

# The Association Between Work as a Calling and Turnover Among Early Childhood Education Professionals

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#### Abstract

Turnover of early childhood education (ECE) professionals negatively impacts program costs, staff morale, and relationships with children. We determined whether the presence of work as a calling was associated with less intention to leave the ECE field. From an online survey administered to 265 ECE professionals in Pennsylvania, a calling score based on the Calling and Vocation Questionnaire was used to create sample-defined tertiles of low (<38), medium (38–44), and high (>44) presence of calling. Those intending to leave the ECE field reported that, given the option, they would most likely "find a position or get training in a completely different field," or "stop work, stay home, or retire." Analysis was restricted to 194 respondents currently employed in ECE and under age 60, of whom 94.8% were female and 53.9% were non-Hispanic White. After adjusting for race/ethnicity and workplace stress, the prevalence (95% CI) of intention to leave decreased as calling increased, from low (28.6% [17.8%, 38.4%]) to medium (12.2% [4.3%, 20.1%]) to high (9.1% [1.5%, 16.6%]). The presence of call was associated with less intention to leave the ECE field. Identifying, building, and sustaining call among ECE professionals may decrease turnover.

Keywords Early Childhood Education · Leadership · Teacher · Turnover · Turnover Intentions · Work as a Calling

# Introduction

In the US, high staff turnover is an ongoing challenge for the field of early childhood education (ECE) (Institute of Medicine and National Research Council, 2012), with recent turnover estimates as high as 37% from one school year to the next (Bassok et al., 2021a). The COVID-19 pandemic has made it even more difficult to recruit and retain ECE staff (Bassok et al., 2021b, c). Turnover increases program costs and negatively impacts staff morale, program quality,

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teacher-child relationships, and children's academic and social-emotional outcomes (Hale-Jinks et al., 2006; Cassidy et al., 2011; Tran & Winsler, 2011; Markowitz, 2019; Kwon et al., 2020). For example, among a sample of approximately 5,600 children in Head Start classrooms, children who experienced within-year teacher turnover had higher levels of teacher-reported overall behavior problems and withdrawn behaviors and lower gains in literacy and pre-writing skills as compared to children who did not experience teacher turnover (Markowitz, 2019). Following staff turnover, ECE professionals have described the loss of safety and trust in adult-child relationships, disruptions in routines and learning, and increased workload for remaining staff (Cassidy et al., 2011; Kwon et al., 2020). Staff turnover creates instability in an environment designed to create the safe, stable, and nurturing adult-child relationships that foster children's learning. Finally, even turnover intentions are detrimental. Those staff members who are thinking about leaving their jobs may be more preoccupied and have a 'diminished capacity to care' (McMullen et al., 2020, p. 332), interfering with the highly relational nature of ECE.

Within this high-turnover environment, there are expectations and standards (Markowitz et al., 2020) for ECE programs and their staff to provide developmentally appropriate learning opportunities, including for many children who experience difficult family and community circumstances (Sciaraffa et al., 2018). Despite efforts to professionalize ECE through educational requirements and continued professional development (Friedman-Krauss et al., 2022), commensurate increases in salary are lacking. Although there has been a long-standing effort to increase the salaries paid to ECE professionals (Whitebook et al., 2014), in part because low pay is an important cause of turnover (Hale-Jinks et al., 2006; Totenhagen et al., 2016), the US has not yet made it a priority to adequately compensate ECE professionals for their work. The 2021 federal poverty guideline for a family of four was \$26,500 (Assistant Secretary for Planning and Evaluation, US Department of Health and Human Services, 2021), and in 2021, childcare workers and preschool teachers earned annual mean wages of \$27,680 and \$36,410, respectively (US Bureau of Labor Statistics, 2022). Therefore, while many continue to advocate for better pay for the ECE workforce, research continues to identify other potentially modifiable factors associated with turnover, because higher salaries alone may not prevent turnover in a field with emotionally and physically demanding work (Kwon et al., 2021).

#### Work as a Calling

A focus on viewing work as a calling may be one way to address the challenge of staff turnover in ECE. Evidence is increasing that those who experience work as a calling have more positive work-related outcomes (Dobrow Riza et al., 2019), including decreased turnover intentions (Duffy & Dik, 2013; Thompson & Bunderson, 2019). Although the concept of work as a calling has religious roots, modern definitions are more secular (Bunderson & Thompson, 2009; Dik & Duffy, 2009; Benefiel et al., 2014; Madero, 2020). Dik & Duffy, (2009) define calling as "a transcendent summons, experienced as originating beyond the self, to approach a particular life role in a manner oriented toward demonstrating or deriving a sense of purpose or meaningfulness and that holds other-oriented values and goals as primary sources of motivation" (p. 427). For scholars defining work as a calling, there are still unresolved issues, such as whether the call must come from an external source, such as from God or a societal need, and whether calling should be examined on a continuum (Bunderson & Thompson, 2009; Dobrow & Tosti-Kharas, 2011; Duffy & Dik, 2013; Marsh & Dik, 2021).

Prior to the Work as Calling Theory, proposed by Duffy and colleagues (2018), there was no theoretical framework that linked perceived calling to work outcomes. This multidimensional model of calling predicts positive outcomes, such as job satisfaction, and negative outcomes, such as burnout and exploitation. While turnover intentions or turnover behavior were not included as work outcomes in the original model, subsequent studies have examined potential mechanisms underlying the association between calling and turnover intentions, and suggest that career commitment may be one such mechanism (Duffy et al., 2011; Afsar et al., 2019; Dalla Rosa et al., 2021). Those who feel highly called to their work may develop greater commitment to their chosen occupation or field and are less likely to leave. In the inherently relational work of ECE, we believe this commitment to education may also reflect a commitment to meaningful relationships. We have previously suggested that having a calling to work in ECE might reflect a search for self-transcendent experiences in work relationships, which could be termed a 'search for the sacred in relationships' or a 'call to relational awareness' (Whitaker et al., 2021a, p. 74).

Furthermore, recent evidence from outside the field of education suggests that calling is a dynamic process, rather than a static quality, influenced by internal, interpersonal, and environmental factors (Dobrow, 2013; Dalla Rosa et al., 2019; Kallio et al., 2022). For example, among over 400 Italian undergraduate and graduate students, a clarity of professional identity, meaningful engagement in learning activities, and social support predicted the development of a calling, rather than calling predicting identity, engagement, and support (Dalla Rosa et al., 2019). Therefore, even though calling can be considered an internal asset that is brought to the workplace, calling is also modifiable and can evolve.

