

Abstract

Studies of early childhood educators (ECEs) have shown that staff performance decreases when their burnout increases. Given recent documented increases in children's disruptive behavior, and the associated interruptions to instruction in Head Start centers, the present study provides an updated examination of burnout using a statewide sample of Head Start educators. Specifically, client-related burnout (CRB) is a measure of fatigue and exhaustion associated with students' challenging behavior. CRB is a composite variable based on sub-scales from the Copenhagen Burnout Inventory (CBI). Analysis of a sample of 165 respondents from Head Start programs shows that while individual characteristics were not predictive of CRB, environmental characteristics had an important relationship to it. Implications for program design, implementation, and future research are discussed.

Introduction

Manifestations of personal stress have been documented in studies of early childhood educators (ECEs) for at least forty years following Hyson's (1982) study of their stress. Burnout is one manifestation of stress, and recent research delineates several consequences associated with it, such as depression and reduced job motivation (Jeon et al., 2019). Staff burnout, in turn, reduces the quality of education services that ECEs provide (Sandilos, Goble, & Schwartz, 2020) and increases ECE attrition from the workplace (Barford & Whelton, 2010). Not surprisingly, burnout has been associated with the smaller supply of individuals willing to teach young children (Jessen-Howard, Malik, & Falgout, 2020), as perennially low wages, insufficient health care insurance and other challenging conditions such as "societal and parental disrespect" add to the stressors in this occupation (Otten et al., 2019).

The present study focuses on Head Start staff and uses a novel measure of client-related burnout (CRB). CRB is unique because it uses sub-scales from the Copenhagen Burnout Inventory (CBI) to "dial in" a burnout measure (described below) more closely linked to child interruptions to instruction.

Head Start and Working Conditions

Launched in 1965, Head Start is intended to promote school readiness for the disadvantaged infants, toddlers, and preschool-aged children it serves. The program is implemented in different settings such as family child care, children's homes, or stand-alone centers. Head Start uses several developmentally aligned activities and individualized learning experiences to promote social skills and related social and emotional development. All activities are geared to facilitate a successful transition to kindergarten (Office of Head Start, 2021).

Investigations of ECE burnout (among all ECEs and those in Head Start) and stress chart the increased concern about the impact of these phenomena on staff. Earlier studies described relatively mundane conditions such as, “a constant barrage of unpredictable stimuli,” and the reality that young children are “predictably unpredictable” (Hyson, 1982) as associated with stress. Yet such findings belied the contemporaneous “high severities” of internalizing and externalizing behavior problems in preschool children (Crowther, Bond & Rolf 1981). Following the compounding impacts of ongoing poverty that grew since the early eighties in the United States, workplace stressors among ECEs intensified. Not surprisingly, by the early nineties burnout, attrition and depression were common descriptors for research on ECE experiences (Manlove, 1993). Soon after, studies that focused specifically on Head Start staff working conditions were more common. These studies included descriptions of children’s aggressive and antisocial behavior (Kupersmidt, Bryant & Willoughby 2000). The first studies of expulsion in pre-kindergarten children also appeared at this time (Gilliam, 2005; Gilliam et al., 2016), reflecting a rising tide of challenging working conditions among ECEs.

In short, conditions within Head Start present significant challenges to staff, often as a result of disruptive behavior among the very young children the program is designed to assist. Disruptive child behaviors range from yelling to throwing objects at teachers and other children. Underlying these behaviors are emotional, behavioral or psychosocial problems estimated to be present in nearly one out of six preschool children – among the children living in poverty, the rate is nearly 25 percent (Cree, 2018).

Measuring Burnout

Burnout was defined first in the mid-1970s. The construct was described in theoretical papers that discussed “dehumanization” of employees. In the social service sector, this could result in decreased concern for the children that ECEs work with (Maslach & Pines, 1977), in turn “leading to a deterioration in the quality of care” (p. 101). More recently Maslach described burnout generally as, “a prolonged response to chronic interpersonal stressors on the job...” (p. 103) and which she tied to three dimensions: exhaustion, cynicism and detachment, and a “sense of ineffectiveness” (Maslach & Leiter 2016).

Not dissimilar to Maslach and her colleagues, Danish researchers (Kristensen, Hogh, & Borg 2005) developed a burnout measure centered on “fatigue and exhaustion” that a worker associates with their occupation. The authors explained the importance of measuring, “a state of physical, emotional and mental exhaustion that results from long-term involvement in work situations that are emotionally demanding” (p. 196). A key difference between the Danish CBI and the often utilized Maslach Burnout Inventory (MBI) is the absence of a cynicism/detachment subscale in the CBI. Nonetheless, the CBI includes multiple items that capture a respondents’ frustration with challenging students and whether defection from their occupations might result (e.g., “Sometimes I wonder how long I am able to continue...”) Finally, the CBI is constructed to identify personal, work and client-oriented dimensions of burnout. These three subscales are useful for creating an adjusted measure of client-related burnout – that is, burnout associated with ECEs’ stress working with children in Head Start.

Correlates of Burnout and Its Prevalence Among ECEs

Previous research has identified several factors related to burnout among ECEs, at the individual and environmental levels, for over thirty years.

Individual Characteristics. Evidence about whether individual characteristics have positive or negative correlations to burnout is uneven. Among the earlier analyses of individual characteristics is a Pennsylvania study that found, “neuroticism, work role conflict, and work role ambiguity” to be correlates of higher burnout (Manlove, 1993). More recently, Barford’s (2010) study of ECEs in western Canada found that certain personality traits were predictive of subjects’ “emotional exhaustion,” specifically “neuroticism.” Having a ‘significant other’ was also important to abating stressors while the amount of professional experience was not (Barford & Whelton 2010). Similarly, West and colleagues (West, Berlin & Harden 2018) identified “depressive symptoms” and perceptions about “higher job demands” as significant predictors of burnout among ECE home visitors. Gooze (2013) identified that the effect of teacher-student conflict on stress was only slightly attenuated by the presence of teachers’ depressive symptoms. Similarly, Friedman-Krauss et al. (Friedman-Krauss et al., 2014) found that Head Start teachers had higher executive functioning when their stress levels (associated with child behavior) were lower, although the role of executive functioning was not a statistically significant moderator of stress and perceived behavior problems.

