Title

Turnover Begets Turnover: An Examination of Job and Occupational Instability Among Child Care Center Staff

Authors

Whitebook, Marcy
Sakai, Laura

Publication Date

2003-09-01

CENTER FOR THE STUDY OF
Child Care Employment

Turnover Begets Turnover: An Examination of Job and Occupational Instability Among Child Care Center Staff

Marcy Whitebook, Ph.D.
Center for Study of Child Care Employment
Institute of Industrial Relations
University of California, Berkeley

Laura Sakai, Ph.D.
Honolulu, Hawaii

Institute of Industrial Relations
Center for the Study of Child Care Employment
2521 Channing Way #5555
Berkeley, CA 94720-5555

Running head: JOB AND OCCUPATIONAL TURNOVER AMONG CENTER STAFF

Turnover begets turnover: An examination of job and occupational instability among child care center staff

Marcy Whitebook, Ph.D.
Center for Study of Child Care Employment
Institute of Industrial Relations
University of California, Berkeley

Laura Sakai, Ph.D.
Honolulu, Hawaii

Short Title: Job and occupational turnover among center staff

Acknowledgment: This research was funded by a grant to the Center for the Child Care Workforce by the David and Lucile Packard Foundation. The final phase of the study was conducted jointly by the Center for the Child Care Workforce and the Institute of Industrial Relations at the University of California at Berkeley. The authors wish to thank the research assistants, and our Advisory Committee members and reviewers for their assistance with this project. A special thanks to the child care teachers and directors who participated in this study, and gave so generously of their time.

Direct all correspondence to: Marcy Whitebook, Center for the Study of Child Care Employment, Institute of Industrial Relations, 2521 Channing Way, #5555, University of California at Berkeley, Berkeley, CA 94720

Voicemail: (510) 643-7091, Email: mwhbk@uclink.berkeley.edu

Abstract

Over half of child care center teaching staff (n=149) and a third of directors (n=71) interviewed in 1996 had left their centers by 2000. The demographic and professional profiles of those who left and stayed at their centers were similar. Among those who left, only half continued to work in child care. Highly-trained teaching staff were more likely to leave their jobs if they earned lower wages, worked in a climate with less stability of highly-trained co-workers, and worked with a greater percentage of teaching staff who did not have a bachelor's degree. Directors were more likely to leave if they earned lower wages. The study extends previous research by revealing the links among the characteristics and stability of the teaching staff as a whole and the retention of highly-trained teachers. It also underscores the multi-faceted benefits resulting from paying higher wages to all staff.

Turnover begets turnover: A closer look at job and occupational instability among child care center staff

All industries wrestle with employee turnover. Depending on the type of product or service it provides and the wage level of its employees, every business will tend to define a certain level of turnover as normal and acceptable. But while employers generally expect more turnover in low-wage industries, it is problematic to tolerate high turnover in a human service business such as a child care center, where it has been associated with compromised development of children and lower quality service (Helburn, 1995; Howes & Hamilton, 1992; Howes, Phillips & Whitebook, 1992; Phillips, Mekos, Scarr, McCartney, & Abbott-Shinn, 2000; Whitebook, Sakai & Howes, 1997).

Turnover in child care centers far exceeds that of other teaching settings. For example, the 30-percent average annual rate of departure from child care jobs is more than four times greater than the seven-percent rate found among elementary school teachers (Whitebook & Bellm, 1999). Fast-food businesses are one of the few employers that report higher levels of annual turnover than child care centers (Bureau of Labor Statistics, 2002). Most disturbingly, high rates of turnover contribute to a worsening teacher shortage in early education which, in turn, is fueling a pervasive, nationwide crisis in the quality of early care and education services that young children receive (Helburn, 1995; Shonkoff & Phillips, 2000; Whitebook, Howes & Phillips, 1990).