#### **Calling and Turnover**

We identified 15 English-language studies, representing samples from seven different countries (China, Mongolia, Pakistan, Philippines, Portugal, South Africa, and the United States), that examined the association between calling and turnover intentions among those currently employed, and in all of these studies, greater calling was associated with lower turnover intentions. These studies included those working within education (Leana et al., 2009; Duffy et al., 2011; Lobene & Meade, 2013; Gazica & Spector, 2015; Fouché et al., 2017), health care (Cardador et al., 2011; Esteves & Lopes, 2017; Afsar et al., 2019; Xu et al., 2020; Zhang et al., 2020), and law enforcement (Chen et al., 2018), as well as four studies with employees from more than one work sector (Presbitero & Teng-Calleja, 2020; Mantler et al., 2021; Park et al., 2021; Zhang & Hirschi, 2021). Although these studies from diverse workplace sectors support an association between calling and turnover intentions, it is not known whether these findings would also apply in early childhood education. Among the five studies in the education sector, two involved higher education faculty and staff (Duffy et al., 2011; Gazica & Spector, 2015), two involved K-12 teachers (Lobene & Meade, 2013; Fouché et al., 2017), and only one involved ECE professionals (Leana et al., 2009). Among the three studies conducted in early childhood through secondary education, two used a measure of calling that was developed by Wrzesniewski and colleagues (1997) but has not been validated. These two studies included early childhood teachers and aides in Pennsylvania and New Jersey, USA (Leana et al., 2009) and secondary school teachers in South Africa (Fouché et al., 2017). The single study of teachers that used a validated measure of calling, developed by Dreher and colleagues (2007), involved 170 full-time K-12 public school teachers in Virginia, USA and found a negative, unadjusted bivariate correlation between calling and turnover intentions (r=-.42) (Lobene & Meade, 2013).

## **Calling and Turnover in Early Childhood Education**

Despite the long-standing recognition that teaching is a calling (Serow, 1994; Palmer, 1998; Bullough & Hall-Kenyon, 2011; Madero, 2020; Hansen, 2021), there are few studies of in-service teachers that use a validated and continuous measure of work as a calling and only a single study linking such a measure to turnover intentions in teachers. If there is evidence of an association between calling and turnover among early childhood educators, such data could begin to inform how a focus on calling might address the high rate of turnover in the ECE field, alongside efforts to increase wages and benefits. The potentially modifiable nature of calling provides opportunities for leaders in ECE to create, strengthen, and maintain the calling of their staff and address the challenge of turnover, including using messaging that supports the meaningful work of being in relationship with children.

# **The Present Study**

In this study, we used survey data from ECE professionals to test the hypothesis that those who perceive higher levels of work as a calling are less likely to report that they intend to leave the field of ECE. We measured calling using the widely used Calling and Vocation Questionnaire (CVQ) (Dik et al., 2012), a validated and continuous measure that reflects a three-part definition of calling (Dik & Duffy, 2009) as a (1) transcendent summons, involving (2) purposeful work and (3) a prosocial orientation.

# Methods

#### **Survey Design and Participants**

In spring 2021, we administered an online survey to 265 ECE professionals before they began an online course about developmental trauma. The course was offered by a

non-profit organization providing professional development and technical assistance to ECE professionals in southeastern Pennsylvania, a state in the Mid-Atlantic region of the eastern US, and most participants (n=252) worked in Pennsylvania. The majority of participants worked in organizations providing direct programming in early childhood education, serving children birth to five years old. Funding for these organizations came from sources that were both private and public (e.g., Head Start). The organizations also varied in their quality rating, based on a statewide quality rating system that considers staff education, learning environment, leadership/management, and family/ community partnerships. In addition to questions about the participants' sociodemographic characteristics, the survey contained a section entitled "Feelings about Work," which included measures about the presence of work as a calling and turnover intentions. Written consent was obtained online, and those completing the survey were given a \$20 gift card. The research was approved by the Mary Imogene Bassett Hospital Institutional Review Board (Cooperstown, NY). We received survey responses from 246 of 265 (92.8%) course participants.

#### Measures

#### Intention to Leave the ECE Field

The prevalence of intention to leave the ECE field was based on a binary variable derived from a single item (Buettner et al., 2016; Grant et al., 2019). After the question, "If you had an option to leave your program (the early childhood program in which you work), what would you most likely do?," participants were asked to select one of the following response options: (1) Stay in the field of early childhood education but in a different setting, (2) Find a position or get training in a field related to early childhood education, (3) Find a position or get training in a completely different field, (4) Stop work, stay home, or retire, or (5) I would not choose to leave this program. Those who indicated either option 3 or 4 were coded as "intending to leave the ECE field" (1), and all others were coded as "not intending to leave the ECE field" (0). This binary variable provided a direct measure of intention to leave or turnover in the ECE field, our primary study outcome.

#### Work as a Calling

To assess the presence of work as a calling, we used the 12 items in the Calling and Vocation Questionnaire that assessed the presence of call (CVQ-Presence) (Dik et al., 2012), which was developed based on Dik and Duffy's (2009) three-part definition of calling. The instrument has

been widely used (Duffy et al., 2015; Thompson & Bunderson, 2019), and its high internal consistency and convergent and discriminate validity have been established (Dik et al., 2012; Duffy et al., 2015).

This scale included three subscales, each consisting of four items: transcendent summons (e.g., "I believe that I have been called to my current line of work"), purposeful work (e.g., "I see my career as a path to purpose in life"), and prosocial orientation (e.g., "My work contributes to the common good"). For each item, the following response options were offered: (1) not at all true of me, (2) somewhat true of me, (3) mostly true of me, and (4) absolutely true of me. The preamble to these items included the following statement: "Please respond by thinking about your career in early childhood education. If you do not consider your current job as part of your career, focus on your career as a whole in early childhood education and not your current job. If any item does not seem relevant to you, '(1) not at all true of me' may be the best answer." After reverse-coding one specified item, we summed responses across all items to calculate the CVQ-Presence score (12 items, possible scores from 12 to 48), hereafter referred to as the "calling score," and the three subscale scores (four items each, possible scores from 4 to 16), with higher scores indicating a greater presence of calling. In the current sample, the internal consistency (Cronbach's alpha) of the calling score was .87, and for each of the subscales was as follows: transcendent summons, .66; purposeful work, .85; and prosocial orientation, .75.

#### Covariates

We assessed seven sociodemographic factors, as previously described (Whitaker et al., 2021b), that might confound the association between work as a calling and the prevalence of intention to leave the ECE field. In addition to items assessing age, gender, race/ethnicity, education, and job position, participants were asked (yes/no) whether, in the prior year, they "had any serious ongoing stress at work—things like consistently extreme work demands, major changes, or uncertainties that most people would consider highly stressful." The economic hardship variable was a count (0–5) of five areas of economic hardship (food, housing, utilities, health care, and income) that each participant reported (yes/ no) experiencing during the prior 12 months.