In contrast to the psychological factors just outlined, demographic-type variables often were not correlated to burnout. For instance, Zhai et al (2011) did *not* find significant predictive roles for measures of race, education level, teaching experience, or teacher type, while others (Friedman-Krauss et al., 2014) found no significant impact of teacher race, gender or education on stress.

Environmental Characteristics. Generally, established theory holds that “prosocial classrooms” sustain supportive relationships that enhance teacher competence, including managing burnout (Jennings & Greenberg, 2009). Nonetheless, research studies of ECEs present a mixed set of results concerning the role of environmental predictors on burnout or stress. Barford (2010) found that supervisor support was not a significant predictor of emotional exhaustion (Barford & Whelton, 2010) based on self-report survey data from child and youth care workers. More recently Sandilos and colleagues’ (Sandilos, Goble & Schwartz, 2020) random assignment study determined that staff burnout *was* conditioned on different levels of coordinated programmatic teacher support.

The Present Study

If studies of Head Start classrooms are to be inclusive of the wide range of factors impinging on teachers’ stress, there is a need to examine environmental factors that relate to burnout. While earlier research shows varying effects of these environmental factors, healthy and effective environments must remain a focus given that they are the basis of common intervention models in early childhood education , such as Positive Behavior Support (PBS). Thus, the present study uses a Spring 2020 survey dataset and exploratory analysis of ECE working conditions on client-related burnout (CRB). Specifically, the study examines the frequency of preschool students’ instruction interruptions and how they relate to CRB in Head Start staff in one state in the eastern United States.

Research Questions

Given perennial burnout among ECEs and its consequences, this research will use survey data to distinguish how burnout varies by individual and environmental characteristics. While

previous research has examined these factors, seldom has it focused specifically on CRB. I expect CRB to be a way that ECEs respond to challenging student behavior in Head Start learning environments. Since ECE working conditions are characterized in part by the behavior of children in these settings, a measure that focuses specifically on client-oriented burnout is advantageous.

The analysis will answer the following questions:

1. To what extent are instruction interruptions associated with Head Start staff client-related burnout (CRB)?
2. How are these relationships moderated by staff and environmental characteristics?

Methods

Sample

An omnibus survey of Head Start staff was fielded in April and May 2020 throughout Pennsylvania. Utilizing a survey frame of Head Start grantees, I obtained a convenience sample from two-thirds of the state's counties and encompassing the geographic breadth of the state. While responses for some rural areas were slightly less represented, some rural counties do not have a Head Start center. Responses were collected anonymously from subjects who were informed their data may be used for research.

The survey sample (n=266) included a smaller number of office or administrative staff (n=47) who were removed so that the analytic file including only staff who had direct relationships to students. After accounting for missing data on the primary independent variable (frequency of instructional interruptions) and the primary dependent variable (CRB) 165 cases

were available for analysis. The mean and standard deviation of CRB in the analytic and full samples are very similar (Figure 1).

Measures

The present study examines staff and environmental predictors of staff burnout. Each of the key dependent and independent variables are described in turn below.

- **Individual Characteristics:** The survey collected demographic information about each respondent (e.g age range, gender) and characteristics about each Head Start center (e.g. enrollment, setting).
- **Interruptions to Instruction:** Interruptions to instruction were measured with a single question that asked respondents, “Thinking about the past year, about how many days of a typical month does challenging or violent behavior interrupt instruction?” Responses were provided for one of five categories: no days, one to five days, 6-10 days, 11-20 days and more than 20 days. See Table 1 for more details.
- **Burnout:** Staff burnout was measured with the 19 item Copenhagen Burnout Inventory (CBI) (Kristensen, Hogh & Borg 2005). The instrument consists of three subscales (personal, work and client oriented burnout) that are conceptually tied to “fatigue and exhaustion” experiences documented across many related studies since the 1980s. Each of the sub-scales, and the individual items that comprise them, are shown in Table 2.

Psychometric properties identified in the CBI’s development include high Cronbach alpha values (between 0.85 and 0.87) for all scale items. Additionally, there is consistent concurrent validity between CBI scores and other health-related measures from the SF-36 Health Questionnaire (Gandek et al., 2004), such as high correlations between the SF-36

vitality scale and the lowest correlations with the general health scale. The authors documented the predictive validity of the CBI by identifying positive correlations between higher scores and increased incidence of sick days, sleep problems and use of pain killers (Kristensen, Hogh & Borg 2005).

- Facility Type. Head Start facilities are typically one of two main types: a Head Start center or a home- or family-based facility (heretofore, “home-based”). About 70 percent of respondents work in center-based facilities. Home-based Head Start involves a home-visitor who meets with a family on a weekly basis for at least 90 minutes in their home (US Department of Health and Human Services 2021).
- Mental Health and Behavioral Support. Respondents indicate a total of nine mental health and behavioral supports provided by mental health consultants at the facility.
- Client-oriented Burnout. To create an adjusted measure of CRB, the personal and work climate sub-scales from the original CBI are included as independent variables predicting the client burnout score using OLS regression. The resulting predicted scores are the CRB measure. CRB has a nearly normal distribution with a mean (stan. deviation) of 2.55 (0.63) and a skew of 0.23. The CRB is then transformed to a z-score to aid interpretation of regression analyses. The analytic file includes 17 cases that were imputed with the mean sub-scale scores.
- Table 3 provides descriptive statistics for the CBR overall (bottom row), and for levels of key independent variables. Notably, older respondents (over the age of 41) have an average CRB slightly below average, while younger respondents (excluding one respondent under

the age of 21) have an above average CRB. The correlation between CRB and interruptions is positive, as expected.