A great deal of change occurs in child care centers every day, not all of which involves staff. Children come and go as their families move or change jobs, or as they "graduate" to elementary school. Changes also occur among support staff who do not work closely with children. However, the most disruptive and potentially troubling form

of turnover in child care centers involves the departure of teaching staff and directors who provide center leadership (Helburn, 1995; Whitebook & Bellm, 1999). There are three main types of turnover among staff in a child care setting:

1. Job turnover occurs when a teacher or director leaves a child care center, but does not necessarily leave the child care field. Job turnover may be involuntary, in the case of a dismissal, or voluntary, as when a teacher or director leaves a program for a better-paying job or in response to a pregnancy or family move. Concern about instability in child care often focuses on voluntary job turnover.
2. Position turnover occurs when a teacher moves to a different classroom within a center, or when a teacher or a director moves to a different site within an agency, resulting from a promotion or perhaps a desire to work with another age group of children. In this instance, the teacher or director continues her employment with the center or agency, but in a new role. Position turnover also happens frequently when agencies expand, adding new classrooms or sites to an existing program. Position turnover is typically viewed as positive for the individual or even the agency, although it may still involve some disruption for children, families and other staff.
3. Occupational turnover occurs when a teacher or director leaves a job at a center and also departs from the child care field. The consequences of job turnover are felt most directly in centers when directors and co-workers struggle to meet required adult-child ratios in response to a staff departure.

> The effects of occupational turnover surface clearly when there is a shortage of qualified candidates for a job opening, and when it takes several weeks or even months to hire a new teacher or director.

This article focuses on job and occupational turnover among teaching staff and directors within child care centers over a four-year period.

Job turnover—calculated in this study by determining the percentage of staff who cease their employment within a year or other specified period—discourages the development and maintenance of consistent relationships between children and their caregivers. The rate of job turnover among teaching staff is linked to the quality of care that programs provide and affects children's social-emotional and language development. In the most recent large-scale studies of child care, higher job turnover rates among staff were linked to lower-quality services (Helburn, 1995; Kontos, Howes, Galinsky & Shin, 1995; Phillips et al., 2000; Whitebook et al., 1990).

Specifically, in the *National Child Care Staffing Study* (Whitebook et al., 1990), centers with higher job turnover were characterized by classrooms with less developmentally appropriate environments and activities, and teaching staff in these programs interacted less sensitively and appropriately with children. Job turnover among staff moderately affected children's language development. There was a modest, but significant correlation between high levels of turnover and children's vocabulary building skills (r=-.29, p<.01); Howes et al., 1992; Whitebook et al., 1990

Helburn and her colleagues also demonstrated a link between staff job turnover and quality in the *Cost, Quality and Child Outcomes in Child Care Centers* study (1995). Centers with staff turnover rates of ten percent or less per year were rated significantly

higher in a combined measure of quality that included structural features (e.g., adult-child ratios, group size, and staff characteristics) and process variables (e.g., interactions between adults and children) than those centers with higher turnover. The study also found that children attending higher-quality programs, which were associated with lower turnover rates, demonstrated more advanced language and pre-math skills. These children also displayed more positive attitudes toward their child care situation and more positive self-concepts, engaged in better relations with their teachers, and demonstrated more advanced social behavior. After controlling for maternal education and ethnicity, children in higher quality programs scored from one-half to one standard deviation higher in these areas than their counterparts in poor quality classrooms. The effects of program quality were evident for children from all backgrounds, but children of low-income families were particularly influenced by the quality of their child care arrangements (Helburn, 1995).

High levels of job turnover among staff can also place the continued operation of a child care center in jeopardy or impede centers' efforts to improve quality. Nine years after the original National Child Care Staffing Study, 30 percent of the original sample of 226 centers had closed. These centers as a group had reported much higher levels of staff turnover when the original data were collected in 1988 (54 percent) than the centers that remained open in 1997 (38 percent). In the centers that later closed, 41 percent of teaching staff had been on the job for a year or less in 1988, versus 28 percent in centers that remained open (Whitebook et al., 1990, 1998). In a study tracking centers seeking to achieve NAEYC accreditation, centers successful at becoming accredited experienced less teaching staff turnover than those who sought but did not achieve accreditation. Centers achieving accreditation were assessed using the Early Childhood Environment

Rating (Harms, Clifford & Cryer, 1998), an observational measure which assesses the environment, interactions and activities within a child care program. Among accredited programs in the study those ranked good or better in quality (score of 5 or higher on the ECERS) had lower levels of teaching staff job turnover than accredited centers ranked as mediocre (score between 3 and 5 on the ECERS; Whitebook et al., 1997).