#### **Data Analysis**

We excluded 48 of the 246 survey respondents, leaving 198 eligible for the current study. Eleven survey respondents were excluded because they were not currently employed in ECE, and three were missing data on age. We excluded an additional 34 who were aged 60 years or older, because they were close to retirement age. Compared to those under age

60, those 60 years or older more often chose "stop work, stay home, or retire" as a reason for leaving ECE (26.4% versus 9.3%), which, in the case of retirement, would not necessarily be related to their level of perceived calling. Of the 198 survey respondents eligible for this analysis, four were excluded because they were missing data on either the calling score (n=2) or intention to leave the ECE field (n=2), leaving a final analytic sample of 194. Statistical analyses were conducted using Stata/MP (v 15.1). Unless otherwise noted, the threshold for statistical significance was p < .05.

We designed our analysis, employing multivariable logistic regression, to provide an estimate of the association between a single exposure, work as a calling, and the prevalence of intention to leave the ECE field (1 = yes, 0 = no), while adjusting for possible confounders. To avoid estimation errors from over-fitting a logistic model with a relatively small sample, we included only predictor variables that were potential confounders (Babyak, 2004). To determine potential confounders, we first used bivariate statistical analyses to identify those covariates that were associated with both intention to leave (using chi-square tests) and the calling score (using one-way analysis of variance and t-tests). We adjusted for covariates that were significantly associated with intention to leave and calling. In selecting these covariates, we used a different threshold for statistical significance (p < .10) to include all potential confounders in the regression model while avoiding an over-fit model. The measured covariates that we excluded from our model were not likely to be confounders, because they were not strongly related to both calling and turnover.

In our primary logistic model, the odds ratio computed from the regression coefficient for the calling score indicated the odds of intention to leave associated with a one-point increase in the calling score. In secondary analyses, we used the score for each of the three subscales of calling as the key independent variable. To facilitate interpretation of our findings, we also used a logistic regression model with sampledefined tertiles of the calling score (low, medium, and high) as the independent variable. To estimate the adjusted prevalence of intention to leave at each level of the calling score, we used regression-based margins, standardized to the distribution of the confounding variables in the model. With the lowest tertile of calling scores as the reference group, we computed adjusted prevalence differences and ratios (and their 95% CIs) to estimate the association between the level of calling score (tertile) and intention to leave (Cummings, 2011).

# Results

Of the 194 participants, 184 (94.8%) identified as female, 103 (53.9%) as non-Hispanic White, and 68 (35.6%) as non-Hispanic Black (Table 1). Eighty-one (41.7%) were less than 40 years of age, and 134 (69.1%) had a bachelor's

Table 1	Participant characteristics	and association with work as	s a calling and intention to	leave the early	y childhood education field

	No. (%) <sup>a</sup>	Work as a Calling S	Work as a Calling Score		Intention to Leave the Field of ECE	
		Mean (SD)	P value <sup>b</sup>	No. (%)	P value <sup>c</sup>	
All	194 (100.0)	40.2 (6.1)	_	33 (17.0)	_	
Gender						
Female	184 (94.8)	40.4 (6.1)	.138	29 (15.8)	.047	
Male	10 (5.2)	37.4 (5.9)		4 (40.0)		
Age, y						
50–59	60 (30.9)	40.6 (5.6)	.906	14 (23.3)	.202	
40–49	53 (27.3)	40.2 (6.7)		8 (15.1)		
30–39	60 (30.9)	39.9 (6.0)		6 (10.0)		
≤29	21 (10.8)	39.7 (6.7)		5 (23.8)		
Race/ethnicity						
White, non-Hispanic	103 (53.9)	39.1 (6.2)	.011	23 (22.3)	.094	
Black, non-Hispanic	68 (35.6)	41.9 (5.7)		9 (13.2)		
Other <sup>d</sup>	20 (10.5)	40.0 (6.5)		1 (5.0)		
Education						
High school/GED or less	27 (13.9)	42.1 (4.4)	.126	2 (7.4)	.031	
Associate degree	33 (17.0)	38.3 (7.4)		9 (27.3)		
Bachelor's degree	69 (35.6)	40.3 (6.2)		16 (23.2)		
Master's or doctoral degree <sup>e</sup>	65 (33.5)	40.3 (5.8)		6 (9.2)		
Job position						
Manager <sup>f</sup>	97 (50.0)	40.2 (6.5)	.984	18 (18.6)	.566	
Teacher or assistant teacher <sup>g</sup>	97 (50.0)	40.2 (5.8)		15 (15.5)		
Number of economic hardships <sup>h</sup>						
0	90 (46.9)	39.9 (6.2)	.616	21 (23.3)	.040	
1	51 (26.6)	39.9 (6.0)		8 (15.7)		
2	27 (14.1)	40.5 (7.2)		3 (11.1)		
3–5	24 (12.5)	41.7 (5.1)		0 (0.0)		
Serious ongoing stress at work <sup>i</sup>						
No	41 (21.1)	42.1 (5.3)	.026	2 (4.9)	.020	
Yes	153 (78.9)	39.7 (6.3)		31 (20.3)		

ECE Early childhood education, GED General Educational Development test

<sup>a</sup> N = 194. Percentages across levels of a characteristic may not add to 100% due to rounding. Participants were missing data on characteristics as follows: race/ethnicity (3); economic hardships (2)

<sup>b</sup> P value for one-way analysis of variance and t-tests comparing work as a calling scores across levels of a participant characteristic

<sup>c</sup> P value for chi-square tests comparing the prevalence of intention to leave the field of ECE across levels of a participant characteristic

<sup>d</sup> Race/ethnicity designations within the category "Other" are not further specified to avoid deductive disclosure. This "Other" category included anyone who reported Hispanic ethnicity or a race that was not Black or White. The response options for race included the following: American Indian or Alaska Native, Black or African American, White, Asian, Native Hawaiian or other Pacific Islander, Biracial or Multi-Racial, and Other

<sup>e</sup> Of the 65 participants in this category, 4 reported having a doctoral degree

<sup>f</sup> This category includes directors, administrators, or supervisors. It also included those in the job position of "coach" (n=10). People in the positions in this category primarily interacted with other adult staff

<sup>g</sup> This category also included those in the job positions of "aide" (n=2), "family-based provider" (n=3), and "parent educator" (n=3). People in the positions in this category primarily interacted with children or parents (or other adult family members)

<sup>h</sup> Sum of five areas of economic hardship experienced during the prior 12 months: (food) received benefits from the Supplemental Nutrition Assistance Program, (housing) not enough money for housing, (utilities) not enough money for utilities, (health care) not enough money for health care, and (income) held second job

<sup>i</sup> Based on the following (yes/no) survey item asked to those currently employed: "In the past 12 months, have you had any serious ongoing stress at work – things like consistently extreme work demands, major changes, or uncertainties that most people would consider highly stressful?"

degree or higher level of education. Serious ongoing stress at work during the prior year was reported by 153 (78.9%), and at least one economic hardship during the prior year was reported by 102 (53.1%).