Analytic Approach

The subjects in the present study represent several different Head Start centers across the state. While nested data like these are typically approached using a hierarchical regression model, the data were collected anonymously and thus identifiers for each classroom and site were not available to partition variance across these levels.

Given the normal distribution of CRB, ordinary least squares (OLS) regression models were used to provide estimates of the relationship between CRB and several predictors. Diagnostic assessments of regression models were completed by examining normality of residuals and cases with higher leverage and Cook's D values using the *olsrr* package (Hebbali, 2020). Discussion of diagnostic measures is provided below. Other statistics on key variables and OLS regression models were computed with R (R Core Team, 2013).

Results

The present study examines the relationship between interruptions to instruction and CRB. There were 266 respondents to the spring 2020 survey, of whom 47 were administrative staff exclusively and were removed from the analytic file. Respondents in the full sample were 97 percent female, 6 percent Hispanic/Latin-X and 8 percent black. About 29 percent were aged 41 to 50 and 28 percent were 51 or older (Table 1). The analytic sample, which is described in the remainder of this paper, had similar distributions to the full sample.

The key independent variable in the present study is the frequency of classroom interruptions. Table 1 shows that about one-third of respondents had interruptions in up to five days in a typical month ($n=13+42=55$). Slightly less than a third had interruptions for more than 20 days in a typical month ($n=50$). This balanced distribution of scores is ideal for exploratory analysis because an examination of lower and higher scores of the phenomena in question is possible.

The CBI is comprised of 19 items that form three sub-scales. A table of the individual CBI items is provided in Table 2. Higher ratings for personal burnout (e.g. "How often are you physically exhausted?") are evident, while ratings for client-burnout are lower (e.g. "Do you find it hard to work with challenging students?"). The average scores for each subscale are 3.05, 2.77 and 2.54 for personal, work and client-related burnout, respectively.

These sub-scale differences underscore the importance of differentiating sources of stress. Furthermore, they permit the computation of an adjusted burnout metric, in which client-related burnout is adjusted by personal and work-related sub-scale responses. The balance of positive and negative values on each side of the mean CRB score is consistent with its skew statistic (0.22). This relatively normal distribution warrants further analysis using OLS regression methods.

Figure 2 illustrates the bivariate relationship between CRB and instructional interruptions. A consistent increase in burnout levels occurs as the frequency of interruptions grows.

Regression Models

I created several regression models to examine the relationship between CRB and interruptions to instruction. Table 4 summarizes these analyses.

Model 1 examines whether and to what extent the average level of instructional interruptions is related to CRB. Including this single predictor shifts the average CRB value to below the mean (from 0.0 to -1.02), indicating that staff experiencing the average amount of interruptions (roughly six days a month) have a burnout score about one standard deviation lower than average. The regression results also show that for a unit increase in instructional interruptions there is a 0.30 increase in a standard deviation of (z-scored) CRB. In practical terms, this is associated with a change in frequency from the one to five days category to the 6-10 days category, for example. The baseline model also shows that roughly 16 percent of variance in the dependent variable is explained by instructional interruptions ($R^2=0.16$). Additionally, the F statistic indicates that the variables included in the baseline model are reliable predictors of the dependent variable ($F = 31.67$ at $p<0.001$).

Before describing additional models predicting CRB, it is informative to understand other variables that were considered as independent predictors in preliminary models. For example, in preliminary models (not tabulated here) the total number of disruptive behaviors observed in a typical month (that is, generally, not to instruction specifically) was significant, its effect was less than half the magnitude of interruptions, its interaction with interruption frequency was not significant, and the model R^2 was 0.07. Additionally, preliminary analyses showed that enrollment was not a significant environmental predictor, most likely because teacher-student ratios are regulated by Head Start programmatically.

Model 2 examines three measures of staff characteristics: whether staff were aged 40 and under or not, having ten or more years of experience (versus not), having a bachelor's degree (versus not), whether staff are absent from work more than the average absentee rate (versus not) and whether staff had a BA or higher degree. None of these predictors were statistically significant. Furthermore, none of the staff characteristics are significant moderators of the interruptions-CRB relationship.¹

Model 3 explores environmental factors by examining two characteristics of Head Start facilities. The first characteristic is a dummy variable for whether a facility is home or family-based, or not. The coefficient for this variable (0.48) suggests that experiences with burnout for staff in home-based facilities is quite different compared to others. Staff in home facilities have a 0.49 standard deviation greater stress than their colleagues in other Head Start locations ($p=0.07$). Model 3 also includes a measure of technical assistance provided to a Head Start facility (number of mental health consultations) yet the magnitude of its relationship to CRB is very small (0.022) and not statistically significant. Residuals are normally distributed in this model.

¹ Preliminary analyses included respondent age as a predictor in Model 2 without the experience variable and was not significant ($p=0.955$). Race is not included in any models because there is not variance in this variable in the final sample used in regression analyses. Additionally, Model 2 was run without interruption frequency and all staff characteristics remained not significant, including their interactions with teaching experience.

Model 4 includes only the significant predictors identified in Models 2 and 3. In terms of main effects, the number of interruptions remains the same as Model 3, however, the difference in CRB is 0.481 standard deviations for facility type, making Head Start facility type the largest discriminating factor across all models. This final model also shows a significant improvement over Models 2 and 3. The diagnostics for Model 4 show that residuals were normally distributed with a mean of -0.0003 and standard deviation of 1.003, and only one case with greater leverage was an outlier.

To illustrate the relationships in Model 4, Figure 3 shows that for each increase in instructional interruptions there is an upward shift in client-related stress. The role of Head Start facility is also apparent – staff in home-based centers consistently have higher stress. The regression lines for the facility types are essentially parallel, so there is no interaction between the two predictors.

Discussion

In previous decades burnout among ECEs has been documented extensively, however, unlike earlier studies I used a measure of client-related burnout adjusted for work and personal burnout. In using an adjusted burnout metric, the direct effects of classroom interruptions on burnout associated is estimated more precisely. Results from the analysis showed that interruptions were a consistent predictor of CRB in several regression models, while individual characteristics did not play a role. In contrast, the environmental setting of a Head Start facility (whether it was home-based, or not) had the largest correlation to CRB.