Because there is so much job turnover among staff in child care centers, many tend to see this phenomenon as entirely negative, and to think of "stability" or lack of change as positive. A center that rarely experiences turnover may be suffering from the equally serious problem of stagnation. Ultimately, the goal is to reduce both negative turnover (people leaving the work they love, when they would prefer to stay) and negative stability (people staying, even when they are "burned out" or inappropriate for the job, because they feel they have no better place to go). While turnover is typically disruptive to children and other staff, some departures may be desirable if staff are not engaged in or skilled at their jobs, unless those staff can be engaged in training or supervision which improves their work with children. Most turnover research to date, however, has looked only at overall rates, with little attention to differential turnover among staff with various skills and backgrounds (Whitebook & Bellm, 1999).

Research examining child care and other occupations suggests that compensation levels play a critical role in determining the extent of job turnover an organization or business experiences (Howes, 2002; Larson & Lakin, 1999). Repeatedly, the low wages that characterize child care employment have been identified as the strongest predictor of instability among teaching staff (Phillips, et al., 2000; Whitebook & Bellm, 1999). Researchers who have studied other occupations identify a link between a supportive

work environment and staff stability. In particular, inappropriate hires and poor working relationships with coworkers are identified as factors influencing turnover (Bloom, 1997; Greengard, 1995; Steele & Jenks, 1997). Previous child care research has primarily focused on the economic contributors to instability and has not sufficiently explored how skill levels and stability among coworkers impact job turnover. In part, previous studies were constrained by their design which focused on workers at one point in time or followed a group of centers, but did not collect information from or about staff beyond the initial visit or for more than six months (Helburn, 1995; Whitebook, et. al, 1990, 1993, 1998).

The issue of whether staff who leave their jobs remain in the child care field is also a pressing concern for the early care and education field, as it will impact the number of new hires needed to meet the demand for services. Most projections of demand are based on information about job rather than occupational turnover. For example, the U.S. Department of Labor anticipates approximately 375,000 new hires in child care centers each year between now and 2008 as a result of employment growth and the need to replace those who have left their jobs. Anticipated job growth for center-based child care workers is estimated at 33 to 39 percent between 1998 and 2008, compared to 15 percent for other occupations, in order to accommodate increased demand and staff turnover (Levine, 2001). If a greater proportion of child care teachers who leave their jobs were to remain in the field, recruitment demands would be reduced. In the absence of longitudinal research, assessing the magnitude of occupational turnover has been impossible. Yet this information, combined with data about job turnover, is needed by

policy makers and program planners to help them estimate the scope of workforce development and higher education demands in a given state or community.

The current study attempts to address these gaps in our understanding of turnover. It differs from previous efforts by focusing on a group of teaching staff and directors over a four-year period. Its goal is to identify differences in demographic, professional preparation and workplace characteristics among teaching and administrative staff who stay and leave centers over time, and to determine the extent to which those who leave centers remain in the early care and education field. Specifically, this study explores the following issues relating to turnover among child care center teaching and administrative staff.[1]

- The personal and workplace characteristics that distinguish teaching staff and directors who stay at or leave their jobs;
- The personal and workplace characteristics, including the background and stability of coworkers, that distinguish teaching staff of different skill levels who stay at or leave their jobs; and
- The extent to which teaching and administrative staff who leave their jobs also leave the field of early care and education.

Method

Sample

The current study offers a unique view of a sizeable group of child care center teaching staff (n=149) and directors (n=71) over a four year period (1996-2000). Study participants were drawn from a population of 260 teaching staff who were observed in their classrooms and interviewed by research staff about their background and jobs, and a

population of 92 directors employed at the same centers who participated in interviews focused on their own professional backgrounds and characteristics of teaching staff employed in their centers.

Center selection. The teaching staff and directors included in this sample were employed in 92 child care centers participating in a longitudinal study assessing center efforts to improve and sustain center quality over time (Whitebook et al., 1997). The centers were part of a study designed to examine NAEYC accreditation[2] as a strategy for improving center-based child care, and to explore the influence of staff qualifications and stability on efforts to improve and sustain quality. Centers from which our sample of teaching staff and directors was drawn were originally selected and visited in 1994, and then revisited in 1996 and 2000. In 1994, centers embarking on the accreditation process were selected as our target group of centers. Centers seeking accreditation (n=55) were identified through records kept by NAEYC, which were further verified by our research team. Comparison centers not seeking accreditation (n=37) were randomly selected from a list of centers compiled by local resource and referral agencies matched in terms of neighborhood income level and profit/nonprofit status to the target centers.