Thirty-three (17.0%) reported that they intended to leave the ECE field. The mean (SD) of the calling score

 
 Table 2
 Regression coefficients and odds ratios from a model predicting intention to leave the field of early childhood education<sup>a</sup>

Measure	B (SE)	Adjusted Odds Ratio (95% Confidence Interval)
Work as a calling score <sup>b</sup>	- 0.09 (0.03)*	0.91 (0.85, 0.97)
Race/ethnicity		
White, non-Hispanic	Reference	Reference
Black, non-Hispanic	- 0.15 (0.47)	0.86 (0.34, 2.15)
Other	- 1.56 (1.07)	0.21 (0.03, 1.70)
Serious ongoing stress at v	work	
No	Reference	Reference
Yes	1.33 (0.78)	3.78 (0.82, 17.32)
Constant	1.10 (1.49)	3.02 (0.16, 56.42)

\**p* < .01

<sup>a</sup> N=191. There was listwise deletion of 3 participants who were missing data on race/ethnicity. For overall model evaluation, the Wald test was used and indicated that the logistic regression model with all three predictors was an improvement over the intercept-only model ( $\chi^2$  (4)=15.56, p=.004). For goodness-of-fit, the Hosmer-Lemeshow test was used and was insignificant, indicating that the model fit the data well ( $\chi^2$  (8)=4.52, p=.807)

<sup>b</sup> In the logistic regression model, with calling score as the predictor variable and intention to leave the early childhood education field as the dependent variable (and with no covariates), for every one point increase in the calling score, the odds of intention to stay decreased from 1.00 to 0.90 (95% CI: 0.85, 0.96). In the logistic regression model, after adjusting for race/ethnicity and stress at work, the addition of the calling score to the model significantly improved model fit, as assessed by the Wald test ( $\chi^2$  (1)=8.20, *p*=.004)

was 40.2 (6.1), and the mean (*SD*) of the three subscales was 12.6 (2.6) for transcendent summons, 13.4 (2.5) for purposeful work, and 14.1 (2.1) for prosocial orientation. In bivariate analyses (Table 1), race/ethnicity and serious ongoing stress at work were the only two covariates significantly associated with calling. Intention to leave the ECE field was significantly more common in those who reported serious ongoing stress at work, but it was significantly less common in those who reported more economic hardships.

Based on a logistic regression model, adjusting for race/ ethnicity and stress at work, the odds of intention to leave associated with the calling score were 0.91 (95% CI: 0.85, 0.97) (Table 2), meaning that for each one point increase in the calling score, the odds of leaving decreased 9 percent (from 1.00 to 0.91). When the calling score was evaluated as sample-defined tertiles, the prevalence (95% CI) of intention to leave decreased from 28.6% (17.8%, 38.4%) to 12.2% (4.3%, 20.1%) to 9.1% (1.5%, 16.6%) across tertiles of calling from low to medium to high, respectively (Table 3). Among those in the high tertile of calling, the adjusted prevalence of intention to leave was 19.5 percentage points lower (95% CI: 32.8 to 6.1 percentage points lower) than among those in the low tertile.

In secondary analyses, we repeated the same logistic regression model, adjusting for race/ethnicity and stress at work and using each of the three calling subscale scores (possible range 4–16 for each) as the key predictor variable. The adjusted odds (95% CI) of intention to leave associated with each one-point increase in the subscale scores were as follows: transcendent summons, 0.84 (0.72, 0.98); purposeful work, 0.76 (0.65, 0.89); and prosocial orientation, 0.86 (0.72, 1.02).

 Table 3
 Prevalence, prevalence difference, and prevalence ratio of intention to leave the field of early childhood education by tertile of work as a calling

Tertile of work as a No. (%) in Tertile		Intention to Leave the Field of ECE		Adjusted	Adjusted
calling score		Unadjusted Preva- lence, % (95% CI) <sup>a</sup>	Adjusted Preva- lence, % (95% CI) <sup>b, c</sup>	Prevalence Differ- ence, % (95% CI) <sup>b</sup>	Prevalence Ratio (95% CI) <sup>b</sup>
Low (<38)	67 (34.5)	29.8 (18.9, 40.8)	28.6 (17.8, 38.4)	Reference	Reference
Medium (38-44)	66 (34.0)	12.1 (4.2, 20.0)	12.2 (4.3, 20.1)	-16.4 (-29.9, -2.8)	0.43 (0.20, 0.91)
High (>44)	61 (31.4)	8.2 (1.3, 15.1)	9.1 (1.5, 16.6)	-19.5 (-32.8, -6.1)	0.32 (0.13, 0.80)

ECE Early childhood education, CI Confidence Interval

<sup>a</sup> The prevalence of intention to leave the field of early childhood education significantly decreased across tertiles of the calling score (chi-square test for trend z = -3.28, p = .001)

 $^{b}N = 191$ . There was listwise deletion of 3 participants who were missing data on race/ethnicity. The logistic regression model used adjusted for race/ethnicity and ongoing stress at work

<sup>c</sup>In a logistic regression model, after adjusting for race/ethnicity andongoing stress at work, the addition of the calling score (tertiles) to the model improved model fit, asassessed by the Wald test ( $\chi^2(2) = 8.85$ , p = .012)

#### Discussion

#### **Key Findings**

Among 194 ECE professionals, we demonstrated that those who perceived having a greater calling to work in ECE were less likely to report an intention to leave the field. To our knowledge, this is the first study among early childhood educators to examine the association between a validated measure of calling and turnover intentions. Because our study used a small convenience sample, cross-sectional design, and an outcome of turnover intention rather than behavior, the results should be regarded as preliminary. However, when examined as tertiles of calling, the adjusted prevalence of intention to leave decreased significantly from 28.6% among those in the low tertile of calling to 9.1% among those in the high tertile.