Environment and Head Start Experiences

The present study showed CRB to be about 0.5 standard deviations greater among staff in home-based Head Start facilities than among colleagues in Head Start centers. Earlier research on the conditions in home-based facilities may explain the higher CRB levels among staff in this sample. For instance, Kitzman and colleagues (Kitzman et al., 1997) described in detail the environmental conditions that home visitors faced in Head Start home-based programs in Memphis. They found home visitors' work settings to be "severely impoverished," and where physical conditions interfered both with clients' growth and the implementation of home visit protocols:

The cognitive-growth-fostering activities recommended by the [home-visiting] protocol produced one of the greatest sources of frustration for the nurses because of limitations imposed by the physical environment. In crowded households, it was difficult to maintain a toy for the infant. Many homes were so impoverished that the competition for a toy was great and toys provided for the project child often disappeared. Because of the crowded conditions, it also was difficult to find a place to store toys. Safety concerns were also particularly troublesome for the nurses. Infants rarely slept in cribs, environments had numerous hazards, and keeping older infants away from potentially dangerous items was difficult. (p. 100)

Kitzman et al. elaborated further that home visitors' frustration with these environmental conditions interfered with delivering even basic advice to the families they wished to assist. Such insights correspond with West and colleagues' more recent study (West, Berlin & Harden 2018), which described clients' psycho-social risk level as associated with home visitors' traumatic

stress, and that home visitors “felt unsupported or undervalued... [and would] benefit from greater role clarity in terms of when and how to intervene with families experiencing severe psychosocial challenges.” (p. 300)

The differences across facility types found in the present study parallel earlier research on levels of control staff have in early childhood education settings (Gooze, 2013). When staff are in Head Start centers they can rely on organizational protocols, such as class rules, the general organization of the classroom setting and instructional schedules. In home settings, parents or guardians typically establish the learning environment (e.g. whether it is cluttered or not) as well as the tacit house rules that may interfere with developmental activities.

When viewed from what Barford and Whelton (2010) described as “employee involvement” the conditions inside home-based Head Start facilities appear all the more salient to greater levels of CRB. While greater staff involvement may be “the antithesis of burnout” (Barford & Whelton, 2010, p. 273), it is at greatest risk in homes where impoverished environments present conditions directly opposed the implementation of developmental activities.

Implications for ECE Working Environments

The importance of responding to varying environmental conditions across Head Start staff could not be more pressing at this moment. While not analyzed in this paper, the same survey data indicated that challenging behaviors have been a sustained issue in the previous three years. Measures of challenging behavior collected in 2017 from the same population of Head Start Centers showed that incidents of children throwing objects, hitting, and fleeing classrooms are reported by roughly 70 percent of participating ECEs.

Experts have prescribed enhanced professional development and recruitment procedures to address ECE burnout. For instance, Barford and Whelton (2010) offered that additional training about work roles, improved communication from supervisors, and mentoring by experienced staff might help. West (2018) recommended a “thoughtful and thorough recruitment process that will attract candidates who are a good fit” (p. 300), and detailed descriptions of the demands of the job for prospective educators. West added that multidisciplinary support teams, higher salaries and methods to address home visitor safety were important to more fully assist ECEs.

Previous research indicates supports like these may be beneficial, yet there are conflicting results about how effectively each reduces burnout and stress. Summarizing Zinsser’s research in Chicago, Smith and Lawrence (2019) wrote that a correlation between “*access* to several social-emotional supports” (p. 9) and stress was absent. While methodological variation across studies of teacher supports might explain their differences, the focus on direct ECE supports seems insufficient.

Future Research

To understand what affects ECE burnout and stress, a multilevel perspective that includes organizational (Head Start inputs) and environmental factors (such household or community level poverty) is warranted. For instance, Vaden-Kiernan et al. (2010) documented how neighborhood factors related to child and family outcomes, and Raugh et al. (2003) revealed that poverty related to child outcomes. A multilevel approach should be complimented with detailed data on home-based facility characteristics to refine our understanding of how these environments relate to burnout. For example, the extent to which staff have opportunities to

navigate challenging work and set realistic goals are two prerequisites for managing stress (Gimbert et al., 2021). Descriptive research on supports for these prerequisites might identify program types in which they are present, and at what level they are associated with different burnout levels.

Future research might also enhance measures of how ECEs engage with families. In interviews of Head Start ECEs, West (2018) learned about important stress factors, such as the extent to which ECEs attempted to provide emotional support to families, or were able to separate from the stresses encountered in their workday. Including such factors in future analyses could further delineate the circumstances that result in burnout.

Limitations

Social science must contend with “real world” conditions that researchers cannot fully “control” and the present study is no exception. Thus, key threats to the validity of this study include measurement of dependent and independent variables. For instance, while instruments to measure individual burnout have been honed across several decades, the methods of measuring classroom or instructional interruptions continues to present challenges to researchers. Respondents’ accurate recollections of the frequency of interruptions may affect data quality, although the present study utilized broader frequency ranges as response options to minimize recall error.

Additionally, the representativeness of the sample is not fully known. While the data analyzed here are a geographically representative sample of Head Start centers in rural, suburban and urban areas, future surveys must utilize more specific facility identifiers to improve sample quality. The *size* of the sample may be improved as well, to permit more detailed analyses of

home-based experiences. Such identifiers will permit the use of more robust mixed-regression models that distribute variance between respondents and their workplaces more accurately.

Conclusion

Head Start staff are integral to enhancing the educational transitions of their students yet they remain in stressful working conditions that thwart their efforts. The effect of these conditions on burnout appears to be more related to environmental conditions than individual characteristics. Given the evidence that burnout impedes: (1) the success of professional learning efforts (Raver et al., 2008), (2) the quality of relationships Head Start staff have with children (Whitaker, Dearth-Wesley & Gooze 2015), (3) interferes with best practices (Grining et al., 2010), and (4) reduces the utility of social-emotional supports (Zinsser et al., 2019), the present study speaks again to the need to address workplace and organizational conditions known to correlate with CRB.