Centers drawn from three communities located in or near the California Silicon Valley comprised the sample. These communities included a mix of high-, middle-and low-income neighborhoods, and a variety of center-based child care programs operating on a for-profit or nonprofit basis. Most of the centers (72 percent, n=54) were operated on a nonprofit basis. Approximately three-quarters (78 percent) of operating funds for the centers came from parent fees; public subsidies constituted only a small portion of other centers' revenue. Centers included in our sample served children of varying age ranges,

but observations were conducted only in classrooms that served two-and-a-half to five year-olds. Centers serving only infants and toddlers or school-age children were excluded because they were too few in number to permit comparisons.

Selection of directors. In 1996 the directors of each of the 92 participating centers were interviewed; this group constitutes the population of directors from which our current sample was recruited.

Selection of teaching staff. Two classrooms were typically observed in each program, unless the center had only one preschool room. A total of 157 classrooms were observed in the 92 programs in 1996. Whenever possible we revisited the same classrooms and observed and interviewed the same teaching staff who had participated in the 1994 phase of the study if they were still employed at the center. In 1996, if there were new staff or a new configuration of classrooms, we followed the same procedure that we had followed in 1994. Specifically, we chose to observe and interview the head or lead teacher in each of the randomly selected preschool classrooms in the centers. Such staff typically set the tone and style for classroom activities and interactions. If a classroom had co-teachers, the teacher who assumed leadership during the visit was selected for the observation, and both teachers were interviewed. If more than one non-lead teacher or assistant teacher worked in the same classroom, we used random sampling to select assistant teachers or teachers. The 260 teaching staff interviewed from these classrooms in 1996 comprised the population from which our current sample was recruited.

Measures

Measures included interview protocols for directors and teaching staff adapted or developed for the study. The director and teaching staff interviews were adapted from measures used in the National Child Care Staffing Study (Whitebook et al., 1990) and from earlier phases of data collection. Interviews sought information from teaching staff and directors about current employment, including wages and benefits; professional preparation; demographics and family characteristics, including marital status, age, ethnicity, languages spoken, number of own children, previous public assistance history, use of child care services, and household income; and opinions about turnover, training opportunities, professional organizations, and recommendations for policy makers. Research assistants piloted the interview questions during their training sessions and during practice visits. Following the practice visits, revisions were made, and each version of the questionnaires was piloted a minimum of five times prior being finalized.

In addition, directors were asked to provide a "census" of their staff by reporting data on salaries, training and educational background for all teaching staff employed at the centers in 1996 and 2000. Teaching staff were identified by first name and last initial and birth date. These data provided a detailed picture of the entire teaching workforce of 92 child care centers in 1996, including 478 teachers, 148 assistant teachers and 46 teacher-directors, and allowed us to track changes in the entire center teaching staff workforce over a four year period. These data also allowed us to construct measures that describe the center climate with regard to educational background and stability of teaching staff described below.

Because of variations in job title, functions and pre-service requirements across settings, as well as the intertwined relationship between training and formal education, Howes (1995) and others (Cassidy, Vardell & Buell, 1995) have categorized the child care workforce in terms of background levels that combine specialized training at the college level as well as other aspects of teachers' formal education. In this study, staff with "low background" levels had 6-24 credits of college-level early childhood training. Staff with "high background" levels had a bachelor's degree and at least 24 credits of college-level early childhood training, some type of early childhood certification, or a bachelor's degree with an advanced early childhood degree or level of training. With a sample of less-educated and trained teaching staff, high and low background might be defined differently. In this study, background climate refers to the percentage of teaching staff with high background levels that are employed in a center at a given time.

The census data provided by directors made it possible for us to compare who among all teaching staff employed in 1996 remained employed at the centers in 2000. Thus we could determine the characteristics of those who had remained at and left the centers for the entire teaching workforce. Turnover climate, as used in this study, is a measure of the percentage of all teaching staff with high background levels who left or remained at a center over the four year span of the study. In the results that follow, we distinguish between characteristics of interviewed teaching staff and the full complement of their colleagues in the center by referring to interviewed and all teaching staff.

