs. When comparing scores pre- and post-wage adjustment, scores on the *Clarity and Innovation* and *Caring and Equitable* scales increased by approximately 2.0 and 2.7 percentage points post-wage adjustment while scores on *Learning Community*, *Lack of Job Control*, and *Professionalized Labor* decreased by approximately 2.5, 2.6, and 1.2 percentage points, respectfully. However, no changes across scales were statistically significant. Increases in scores also were unrelated to the size of a teachers' wage increase ($r = -.085$ to $.224$; with none statistically significant).

Have there been changes in teachers' responsive caregiving one-year post-wage adjustment?

To address this evaluation question, we pooled the *Emotional Support*, *Emotional and Behavioral Support*, and *Responsive Caregiving* subscales on the Pre-k, Toddler, and Infant CLASS, respectively. We focused on these scales specifically, because they were common across age-groups, and because responsive caregiving may be more malleable to interventions such as a wage adjustment than CLASS dimensions such as *Instructional Support*, which may be more malleable to interventions that seek to enhance teacher knowledge. Indeed, prior research in the parenting context has found that increases to family income can help alleviate financial strain, decrease parenting stress, and subsequently increase responsive caregiving²⁰.

Results are presented in Table 15, where scores of 1.00 on the *Emotionally Supportive and Responsive Caregiving* scale are considered low quality and scores of 7.00 are considered high quality. The table shows that both pre- and post-wage adjustment, teachers at MHEL were scoring relatively high on the emotionally focused subscales on the CLASS. In the year pre-wage adjustment, scores averaged 5.78; and in the year post-wage adjustment, scores averaged 5.93. Results also show an approximate 2.6% improvement in *Emotionally Supportive and Responsive Caregiving*, one-year post-wage adjustment; however, this change was not statistically significant, likely because scores were already high prior to the wage adjustment. Increases in *Emotionally Supportive and Responsive Caregiving* scores were also unrelated to the size of the wage increase after controlling for teacher education levels, classroom ratios, group sizes, and number of English language learners ($r = 0.128$; $p = 0.551$).

Table 15. Emotionally Supportive and Responsive Caregiving

	PRE-WAGE ADJUSTMENT			POST-WAGE ADJUSTMENT			T-TEST	P-VALUE
	MEAN	SD	RANGE	MEAN	SD	RANGE		
Emotionally Supportive and Responsive Caregiving	5.78	0.90	3.62 – 6.93	5.93	0.93	4.20 – 6.87	1.08	0.288

20 Huston AC, Gupta AE, Walker JT, et al. (2011). *The long-term effects on children and adolescents of a policy providing work supports for low-income parents*. *Journal of Policy Anal Management*, 30(4):729–754.

CHAPTER 5. CONCLUSION

Turnover, Retention and Mobility

The preliminary findings outlined in this report provide initial support for the wage adjustment and new teacher salary scale now being enacted at MHEL. The wage adjustment appeared to positively influence teacher retention at MHEL. When comparing the turnover rates one-year prior to the wage adjustment with turnover rates one-year post wage adjustment at MHEL, we observed an 80% reduction in turnover among teachers and a 79% reduction in turnover among assistant teachers. We also observed a statistically significant reduction in lead teacher, and preschool teacher turnover in comparison to a control group.

Our analysis also found that prior to the wage adjustment, high rates of teacher turnover were primarily being driven by preschool teachers. One-year post wage-adjustment, turnover appears to be driven by infant/toddler teachers and assistant teachers. To better understand these trends, our next analyzes will examine from both a quantitative and qualitative perspective, factors that are driving teachers' decisions to stay working at MHEL or to leave the organization post-wage adjustment. We will pay particular attention to infant and toddler teachers.

Our analysis also showed that even though turnover has been significantly reduced at MHEL as a function of the wage adjustment, there still appears to be substantial movement among teachers in the organization that may constrain teacher cohesion, and may potentially constrain other aspects of classroom quality and children's school readiness. For example, when considering all types of classroom turnover: teachers who quit, who were terminated, who moved classrooms within a center, and who moved out of the center to another center or to a position in the central office, 60% of teachers, 28% of assistant teachers, and 31% of staff aides moved out of the classrooms in a 12-month period. For teachers, in particular, this is a sizable amount of movement and may potentially be disruptive to classroom and organization goals. Creating a plan to strategically reduce the amount of movement may be an important focal point for change.