References

- Barford, Sean W., and William J. Whelton. 2010. "Understanding Burnout in Child and Youth Care Workers." *Child & Youth Care Forum* 39 (4): 271–87.
<https://doi.org/10.1007/s10566-010-9104-8>.
- Cree, Robyn A. 2018. "Health Care, Family, and Community Factors Associated with Mental, Behavioral, and Developmental Disorders and Poverty Among Children Aged 2–8 Years — United States, 2016." *MMWR. Morbidity and Mortality Weekly Report* 67.
<https://doi.org/10.15585/mmwr.mm6750a1>.
- Crowther, J. H., L. A. Bond, and J. E. Rolf. 1981. "The Incidence, Prevalence, and Severity of Behavior Disorders Among Preschool-Aged Children in Day Care." *Journal of Abnormal Child Psychology* 9 (1): 23–42. <https://doi.org/10.1007/BF00917855>.
- Friedman-Krauss, Allison H., C. Cybele Raver, Juliana M. Neuspiel, and John Kinsel. 2014. "Child Behavior Problems, Teacher Executive Functions, and Teacher Stress in Head Start Classrooms." *Early Education and Development* 25 (5): 681–702.
<https://doi.org/10.1080/10409289.2013.825190>.
- Gandek, Barbara, Samuel J. Sinclair, Mark Kosinski, and John E. Ware. 2004. "Psychometric Evaluation of the SF-36® Health Survey in Medicare Managed Care." *Health Care Financing Review* 25 (4): 5–25.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4194895/>.
- Gilliam, Walter S. 2005. "Prekindergarteners Left Behind: Expulsion Rates in State Prekindergarten Systems." New Haven, CT: Yale University Child Study Center.
<https://medicine.yale.edu/childstudy/policy/Images/National>.

- Gilliam, Walter S., Angela N. Maupin, and Chin R. Reyes. 2016. "Early Childhood Mental Health Consultation: Results of a Statewide Random-Controlled Evaluation." *Journal of the American Academy of Child & Adolescent Psychiatry* 55 (9): 754–61.
<https://doi.org/10.1016/j.jaac.2016.06.006>.
- Gimbert, Belinda G., Dustin Miller, Emily Herman, Meghan Breedlove, and Citlali Estela Molina. 2021. "Social Emotional Learning in Schools: The Importance of Educator Competence." *Journal of Research on Leadership Education*, May, 19427751211014920.
<https://doi.org/10.1177/19427751211014920>.
- Gooze, Rachel A. 2013. "Workplace Stress and the Quality of Teacher–Children Relationships in Head Start." PhD thesis, Philadelphia, PA: Temple University.
<http://www.sciencedirect.com/science/article/pii/S0885200614000891>.
- Grining, Christine Li, C. Cybele Raver, Kina Champion, Latrrese Sardin, Molly Metzger, and Stephanie M. Jones. 2010. "Understanding and Improving Classroom Emotional Climate and Behavior Management in the 'Real World': The Role of Head Start Teachers' Psychosocial Stressors." *Early Education and Development* 21 (1): 65–94.
<https://doi.org/10.1080/10409280902783509>.
- Hebbali, Aravind. 2020. "Package 'Olsrr'." <https://cran.r-project.org/package=olsrr>.
- Hyson, Marion C. 1982. "'Playing with Kids All Day': Job Stress in Early Childhood Education." *Young Children* 37 (2): 25–32. <https://www.jstor.org/stable/42643732>.
- Jennings, P. A., and M. T. Greenberg. 2009. "The Prosocial Classroom: Teacher Social and Emotional Competence in Relation to Student and Classroom Outcomes." *Review of Educational Research* 79 (1): 492–525.

Jeon, Hyun-Joo, Kyong-Ah Kwon, Bridget Walsh, Melissa M. Burnham, and Yun-Jung Choi.

2019. "Relations of Early Childhood Education Teachers' Depressive Symptoms, Job-Related Stress, and Professional Motivation to Beliefs About Children and Teaching Practices." *Early Education and Development* 30 (1): 131–44.

<https://doi.org/10.1080/10409289.2018.1539822>.

Jessen-Howard, Steven, Rasheed Malik, and M. K. Falgout. n.d. "Costly and Unavailable:

America Lacks Sufficient Child Care Supply for Infants and Toddlers." *Center for American Progress*. Accessed December 1, 2020.

<https://www.americanprogress.org/issues/early-childhood/reports/2020/08/04/488642/costly-unavailable-america-lacks-sufficient-child-care-supply-infants-toddlers/>.

Kitzman, Harriet J., Robert Cole, H. Lorrie Yoos, and David Olds. 1997. "Challenges

Experienced by Home Visitors: A Qualitative Study of Program Implementation."

Journal of Community Psychology 25 (1): 95–109. [https://doi.org/10.1002/\(SICI\)1520-6629\(199701\)25:1<95::AID-JCOP7>3.0.CO;2-1](https://doi.org/10.1002/(SICI)1520-6629(199701)25:1<95::AID-JCOP7>3.0.CO;2-1).

Kristensen, Taje, Annie Hogh, and Vilhelm Borg. 2005. "The Copenhagen Psychosocial

Questionnaire - A Tool for the Assessment and Improvement of the Psychosocial Work Environment." *Scandinavian Journal of Work, Environment and Health* 31 (6).

https://www.researchgate.net/publication/7346426_The_Copenhagen_Psychosocial_Questionnaire_-_A_tool_for_the_assessment_and_improvement_of_the_psychosocial_work_environment.