Procedures

The 260 teaching staff interviewed in 1996 as part of our study about centers seeking NAEYC accreditation were asked to provide information to permit us to contact

them in the future, and all but five provided it. After our 1996 visit, we did not contact these teachers again until 2000, at which time we sent letters saying that we would phone them shortly and would need to update their contact information. We also asked them to return a postcard to indicate whether they were at the same center where they had been employed in 1996, and if not, if they were still working in child care. For teaching staff we did not reach through our letters or initial calls, we employed several other strategies: an Internet search, contacting former co-workers, and working with the Survey Research Center at the University of California, Berkeley, which routinely locates people through a variety of databases. We conducted similar strategies for contacting directors, as well as asking professional organizations to contact directors on our behalf.

All teaching staff and directors whom we reached agreed to participate in an interview (See Table 1). We successfully reached 57 percent (n=149) of the 260 teaching staff interviewed in 1996. There were no differences between 1996 observed teaching staff that we were able to locate and those we could not find, with respect to their educational background, ethnicity or partner/marital status in 1996. There were also no differences among the centers in which they worked with regard to staff or director stability or NAEYC accreditation status. Those we were unable to locate, however, were more likely to have worked in a for-profit center when we visited, and were earning lower wages in 1996, than teaching staff we located. Specifically, twenty-one percent of those we located worked in a for-profit center, compared to 32 percent of those we were unable to locate (X^2 (1) =4.12, $p<.05$). Those we located earned, on average, $11.28 per hour, compared to $10.35 per hour for those we did not locate. ($t(255)=1.95$, $p<.05$).

We successfully reached 71 out of the 92 directors (77 percent) interviewed in 1996. There were no differences between directors we were able or unable to locate with respect to marital status, education and early childhood training, wages, staff turnover at center, or center quality in 1996.

Insert Table 1: 2000 Status of Teaching Staff and Directors Interviewed in 1996

Teaching staff and directors who remained working at their 1996 centers were interviewed in person if the center was visited again in 2000 by our research team.[3] All other participants were interviewed by phone. All participants completing the interview received a small payment to acknowledge their time and effort.

Plan of Analysis

First, we classified staff according to their current employment status in their centers as well as in the field of early childhood education. We then looked at differences among those who remained on the job and/or in the field and those who had left their centers and/or the field. Thus, we were able to explore differences between teaching staff who stayed and left their jobs and/or the field of early education over a four year period.

We then used t-tests, analysis of variance and chi-square analyses to compare the professional and demographic characteristics of teaching staff and administrative directors and to identify the factors associated with the stability and instability of personnel. We also used discriminant function analysis to predict group membership among those with different educational levels who stayed in or left centers from a set of predictors including personal, demographic, and workplace characteristics.

Results

Personal and workplace characteristics that distinguish teaching staff and directors who stay at or leave their jobs

Characteristics of teaching staff. Among the 149 teaching staff we reached and interviewed, 68 (46 percent) were still working four years later at the same center where we had observed and interviewed them in 1996. Over half (54 percent, n=81) were no longer working in the original centers when we re-contacted them in 2000. Of these, half (41 of 81) were still working in settings associated with young children (e.g., teacher in other early care and education programs, family child care provider, working in child-related agencies or as a director). The remainder (n=40) had left the child care field by 2000 (e.g., non-child related job, full-time student, retired). Those we interviewed in 2000 were more stable than the full complement of teaching staff in their centers. Three-quarters (76 percent) of all teaching staff employed in the centers in 1996 were no longer employed at the centers in 2000. Teaching staff were just as likely to leave centers accredited by NAEYC than teaching staff at non-accredited centers.

As shown in Table 2, teaching staff were overwhelmingly female and most-likely married or living with a partner. The majority of staff (69 percent) were Caucasian; 13 percent of teaching staff were Latino or Hispanic, seven percent Asian or Pacific Islander, 3.4 percent African American, 3.4 percent mixed-ethnicity and 3.4 percent of staff reported being of another-ethnicity. Native American/Alaskan comprised the remainder of teaching staff (less than one percent). The majority of teaching staff were in their 40's with median annual household income between $50,000 and $59,999 in 2000.

Thirty percent of all staff reported being fluent in another language in addition to English although only 22 percent used that language to communicate with families and children in the classroom. Approximately one quarter of staff held second jobs in 1996 and 2000. "Self-sufficiency" is a composite variable for teaching staff based on the number and ages of their children, number of adults contributing to (and size of) household income, and the minimum wage that heads of working families need to meet their basic needs, without public subsidies or private assistance (Pearce, 1996). Approximately one-third of staff who stayed or left their center and one-quarter of staff who left the field did not meet self sufficiency standards for their county and family size.