# Findings in the Context of Early Childhood Education

In reviewing the peer-reviewed, English-language literature, we could locate only three studies that examined, quantitatively, the association between calling and turnover intentions among teachers in early childhood, elementary, or secondary education (Leana et al., 2009; Lobene & Meade, 2013; Fouché et al., 2017). Similar to our study findings, all three studies found that higher calling was significantly associated with lower turnover intentions. However, only zero-order correlations were used to describe the association between calling and turnover in these studies, and only one involved early childhood educators (Leana et al., 2009). One study involved only secondary teachers and was based outside the US (Fouché et al., 2017). Finally, only one of the studies used a validated measure of calling (Lobene & Meade, 2013), but it was not the CVQ measure used in our study (Dik et al., 2012). To better understand how the CVQ-Presence score used in our study compared with similar samples, we identified two studies in which the CVQ-Presence score was reported in a sample of teachers, even though turnover was not assessed. In both studies, the score was computed by dividing the total score by the number of items (12). As applied to our sample, this scoring method yielded a mean (SD) CVQ-Presence score of 3.35 (0.51), which was a higher score than in the other two studies: 3.11 (0.51) in a sample of 129 US public high school teachers (Ehrhardt & Ensher, 2021) and 2.72 (0.53) in a sample of 140 Finnish ECE teachers (Kallio et al., 2022).

## Limitations

Our cross-sectional design does not allow us to make causal inferences about the association between calling and intention to leave the field of ECE. The study participants volunteered for a professional development course and may have had a higher career commitment, greater calling, and lower likelihood of leaving the field than the general population of ECE professionals. Our measure of turnover was related to leaving the field of ECE and not leaving a particular ECE program, and the turnover measure assessed intentions rather than actual turnover. However, turnover intentions have been shown to be highly correlated with turnover behavior (Tett & Meyer, 1993; Griffeth et al., 2000; Sun & Wang, 2017). Finally, we could have overestimated the strength of the association between calling and turnover because of residual confounding from unmeasured covariates.

#### **Potential Implications for Research and Practice**

While many entering the field of ECE may already have a calling, calling may develop or change over time (Dobrow, 2013; Dalla Rosa et al., 2019; Kallio et al., 2022), providing ECE leadership with the opportunity to identify, build, and sustain the calling of their staff, including during pre-service education and through professional advocacy organizations. Using language resonate with calling, particularly around the meaningful work of entering into relationships with children, ECE leaders may be better able to engage their staff in the values, curriculum, and activities of their programs. In particular, ECE leaders and those facilitating professional development opportunities could conceptualize staff wellness as meeting and fostering calling. Fortifying such a calling may serve as an internal resource for staff to remain in the challenging work of educating and caring for young children and building relationships with their families. ECE leaders who recognize the calling of their staff could simultaneously promote staff wellness and program quality, by ultimately giving voice to the societal importance of safe, stable, and nurturing relationships for children's learning (Centers for Disease Control and Prevention, 2014; National Scientific Council on the Developing Child, 2015; Garner and Yogman, 2021).

Alongside the potential benefits of focusing on the calling of early childhood educators sits a tension in identifying, building, and sustaining call in the field of ECE. We believe this tension arises from the potential to exploit early childhood educators who feel highly called but poorly paid. Nurses, for example, who are also in a helping profession, have expressed a desire to avoid discussing call because it might justify poor wages and working conditions (Kallio et al., 2022). In work that is distinct from ECE but shares some parallel tensions, zookeepers have reported feeling highly called to their exhausting and 'dirty work'(as described in the literature), while also aware that their supervisors sometimes took advantage of this calling (Bunderson & Thompson, 2009, p. 35). Feeling a moral obligation to care for animals, zookeepers acknowledged a willingness to sacrifice their personal lives and professional compensation to provide quality care. Similarly, those who report a high level of calling to the work of ECE may also feel a moral obligation to provide quality care for children and their families in work characterized by high emotional labor and poor compensation.

The emotional labor of working in ECE refers to the continuous work of self-regulation and co-regulation that is required, such as being attuned, responsive, calm, and compassionate with children and parents, even as they sometimes express challenging emotions and behaviors. Historically, the care and education of young children has been considered unpaid 'women's work' occurring at home (Bloom & Farragher, 2011, p. 187). Because of this, there is an accompanying sexist assumption that this caring work is not cognitively demanding. Therefore, ECE professionals continue to be poorly compensated for their work, even though it requires high levels of both cognitive and emotional labor. Furthermore, amidst pressures to professionalize the ECE workforce, leaders of ECE programs may already experience some moral distress by requiring higher levels of education from their staff without paying them more money. In this setting, leaders might understandably hesitate to focus on calling if it implied that their staff should invest further in the emotional labor that is already unappreciated and uncompensated. Thus, the field is left with a dilemma. The recognition by ECE leaders of unfair wages may prevent them from supporting the calling of their staff to the work of building safe, stable, and nurturing relationships with children that are the foundation of early learning.

Given the lack of research on call in ECE and the dynamic nature of calling over one's working life, future studies should prospectively examine calling, turnover intentions, teacher-child relationship quality, and actual turnover behavior. Qualitative research could extend our findings and explore two broad areas. First, given the potential dilemma ECE leaders may experience in promoting calling, qualitative studies could elucidate how ECE leaders understand calling, whether the concept of calling resonates with the work in ECE, and ways to promote calling that do not ignore or exploit the existing wage inequity. Second, because the nature of the work in ECE is highly relational, qualitative studies could examine if and how early childhood educators experience calling in their work through their relationships with children, families, and colleagues, and whether those who experience call in this way describe feeling more present and attuned in their relationships. Although we focused on the presence of a calling, scholars also recognize the distinct concept of "living a calling" (Duffy et al., 2012, 2013), which means being able, in the present, to meet that calling. Future research with early childhood educators could examine the relationship between perceiving and living a calling,

including contextual factors that may influence this association (Duffy et al., 2018), such as organizational support from supervisors and colleagues and the ability to craft one's job responsibilities informally with colleagues in the team environment of ECE (Leana et al., 2009). Finally, examining the workplace climate in ECE and its association with the development of calling and turnover could also be useful to ECE leaders. In particular, workplaces that allow staff to pursue meaningful work, feel connected to colleagues, and experience alignment with program values (Ashmos & Duchon, 2000; Fry, 2003; Milliman et al., 2003; Houghton et al., 2016) may help increase both the presence of call and living a call.

# Conclusion

We have provided evidence that early childhood educators who perceive higher levels of calling are less likely to leave the field of ECE. In a field still struggling to address adequate compensation and high turnover rates, further research may provide evidence that building and sustaining calling of early childhood educators can decrease turnover. Future research would also benefit from understanding how ECE leaders can promote the calling of their staff within an environment of low social standing and pay so that ECE professionals feel valued and respected.