- Kupersmidt, Janis B., Donna Bryant, and Michael T. Willoughby. 2000. "Prevalence of Aggressive Behaviors Among Preschoolers in Head Start and Community Child Care Programs." *Behavioral Disorders* 26 (1): 42–52.
<https://doi.org/10.1177/019874290002600105>.
- Manlove, Elizabeth E. 1993. "Multiple Correlates of Burnout in Child Care Workers." *Early Childhood Research Quarterly* 8 (4): 499–518. [https://doi.org/10.1016/S0885-2006\(05\)80082-1](https://doi.org/10.1016/S0885-2006(05)80082-1).
- Maslach, Christina, and Michael P. Leiter. 2016. "Understanding the Burnout Experience: Recent Research and Its Implications for Psychiatry." *World Psychiatry* 15 (2): 103–11.
<https://doi.org/https://doi.org/10.1002/wps.20311>.
- Maslach, Christina, and Ayala Pines. 1977. "The Burnout Syndrom in the Day-Care Setting." *Child Care Quarterly* 6 (2). https://www.researchgate.net/profile/Christina-Maslach/publication/226884500_The_Burn-Out_Syndrome_in_the_Day_Care_Setting/links/57bb9a4008ae8a9fc4c27d55/The-Burn-Out-Syndrome-in-the-Day-Care-Setting.pdf.
- Office of Head Start. (2021). "Head Start Services." US Department of Health; Human Services.
<https://www.acf.hhs.gov/ohs/about/head-start>.
- Otten, Jennifer J., Victoria A. Bradford, Bert Stover, Heather D. Hill, Cynthia Osborne, Katherine Getts, and Noah Seixas. 2019. "The Culture Of Health In Early Care And Education: Workers' Wages, Health, And Job Characteristics." *Health Affairs* 38 (5): 709–20. <https://doi.org/10.1377/hlthaff.2018.05493>.

Raver, C. Cybele, Stephanie M. Jones, Christine P. Li-Grining, Molly Metzger, Kina

Smallwood, and Latriese Sardin. 2008. "Improving Preschool Classroom Processes: Preliminary Findings from a Randomized Trial Implemented in Head Start Settings." *Early Childhood Research Quarterly* 63 (3): 253–55.

<https://doi.org/10.1016/j.ecresq.2007.09.001>.

Sandilos, Lia, Priscilla Goble, and Samantha Schwartz. 2020. "Burnout and Teacher–Child Interactions: The Moderating Influence of SEL Interventions in Head Start Classrooms." *Early Education and Development* 31 (7): 1169–85.

<https://doi.org/10.1080/10409289.2020.1788331>.

Smith, S., & Lawrence, S. (2019). Early Care and Education Teacher Well-being; Associations with Children's Experience, Outcomes, and Workplace Conditions: A Research-to-Policy Brief. http://www.nccp.org/wp-content/uploads/2020/05/text_1224.pdf

Rauh, V. A., Parker, F. L., Garfinkel, R. S., Perry, J., & Andrews, H. F. (2003). Biological, social, and community influences on third-grade reading levels of minority Head Start children: A multilevel approach. *Journal of Community Psychology*, 31(3), 255–278.

<https://doi.org/10.1002/jcop.10049>

Raver, C. C., Jones, S. M., Li-Grining, C. P., Metzger, M., Smallwood, K., & Sardin, L. (2008). Improving Preschool Classroom Processes: Preliminary Findings from a Randomized Trial Implemented in Head Start Settings. *Early Childhood Research Quarterly*, 63(3), 253–255. <https://doi.org/10.1016/j.ecresq.2007.09.001>

R Core Team. 2013. R Core Team (2013). R: A language and environment for statistical computing., issued 2013. <https://www.r-project.org/about.html>.

US Department of Health and Human Services, Administration for Children and Families. 2021.

“1302 Subpart B—Program Structure ECLKC.” <https://eclkc.ohs.acf.hhs.gov/policy/45-cfr-chap-xiii/1302-subpart-b-program-structure>.

Vaden-Kiernan, M., D’Elio, M. A., O’Brien, R. W., Tarullo, L. B., Zill, N., & Hubbell-McKey, R. (2010). Neighborhoods as a Developmental Context: A Multilevel Analysis of Neighborhood Effects on Head Start Families and Children. *American Journal of Community Psychology*, 45(1), 49–67. <https://doi.org/10.1007/s10464-009-9279-z>

West, Allison L.1, awest25@jhu.edu, Lisa J.1 Berlin iberlin@ssw.umaryland.edu, and Brenda Jones2 Harden bjharden@umd.edu. 2018. “Occupational Stress and Well-Being Among Early Head Start Home Visitors: A Mixed Methods Study.” *Early Childhood Research Quarterly* 44: 288–303. <https://doi.org/10.1016/j.ecresq.2017.11.003>.

Whitaker, Robert C., Tracy Dearth-Wesley, and Rachel A. Gooze. 2015. “Workplace Stress and the Quality of Teacher–Children Relationships in Head Start.” *Early Childhood Research Quarterly* 30 (Part A): 57–69. <https://doi.org/10.1016/j.ecresq.2014.08.008>.

Zhai, F., Raver, C. C., & Li-Grining, C. (2011). Classroom-based Interventions and Teachers’ Perceived Job Stressors and Confidence: Evidence from a Randomized Trial in Head Start Settings. *Early Childhood Research Quarterly*, 26(7), 442–452. <https://doi.org/10.1016/j.ecresq.2011.03.003>

Zinsser, Katherine M., Courtney A. Zulauf, Vinodharen Nair Das, and H. Callie Silver. 2019. “Utilizing Social-Emotional Learning Supports to Address Teacher Stress and Preschool Expulsion.” *Journal of Applied Developmental Psychology*, Teacher Well-Being in Early Childhood Education, 61 (March): 33–42. <https://doi.org/10.1016/j.appdev.2017.11.006>.