The demographic profiles of interviewed teaching staff who stayed or left their center of the child care field were remarkably similar. With respect to gender, ethnicity or living with a partner or spouse, there were no differences among the three groups of teaching staff. We did find group differences with respect to age. Teaching staff who left their centers but remained in the child care field were younger on average (M=41 years) than those who stayed (M=47 years old; $F(2,146)=4.25$, $p < .05$). Teaching staff who left the child care field were least likely to report being a prior or current recipient of public assistance (χ^2 (2) =8.31, $p<.05$).

Insert Table 2: Demographic Characteristics of 1996 Observed Teaching Staff: Left the Field, Left the Center, Stayed at the Center

---

With respect to professional preparation, we found that about half of the teachers in our sample earned their BA degree or higher and more than half completed a

practicum in early childhood as part of their training. In 1996, staff averaged 11.5 years in the child care field and 5.7 years at their center. Almost half of all teaching staff belonged to a professional organization. Less than half of all teaching staff received health benefits or a pension through their job. Teachers, on average, earned $11.28 per hour in 1996.

The professional characteristics of interviewed teaching staff who left their center, left the child care field, and those who stayed differed along a few dimensions (see Table 3). There were no significant differences among the groups with respect to the percent of staff who participated in an early childhood practicum as part of their training or average educational levels. Teaching staff did differ with respect to their tenure in the field and at their center and with respect to professional affiliation. Teaching staff who stayed at their centers in 2000 reported longer tenure at their center in 1996 than teaching staff who left the child care field by 2000 and teaching staff who left their center but remained in the child care field ($F(2,141)=6.52$, $p<.01$). Teaching staff who stayed at their centers in 2000 reported longer tenure in the child care field in 1996 than teaching staff who left the field by 2000 ($F(2,141)=4.74$, $p<.05$). Stayers also reported more tenure in the field in 2000 than teaching staff who left the field ($F(2,102)=3.05$, $p=.05$). This may be, in part, a reflection age differences between the groups. With regard to professional affiliation, teaching staff who stayed at their center and staff who left their center but remained in the field were more likely to belong to a professional organization than staff who left in the field (χ^2 $(2)=14.25$, $p<.01$).

We also found pension and wages differences among teaching staff who stayed, left their center, or left the child care field. Teaching staff who stayed at their center were

more likely to receive pension benefits from their center in 2000 compared with teaching staff who left their center but stayed in the field (χ^2 (2)=8.61, p<.05). Teaching staff who remained at their centers were paid higher wages in 1996 than those who left their center and those who left the field (F(2,142)=8.08, p<.001). For current wages, teaching staff who left the child care field earned more on average than teaching staff who left their center but remained in the field (F(2,124)=3.67, p<.05). There were no differences among the three groups with respect to receiving health benefits from their center in 1996.

Insert Table 3: Professional Characteristics of 1996 Observed Teaching Staff: Left the Field, Left the Center, Stayed at the Center

---

Characteristics of directors. Director turnover was also high. Among the 71 directors who comprised the current sample, 45 continued to work at their 1996 centers, and 26 had left their original centers. Forty percent (30 of 75) of the centers still in operation in 2000 had a new director since 1996, and two-thirds of these centers (n=20) reported having two or more directors in the last four years. The demographic and professional profile of directors who stayed and left their programs was remarkably similar. There were no significant differences between directors who left and those that stayed, with respect to demographic characteristics such as age, gender, marital or partner status, median household income, or history of receiving public support. Directors who left their programs were more likely to be people of color than those that remained (χ^2 (1)=5.68, p<.05).

With respect to professional background, including education, early childhood training, tenure in the field or in the program, and affiliation with a professional organization, directors who left and stayed were not distinguishable. The directors we interviewed in 2000 were well-educated and well-trained in early childhood education. Approximately three-quarters of the directors (77 percent) had completed a four-year degree; approximately half (49 percent) had post-baccalaureate coursework or degrees in early childhood education; and 71 percent had participated in a supervised practicum to prepare for work with young children. On average, directors had worked at their centers for slightly more than eight years, and had been employed in the field of early care and education for approximately 18 years. Over 90 percent had previously worked as child care teachers, for an average of more than ten years.