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#### Declarations

**Conflict of interest** The authors report there are no competing interests to declare.

# References

Afsar, B., Umrani, W. A., & Khan, A. (2019). The impact of perceived calling on work outcomes in a nursing context: The role of career commitment and living one's calling. *Journal of Applied Biobehavioral Research*, 24(1), e12154. doi: https://doi.org/10.1111/ jabr.12154.

- Ashmos, D. P., & Duchon, D. (2000). Spirituality at work: A conceptualization and measure. *Journal of Management Inquiry*, 9(2), 134–145. https://doi.org/10.1177/105649260092008
- Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services (2021). U.S. federal poverty guidelines used to determine financial eligibility for certain federal programs. https://aspe.hhs.gov/topics/poverty-economic-mobility/ poverty-guidelines/prior-hhs-poverty-guidelines-federal-registerreferences/2021-poverty-guidelines. [Accessed May 11, 2022]
- Babyak, M. A. (2004). What you see may not be what you get: A brief, nontechnical introduction to overfitting in regression-type models. *Psychosomatic Medicine*, 66(3), 411–421.
- Bassok, D., Markowitz, A. J., Bellows, L., & Sadowski, K. (2021a). New evidence on teacher turnover in early childhood. *Educational Evaluation and Policy Analysis*, 43(1), 172–180. doi: https://doi.org/10.3102/0162373720985340.
- Bassok, D., Smith, A. E., Markowitz, A. J., & Doromal, J. B. (2021b). Child care staffing challenges during the pandemic: lessons from child care leaders in Louisiana. EdPolicyWorks, University of Virginia and the UCLA Graduate School of Education and Information Studies. https://files.elfsightcdn.com/022b8 cb9-839c-4bc2-992e-cefccb8e877e/77ea6e06-3c45-4871-9f21-22644992a486.pdf.
- Bassok, D., Smith, A. E., Markowitz, A. J., & Doromal, J. B. (2021c). Child care staffing challenges during the pandemic: lessons from child care leaders in Virginia. EdPolicyWorks, University of Virginia and the UCLA Graduate School of Education and Information Studies. https://files.elfsightcdn.com/022b8cb9-839c-4bc2-992e-cefccb8e877e/029d2127-5d18-4e89-8762-029e75d605fc. pdf.
- Benefiel, M., Fry, L. W., & Geigle, D. (2014). Spirituality and religion in the workplace: History, theory, and research. *Psychology of Religion and Spirituality*, 6(3), 175–187. https://doi.org/10.1037/ a0036597
- Bloom, S. L., & Farragher, B. (2011). Destroying sanctuary: The crisis in human service delivery systems. Oxford University Press.
- Buettner, C. K., Jeon, L., Hur, E., & Garcia, R. E. (2016). Teachers' social–emotional capacity: Factors associated with teachers' responsiveness and professional commitment. *Early Education* and Development, 27(7), 1018–1039. doi: https://doi.org/10.1080/ 10409289.2016.1168227.
- Bullough, R. V., & Hall-Kenyon, K. M. (2011). The call to teach and teacher hopefulness. *Teacher Development*, 15(2), 127–140. doi: https://doi.org/10.1080/13664530.2011.571488.
- Bunderson, J. S., & Thompson, J. A. (2009). The call of the wild: Zookeepers, callings, and the double-edged sword of deeply meaningful work. *Administrative Science Quarterly*, 54(1), 32–57. doi: https://doi.org/10.2189/asqu.2009.54.1.32.
- Cardador, M. T., Dane, E., & Pratt, M. G. (2011). Linking calling orientations to organizational attachment via organizational instrumentality. *Journal of Vocational Behavior*, 79(2), 367–378. doi: https://doi.org/10.1016/j.jvb.2011.03.009.
- Cassidy, D. J., Lower, J. K., Kintner-Duffy, V. L., Hegde, A. V., & Shim, J. (2011). The day-to-day reality of teacher turnover in preschool classrooms: An analysis of classroom context and teacher, director, and parent perspectives. *Journal of Research in Childhood Education*, 25(1), 1–23. doi: https://doi.org/10.1080/02568 543.2011.533118.
- Centers for Disease Control and Prevention, National Center for Injury Prevention and Control, Division of Violence Prevention (2014). *Essentials for childhood: Creating safe, stable, nurturing relationships and environments for all children* https://www.cdc.gov/viole nceprevention/pdf/essentials-for-childhood-framework508.pdf
- Chen, J., May, D. R., Schwoerer, C. E., & Augelli, B. (2018). Exploring the boundaries of career calling: The moderating roles of procedural justice and psychological safety. *Journal of Career*

Development, 45(2), 103–116. doi: https://doi.org/10.1177/08948 45316671214.