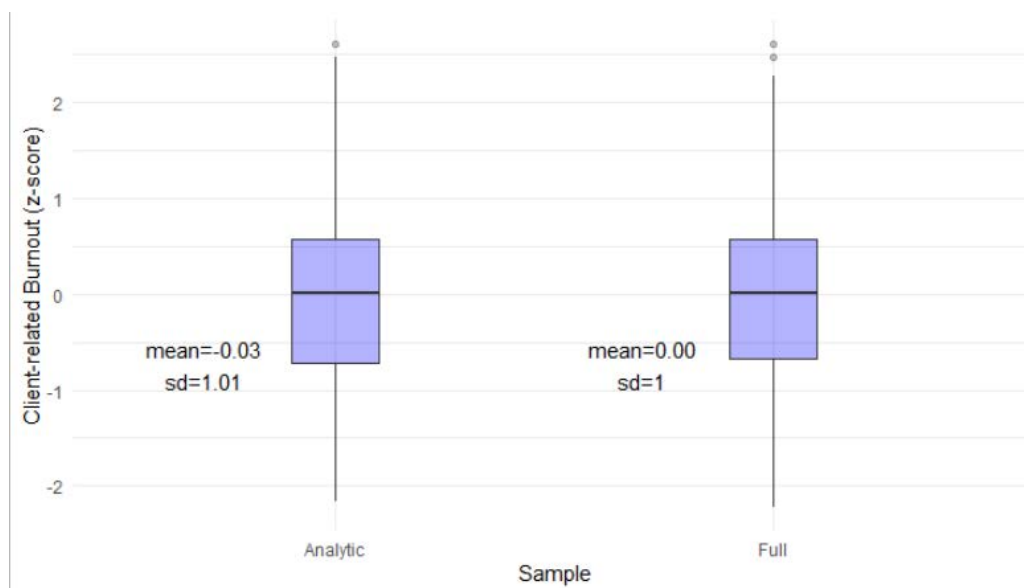
Figures and Tables

Figure 1: Distribution of Client-related Burnout in Full and Analytic Samples

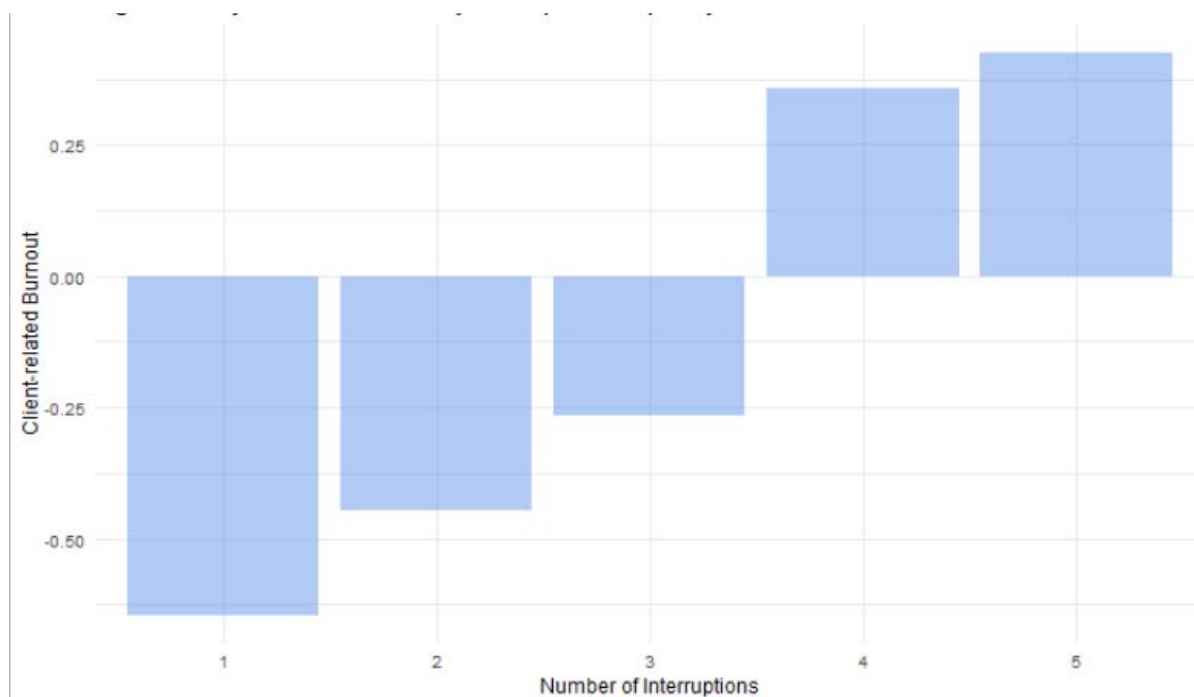


Figure 2: Adjusted CRB Scores by Interruption Frequency

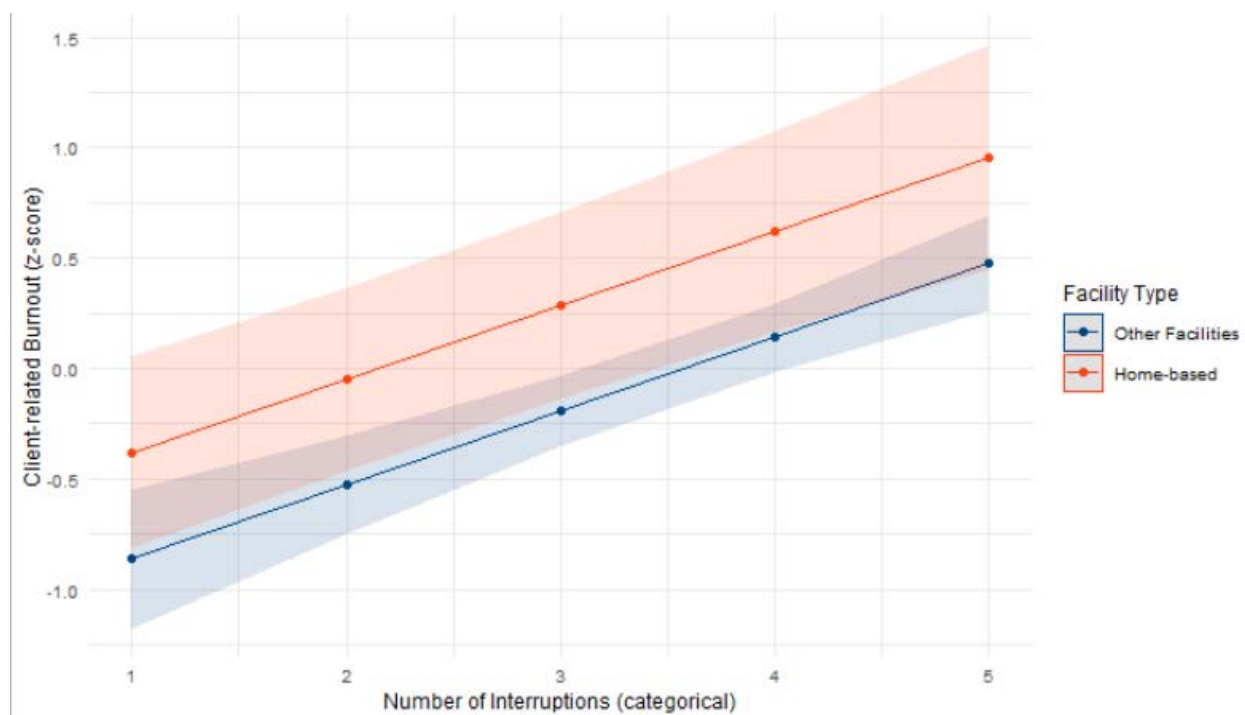


Figure 3: Predicted Values of Client-related Burnout

[figure 3 may be reproduced in grayscale if the different color values are discernable]

Table 1: Characteristics of Respondents in Full (n=266) and Analytic Samples (n=165)

Measure	Full Sample		Analytic Sample	
	n	Percent	n	Percent
Experience				
Less Experience	107	48.9	74	44.8
More than 10 Years	112	51.1	91	55.2
Age				
21 or younger	3	1.4	1	0.6
22 to 30	34	15.6	26	15.9
31 to 40	54	24.8	42	25.6
41 to 50	65	29.8	50	30.5
51 or older	62	28.4	45	27.4
Race				
Black	18	8.2	11	6.7
Not Black	201	91.8	154	93.3
Ethnicity				
Hispanic - No	204	93.6	156	95.1
Hispanic - Yes	14	6.4	8	4.9
Gender				
Female	212	96.8	162	98.2
Male	6	2.7	2	1.2
Other	1	0.5	1	0.6
Absences in a Year				
Less often or not at all	101	46.1	78	47.3
More than once or twice	118	53.9	87	52.7
Facility Type				
Other Facilities	190	86.8	146	88.5
Home-based	29	13.2	19	11.5
Interruption Frequency				
None	14	7.1	13	7.9
1 to 5 days	47	23.9	42	25.5
6-10 days	31	15.7	26	15.8
11-20 days	41	20.8	34	20.6
More than 20 days	64	32.5	50	30.3

Some subtotals vary due to item non-response.

Table 2: Means and standard deviations for individual CBI variables (n=165)

Measure	Mean	StDev
How often do you feel tired?	3.47	0.95
How often are you physically exhausted?	3.23	0.97
How often are you emotionally exhausted?	3.42	1.00
How often do you think: I can't take it anymore.	2.63	1.11
How often do you feel worn out?	3.11	0.99
How often do you feel weak and susceptible to illness?	2.41	1.09
Is your work emotionally exhausting?	3.31	1.12
Do you feel burnt out because of your work?	2.85	1.20
Does your work frustrate you?	2.67	1.11
Do you feel worn out at end of working day?	2.96	1.19