Financial Strain and Economic Vulnerability

The results of this evaluation also point to another area in which the wage adjustment may be positively influencing teachers; reducing financial strain. We found that post-wage adjustment, there was respectively a 5.3% and 9.3% improvement in teachers' and assistant teachers' perceptions of their abilities to make ends meet. There was also a 22.6% and 34.4% decrease in the amount of financial cut-backs made by teachers and assistant teachers' respectively; and these decreases were statistically significant for assistant teachers. It is, however, important to note that these changes cannot be attributed to the wage adjustment at this time. However, future analyses that include a second round of data collected on the control group will reexamine these data to determine the influence of the wage adjustment on dimensions of MHEL teachers' financial strain.

Interestingly, this portion of the evaluation did not find any changes in the percentages of teachers at MHEL who had a second job or who received public subsidies reserved for lower-income individuals and families. Approximately 20% of MHEL teachers have second jobs, and approximately 6% of teachers and 14% of assistant teachers rely on public subsidies; figures that have been stable pre- and post-wage adjustment. It is likely that, for second job holders, it may take longer than a year with a wage adjustment to achieve financial stability to allow teachers to stop working a second job. Future analyses will explore whether, after a two-year period of experiencing the wage adjustment, these figures decrease.

Emotional Well-Being and Organizational Climate

Taken together, these results suggest that strategies to enhance teacher wages at MHEL are positively influencing teacher retention and potentially reducing teachers' financial strain. However, where we see less direct support for the wage enhancement is on other dimensions of teacher well-being, on perceptions of organizational climate, and on responsive caregiving. For example, we did not observe changes in occupational burnout, in teacher self-efficacy, or in any dimension of organizational climate post wage-adjustment. These results may not be surprising because raising teacher wages is not necessarily a strategy that directly intervenes to improve these dimensions of work life. However, as the additional teacher retention strategies, such as reflective supervision, training on trauma informed care, and changes to working conditions are implemented, we may observe changes in these aspects of teachers' emotional well-being and in their caregiving. It may also be that the wage adjustment has indirect effects on, for example, occupational burnout and responsive caregiving, such that lower rates of turnover may be related to higher classroom quality and lower occupation burnout, and that turnover is related to the wage adjustment. Understanding these complex mechanisms will require studies involving larger samples.

The results of this evaluation did suggest, however, that enhancing workplace climate may be an important area for focusing quality improvement. In particular, the Job Control, subscale score indicated that many teachers view MHEL as a top-heavy organization with too many supervisors and that teachers do not have the decision-making in their classrooms and in the larger organization that they would like. Efforts to design teacher leadership opportunities may be well positioned to support teacher retention. It may also be important to consider all of the leadership positions in the organization and to better understand how many different people are interacting with teachers to provide them with supervision or direction to help streamline teacher supervision.

One surprising result from this evaluation is that there was a statistically significant decrease in levels of teacher depressive symptomologies found in the year after the wage adjustment. While the reduction in teacher depression scores cannot be attributed to the wage enhancement at this time, it is nonetheless a finding worth noting. At the same time, this evaluation also found in the midst of many teachers decreasing in their levels of depression, there still remain a sizable percentage of teachers at MHEL who are experiencing clinical levels of depression. Approximately 41% of MHEL teachers indicate that they have clinical levels of depression, which is about a third higher than would be expected in the general population²¹. Strategies focused on connecting teachers to emotional health resources and/or providing in-house services may be important strategies to foster teacher well-being in an ongoing way.

21 National Institute of Health (2018). *Transforming the understanding and treatment of mental health*. Washington, D.C.

Conclusion

These preliminary results show promise for MHEL's new teacher salary scale for fostering greater teacher retention and for reducing teachers' financial strain. Future analyses for this evaluation will examine factors that influence teachers' turnover and retention decisions in light of the raise they received to help MHEL continue to target their teacher retention activities. In addition, we will also examine the effects of the wage adjustment on teachers' well-being, on perceptions of organizational climate, and on classroom quality again once a second round of data is collected from the control group and we will continue to examine the effects of the wage enhancement on turnover after two years of implementation to explore whether its effects on turnover and retention persist.