- Cummings, P. (2011). Estimating adjusted risk ratios for matched and unmatched data: An update. *Stata Journal*, 11(2), 290–298. doi: https://doi.org/10.1177/1536867X1101100208.
- Dalla Rosa, A., Vianello, M., & Anselmi, P. (2019). Longitudinal predictors of the development of a calling: New evidence for the a posteriori hypothesis. *Journal of Vocational Behavior*, 114, 44–56. doi: https://doi.org/10.1016/j.jvb.2019.02.007.
- Dalla Rosa, A., Vianello, M., & Galliani, E. M. (2021). Career calling: scale validation and mediation effects on work-related outcomes. *TPM: Testing Psychometrics Methodology in Applied Psychology*, 28(2), doi: https://doi.org/10.4473/TPM28.2.
- Dik, B. J., & Duffy, R. D. (2009). Calling and vocation at work: Definitions and prospects for research and practice. *The Counseling Psychologist*, 37(3), 424–450. doi: https://doi.org/10.1177/00110 00008316430.
- Dik, B. J., Eldridge, B. M., Steger, M. F., & Duffy, R. D. (2012). Development and validation of the calling and vocation questionnaire (CVQ) and brief calling scale (BCS). *Journal of Career Assessment*, 20(3), 242–263. doi: https://doi.org/10.1177/1069072711 434410.
- Dobrow Riza, S., Weisman, H., Heller, D., & Tosti-Kharas, J. (2019, August). "Calling attention to 20 years of research: a comprehensive meta-analysis of calling." Paper presented at the Academy of Management Annual Meeting, Boston, MA.
- Dobrow, S. R. (2013). Dynamics of calling: A longitudinal study of musicians. *Journal of Organizational Behavior*, 34(4), 431–452. doi: https://doi.org/10.1002/job.1808.
- Dobrow, S. R., & Tosti-Kharas, J. (2011). Calling: The development of a scale measure. *Personnel Psychology*, 64(4), 1001–1049. doi: https://doi.org/10.1111/j.1744-6570.2011.01234.x.
- Dreher, D. E., Holloway, K. A., & Schoenfelder, E. (2007). The vocation identity questionnaire: Measuring the sense of calling. *Research in the Social Scientific Study of Religion*, 18, 99–120.
- Duffy, R. D., Allan, B. A., Autin, K. L., & Bott, E. M. (2013). Calling and life satisfaction: It's not about having it, it's about living it. *Journal of Counseling Psychology*, 60(1), 42–52. doi: https://doi. org/10.1037/a0030635.
- Duffy, R. D., Autin, K. L., Allan, B. A., & Douglass, R. P. (2015). Assessing work as a calling: An evaluation of instruments and practice recommendations. *Journal of Career Assessment*, 23(3), 351–366. doi: https://doi.org/10.1177/1069072714547163.
- Duffy, R. D., Bott, E. M., Allan, B. A., Torrey, C. L., & Dik, B. J. (2012). Perceiving a calling, living a calling, and job satisfaction: Testing a moderated, multiple mediator model. *Journal of Counseling Psychology*, 59(1), 50–59. doi: https://doi.org/10. 1037/a0026129.
- Duffy, R. D., & Dik, B. J. (2013). Research on calling: What have we learned and where are we going? *Journal of Vocational Behavior*, 83(3), 428–436. doi: https://doi.org/10.1016/j.jvb.2013.06.006.
- Duffy, R. D., Dik, B. J., Douglass, R. P., England, J. W., & Velez, B. L. (2018). Work as a calling: A theoretical model. *Journal of Counseling Psychology*, 65(4), 423–439. doi: https://doi.org/10. 1037/cou0000276.
- Duffy, R. D., Dik, B. J., & Steger, M. F. (2011). Calling and workrelated outcomes: Career commitment as a mediator. *Journal* of Vocational Behavior, 78(2), 210–218. doi: https://doi.org/10. 1016/j.jvb.2010.09.013.
- Ehrhardt, K., & Ensher, E. (2021). Perceiving a calling, living a calling, and calling outcomes: How mentoring matters. *Journal of Counseling Psychology*, 68(2), 168–181. doi: https://doi.org/10.1037/cou0000513.
- Esteves, T., & Lopes, M. P. (2017). Crafting a calling: The mediating role of calling between challenging job demands and turnover

intention. *Journal of Career Development*, 44(1), 34–48. doi: https://doi.org/10.1177/0894845316633789.

- Fouché, E., Rothmann, S. S., & Van der Vyver, C. (2017). Antecedents and outcomes of meaningful work among school teachers. SA Journal of Industrial Psychology, 43(1), 1–10. doi: https://doi. org/10.4102/sajip.v43i0.1398.
- Friedman-Krauss, A., Barnett, W., Garver, K., Hodges, K., Weisenfeld, G., Gardiner, B., et al. (2022). *The state of preschool 2021: state preschool yearbook*. National Institute for Early Education Research. https://nieer.org/wp-content/uploads/2022/04/YB2021\_ Full\_Report.pdf.
- Fry, L. W. (2003). Toward a theory of spiritual leadership. *The Leadership Quarterly*, 14(6), 693–727. doi: https://doi.org/10.1016/j.leaqua.2003.09.001.
- Garner, A., Yogman, M., & Committee on Psychosocial Aspects of Child and Family Health, Section on Developmental and Behavioral Pediatrics, Council on Early Childhood. (2021). Preventing childhood toxic stress: partnering with families and communities to promote relational health. *Pediatrics*, 148(2), e2021052582. https://doi.org/10.1542/peds.2021-052582.
- Gazica, M. W., & Spector, P. E. (2015). A comparison of individuals with unanswered callings to those with no calling at all. *Journal* of Vocational Behavior, 91, 1–10. doi: https://doi.org/10.1016/j. jvb.2015.08.008.
- Grant, A. A., Jeon, L., & Buettner, C. K. (2019). Relating early childhood teachers' working conditions and well-being to their turnover intentions. *Educational Psychology*, 39(3), 294–312. doi: https://doi.org/10.1080/01443410.2018.1543856.
- Griffeth, R. W., Hom, P. W., & Gaertner, S. (2000). A meta-analysis of antecedents and correlates of employee turnover: update, moderator tests, and research implications for the next millennium. *Journal of Management*, 26(3), 463–488. doi: https://doi.org/10. 1177/014920630002600305.
- Hale-Jinks, C., Knopf, H., & Knopf, H. (2006). Tackling teacher turnover in child care: understanding causes and consequences, identifying solutions. *Childhood Education*, 82(4), 219–226. doi: https://doi.org/10.1080/00094056.2006.10522826.
- Hansen, D. T. (2021). *Reimagining the call to teach: a witness to teachers and teaching*. Teachers College Press, New York, NY.
- Houghton, J. D., Neck, C. P., & Krishnakumar, S. (2016). The what, why, and how of spirituality in the workplace revisited: a 14-year update and extension. *Journal of Management Spirituality & Religion*, 13(3), 177–205. doi: https://doi.org/10.1080/14766086. 2016.1185292.
- Institute of Medicine and National Research Council. (2012). The early childhood care and education workforce: challenges and opportunities: a workshop report. The National Academies Press. https:// doi.org/10.17226/13238
- Kallio, H., Kangasniemi, M., & Hult, M. (2022). Registered nurses' perceptions of having a calling to nursing: a mixed-method study. *Journal of Advanced Nursing*. doi: https://doi.org/10.1111/jan. 15157.
- Kwon, K. A., Ford, T. G., Jeon, L., Malek-Lasater, A., Ellis, N., Randall, K., Kile M., Salvatore A.L. (2021). Testing a holistic conceptual framework for early childhood teacher well-being. *Journal* of School Psychology, 86, 178–197. doi: https://doi.org/10.1016/j. jsp.2021.03.006.
- Kwon, K. A., Malek, A., Horm, D., & Castle, S. (2020). Turnover and retention of infant-toddler teachers: Reasons, consequences, and implications for practice and policy. *Children and Youth Services Review*, 115, 105061. doi: https://doi.org/10.1016/j.childyouth. 2020.105061.
- Leana, C., Appelbaum, E., & Shevchuk, I. (2009). Work process and quality of care in early childhood education: The role of job crafting. Academy of Management Journal, 52(6), 1169–1192. doi: https://doi.org/10.5465/amj.2009.47084651.