Workplace characteristics for teaching staff and directors. Centers that paid higher wages to directors and to teaching staff were better able to retain both categories of workers. Among our sample of interviewed teaching staff working at the centers in 1996, those no longer on the job in 2000 across all job titles earned significantly less per hour than those who remained on the job ($t(208) = 3.82$, $p < .001$). For example, teachers who remained on the job earned $15.76 in 1996, compared to $13.11 for those who left.

Even though their qualifications were similar, directors who were no longer on the job in 2000 earned significantly less per hour ($14.47) in 1996 than those who remained on the job ($17.27) ($t(75) = 2.81$, $p < .01$). This difference amounted to more than $5,000 per year for full-time directors. Directors who left also worked in programs that paid lower average wages in 1996 to all teachers ($12.21 per hour) than centers in which directors remained ($14.86 per hour) ($t(58) = 2,00$, $p < .05$). Wages for all assistant

teachers, however, were not significantly different between centers that retained or lost their directors.

Job turnover among all teachers over the four years of the study was lower in programs where the director remained on the job (66 percent) than in programs where the director left (83 percent; $t(73)=-2.68$, $p.009$). There were no differences in turnover among all assistant teachers related to director stability.

Personal and workplace characteristics that distinguish teachers of different skill levels who stay at or leave their jobs

Our finding that better wages significantly influenced whether teachers and directors remained on the job was consistent with previous child care research (Helburn, 1995; Whitebook et al., 1990). We were also interested in exploring the impact of staff educational background and turnover on who left and who stayed in a center over time. To do this, we performed a series of discriminant analyses. Discriminant analyses are used to predict membership in two or more mutually exclusive groups. We examined different individual and job characteristics that distinguish among four groups of interviewed teachers:

- highly-trained teachers who remained on the job;
- highly-trained teachers who left the job;
- less-trained teachers who stayed; and
- less-trained teachers who left.

We tested a series of variables that have been associated in prior research with turnover and/or have been hypothesized to influence it. Specifically, we performed a series of discriminant function analyses to determine whether wages, benefits, working

conditions and center organizational characteristics, as well as individual professional and demographic characteristics, differentiated group membership for interviewed teaching staff (Helburn, 1995; Kontos, et al., 1995; Levine, 2001; Phillips, et al., 2000; Whitebook & Bellm, 1999; Whitebook, et. al., 1990). See Table 4 for a list of the variables tested. Table 5 lists all relevant variables and the correlation between each variable and function. Functions are similar to a regression. Function 1 accounts for a percentage of the variance in our four groups. Function 2 accounts for a portion of the variance after the variance attributed to Function 1 is accounted for.

Insert Table 4: Variables Tested to Discriminate Teaching Staff of Different Educational Levels Who Left or Remained on the Job.

Of all these variables, wages, staff background and turnover climate, membership in a professional organization, pension, health coverage and tenure in child care were the only significant predictors identified from the series of discriminant function analyses. These seven variables were then selected for another discriminant function analysis, the results of which are reported in Table 5.

Insert Table 5: Discriminant Function Analyses of Variables Identified with Stability and Turnover Among Interviewed Teachers

---

We found among our interviewed sample that highly-trained teachers were more likely to leave their jobs if they earned lower wages, worked in a climate with less

stability of highly-trained co-workers, experienced a change in director, and/or worked with a greater percentage of teaching staff with less than a bachelor's degree and with limited specialized, college-level training in early childhood education (Whitebook et al., 1997). Membership in a professional organization also discriminated who left and who stayed.

Because we had data for all teaching staff regarding wages, turnover climate, background climate and director turnover, we selected these variables for another discriminant function analysis to test whether they distinguished among the full complement of teaching staff with different backgrounds who stayed or left their jobs. We found that for all teaching staff, highly-trained teachers were more likely to leave their jobs if they earned lower wages, worked in a climate with less stability of highly-trained co-workers, experienced a change in director and worked with a greater percentage of teaching staff who did not have a bachelor's degree. Highly-trained teaching staff who stayed earned $3.00 more per hour than highly-trained teaching staff who left (see Table 6).

Insert Table 6: Discriminant Function Analyses of Variables Identified with Stability and Turnover Among Teaching Staff with Different Educational Levels.