Are you exhausted in morning at thought of another day at work?	2.29	1.18
Do you feel that every working hour is tiring for you?	2.07	1.15
Do you have enough energy for family and friends during leisure time?	3.25	1.14
Do you find it hard to work with challenging student?	2.75	1.09
Do you find it frustrating to work with challenging students?	2.59	1.10
Does it drain your energy to work with challenging students?	2.84	1.15
Do you feel you give more than get back when work w/challenging students?	2.75	1.30
Are you tired of working with challenging students?	2.07	1.09
Do you sometimes wonder how long you are able continue working w/challenging students?	2.27	1.17

Table 3: Summary Statistics for Client-related Burnout by Key Independent Variables in Analytic Sample (n=165)

		Mean	SD	N
Freq. of Class Interruptions	None	-0.64	1.06	13
	1 to 5 days	-0.45	0.92	42
	6-10 days	-0.26	0.81	26
	11-20 days	0.36	1.02	34
	More than 20 days	0.42	0.89	50
Gender	Female	0.00	1.01	162
	Male	-0.79	0.28	2
	Other	1.09		1
Age Category	21 or younger	-0.67		1
	22 to 30	0.08	0.87	26
	31 to 40	0.09	1.26	42
	41 to 50	-0.17	0.87	50
	51 or older	0.05	0.98	45
Hispanic Ethnicity	No	0.01	1.02	156
	Yes	-0.39	0.66	8
#Total		0.00	1.01	165

Table 4: Individual and Environmental Predictors of Client-related Burnout

	Model 1	Model 2	Model 3	Model 4
Intercept	-1.023*** (0.000)	- 1.205*** (0.000)	-1.248*** (0.000)	-1.195*** (0.000)
Interruption Frequency	0.300*** (0.000)	0.284*** (0.000)	0.334*** (0.000)	0.334*** (0.000)
Aged 40 or Under		0.085 (0.590)		
10+ Years Experience		0.145 (0.349)		
More Experience		-0.032 (0.829)		
Absent More Than Once or Twice		0.229 (0.122)		
BA or Higher Degree		0.074 (0.629)		
Home-based Staff			0.484** (0.041)	0.481** (0.042)
Number of MH Consultations			0.015 (0.655)	
n	165	164	165	165
R ²	0.163	0.189	0.185	0.184
R ² Adj.	0.158	0.158	0.170	0.174
F	31.666	6.103	12.171	18.246

Table presents coefficients and standard errors in parentheses.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$