- Lobene, E. V., & Meade, A. W. (2013). The effects of career calling and perceived overqualification on work outcomes for primary and secondary school teachers. *Journal of Career Development*, 40(6), 508–530. doi: https://doi.org/10.1177/0894845313 495512.
- Madero, C. (2020). A calling to teach: What the literature on callings tells us about approaches to research the calling to the teaching profession. *Religion & Education*, 47(2), 170–187. doi: https:// doi.org/10.1080/15507394.2020.1728028.
- Mantler, J., Campbell, B., & Dupré, K. E. (2021). Jobs, careers, and callings: Exploring work orientation at mid-career. *Journal of Career Development*. doi: https://doi.org/10.1177/0894845321 1022845.
- Markowitz, A. J. (2019). Within-year teacher turnover in Head Start and children's school readiness Working paper, EdPolicyWorks, University of Virginia. https://curry.virginia.edu/sites/default/files/ uploads/epw/70\_Teacher\_Turnover\_in\_Head\_Start.pdf.
- Markowitz, A. J., Bassok, D., & Player, D. (2020). Simplifying quality rating systems in early childhood education. *Children and Youth Services Review*, 112, 104947. doi: https://doi.org/10.1016/j.child youth.2020.104947.
- Marsh, D. R., & Dik, B. J. (2021). Beyond-the-self callings: The role of a transcendent summons for undergraduates and working adults. *Journal of Career Assessment*, 29(4), 570–588. doi: https://doi. org/10.1111/jan.15157.
- McMullen, M. B., Lee, M. S., McCormick, K. I., & Choi, J. (2020). Early childhood professional well-being as a predictor of the risk of turnover in child care: a matter of quality. *Journal of Research in Childhood Education*, 34(3), 331–345. doi: https://doi.org/10. 1080/02568543.2019.1705446.
- Milliman, J., Czaplewski, A. J., & Ferguson, J. (2003). Workplace spirituality and employee work attitudes: An exploratory empirical assessment. *Journal of Organizational Change Management*, *16*(4), 426–447. doi: https://doi.org/10.1108/095348103104841 72.
- National Scientific Council on the Developing Child (2015). Supportive relationships and active skill-building strengthen the foundations of resilience: Working paper 13. https://46y5eh11fhgw3ve3ytpw xt9r-wpengine.netdna-ssl.com/wp-content/uploads/2015/05/The-Science-of-Resilience2.pdf
- Palmer, P. J. (1998). *The courage to teach: Exploring the inner landscape of a teacher's life*. Jossey-Bass, San Francisco, CA.
- Park, J., Choi, Y., Chao, M. M., Beejinkhuu, U., & Sohn, Y. W. (2021). A cultural orientation approach to work orientation: Mongolian workers' jobs, careers, and callings. *Journal of Career Development.* doi: https://doi.org/10.1177/08948453211040811.
- Presbitero, A., & Teng-Calleja, M. (2020). Employee intention to stay in an organization: Examining the role of calling and perceived supervisor support through the theoretical lens of work as calling. *Journal of Career Assessment*, 28(2), 320–336. doi: https://doi. org/10.1177/1069072719858389.
- Sciaraffa, M. A., Zeanah, P. D., & Zeanah, C. H. (2018). Understanding and promoting resilience in the context of adverse childhood experiences. *Early Childhood Education Journal*, 46(3), 343–353. doi: https://doi.org/10.1007/s10643-017-0869-3.
- Serow, R. C. (1994). Called to teach: a study of highly motivated preservice teachers. *Journal of Research & Development in Education*, 27(2), 65–72.
- Sun, R., & Wang, W. (2017). Transformational leadership, employee turnover intention, and actual voluntary turnover in public organizations. *Public Management Review*, 19(8), 1124–1141. doi: https://doi.org/10.1080/14719037.2016.1257063.
- Tett, R. P., & Meyer, J. P. (1993). Job satisfaction, organizational commitment, turnover intention, and turnover: path analyses based on meta-analytic findings. *Personnel Psychology*, 46(2), 259–293. doi: https://doi.org/10.1111/j.1744-6570.1993.tb00874.x.

- Thompson, J. A., & Bunderson, J. S. (2019). Research on work as a calling... and how to make it matter. *Annual Review of Organizational Psychology and Organizational Behavior*, 6, 421–443. doi: annurev-orgpsych-012218-015140.
- Totenhagen, C. J., Hawkins, S. A., Casper, D. M., Bosch, L. A., Hawkey, K. R., & Borden, L. M. (2016). Retaining early childhood education workers: A review of the empirical literature. *Journal of Research in Childhood Education*, 30(4), 585–599. doi: https://doi.org/10.1080/02568543.2016.1214652.
- Tran, H., & Winsler, A. (2011). Teacher and center stability and school readiness among low-income, ethnically diverse children in subsidized, center-based child care. *Children and Youth Services Review*, 33(11), 2241–2252. doi: https://doi.org/10.1016/j.child youth.2011.07.008.
- US Bureau of Labor Statistics (2022). May 2021 national occupational employment and wage estimates United States. https://www.bls. gov/oes/current/oes\_nat.htm#00-0000. [Accessed May 11, 2022]
- Whitaker, R. C., Dearth-Wesley, T., & Herman, A. N. (2021a). The association of daily spiritual experiences with depression among Head Start staff. *Early Childhood Research Quarterly*, 56, 65–77. doi: https://doi.org/10.1016/j.ecresq.2021.03.001.
- Whitaker, R. C., Herman, A. N., & Dearth-Wesley, T. (2021b). Death from COVID-19 as context for early childhood education. *JAMA Pediatrics*, 175(11), 1176–1178. doi: https://doi.org/10.1001/ jamapediatrics.2021.2348.
- 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. Center for the Study of Child

Care Employment, University of California, Berkeley. https://cscce.berkeley.edu/wp-content/uploads/2014/ReportFINAL.pdf.

- Wrzesniewski, A., McCauley, C., Rozin, P., & Schwartz, B. (1997). Jobs, careers, and callings: People's relations to their work. *Journal of Research in Personality*, 31(1), 21–33. doi: https://doi.org/ 10.1006/jrpe.1997.2162.
- Xu, S., Tao, L., Huang, H., Little, J., & Huang, L. (2020). Pediatric nurses' turnover intention and its association with calling in China's tertiary hospitals. *Journal of Pediatric Nursing*, 52, e51–e56. doi: https://doi.org/10.1016/j.pedn.2020.01.005.
- Zhang, C., & Hirschi, A. (2021). Forget about the money? A latent profile analysis of calling and work motivation in chinese employees. *Career Development International*, 26(2), 105–118. doi: https:// doi.org/10.1108/CDI-12-2019-0294.
- Zhang, L., Jin, T., & Jiang, H. (2020). The mediating role of career calling in the relationship between family-supportive supervisor behaviors and turnover intention among public hospital nurses in China. Asian Nursing Research, 14(5), 306–311. doi: https://doi. org/10.1016/j.anr.2020.08.011.

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