The relation between job and occupational turnover

When teaching staff leave their centers, only half continue to work in child care. Fifty-one percent of former interviewed teaching staff (41 of 81) were still working in settings associated with young children when we contacted them in 2000. Of these, 83

percent were teachers in other early care and education programs, and 10 percent had established their own family child care businesses or were working as nannies. The remaining seven percent were working in child related agencies or as directors. One-third of former teachers accepting jobs in new centers had worked at centers that closed between 1996 and 2000. (See Table 7) On average, teachers who stayed in child care were not earning more than their colleagues who had remained at those centers.

Insert Table 7: Where Teachers Go When They Leave a Center

Teachers no longer in the child care field were found working in a wide variety of occupations including high tech industries, retail, and other human services. Several had started their own businesses. Some wanted to be their own boss. Others sought better pay and benefits. On average, those working in non-child care-related industries earned significantly higher wages ($18.40 per hour) than those who accepted new child care jobs ($14.24 per hour; $t(28)=-2.07$, $p<.05$). Some made their choices because of family considerations or because they "fell into a good situation."

When directors leave their centers, half leave the field of early care and education. Thirty-nine percent of those who left accepted positions as directors or assistant directors at different programs, and 11 percent were employed in child care agencies, such as a resource and referral agencies or as teachers in other centers. The remaining were either retired or deceased (18 percent), staying at home with children (18 percent), or employed in non-child care related fields (14 percent).

Discussion

Our study contributes to previous understanding of turnover in child care centers by distinguishing between job and occupational turnover, and by tracking a sizeable group of staff over an extended period of time. Not unexpectedly, we found high levels of instability among interviewed teachers as well as all teaching staff working in their centers. While directors as a group were more stable than teaching staff, the impact of their departure on center operations and staff morale may be just as, if not more, disruptive, since their function within the center is to provide overall leadership and guidance. The high rate of director job turnover documented in this study underscores the pervasive instability among all positions within the center-based workforce.

The group of centers from which our longitudinal sample of interviewed teaching staff and directors were drawn includes many programs that were accredited by NAEYC and/or rated high in quality using the nationally recognized Early Childhood Environment Rating Scale (Harms et al., 1998). Nationally, approximately 15 percent of centers were rated high in quality, and as many as one-sixth have been rated as harmful to children (Helburn, 1995). Twenty-five percent of the centers from which our sample was drawn, however, were rated "good" in overall quality at the time of our visits in 1996, and none were rated poor in quality. Because higher-quality programs are associated with higher wages, lower turnover, and better-qualified staff, we would expect turnover among staff in our sample to be lower than what would be found in most communities. Therefore, our findings from this sample of relatively high-quality centers may not be representative of teaching and administrative staff in other communities, or among centers that represent a greater range of quality.

Indeed, the job and occupational turnover rates reported here may fall well below those found in other communities. That fact, coupled with information that teaching staff and directors who left the centers were as likely to be well-trained as those who remained at their jobs and that approximately half of those who left their jobs did not continue to work in child care centers, suggests that staffing problems in the field of early care and education may be more severe than has been previously recognized. Efforts to build a skilled and stable workforce compete with pressures that draw people away from turnover negatively affected their ability to do their jobs, and for some, this contributed to their decision to leave their current employment or the field altogether. Many talked about how turnover created more work for them and spoke of related problems with staff: child ratios and substitutes. Nearly half of the centers (48 percent) reported openings for one or more teacher positions, and 41 percent of centers reported vacancies lasting six weeks or more. Improving wages was believed by the vast majority of teachers and directors as essential to stemming turnover.

As our findings indicate, multi-faceted benefits related to both recruitment and retention of staff can result from paying higher wages. Better pay enables a center to attract individuals who are better-trained; centers paying above the median wage employed nearly twice as many BA level teachers (51 percent) as those paying wages below the median (27 percent). Paying higher wages also help centers to create and sustain a staffing pool of higher caliber teaching and administrative staff who in turn promote stability among other qualified staff. Low pay leads not only to job, but also occupational turnover. Our findings extend previous research by revealing that the characteristics and stability of the teaching staff as a whole—as well as the consistency of

the director—influenced whether highly-trained teachers remained on the job. In centers where highly-trained staff worked with other highly-trained teachers who remained on the job, they themselves were more likely to stay. And wages were the strongest indicator of which centers attracted highly-trained staff. Highly-trained teaching staff who remained on the job earned between $3,000 and $6,000, depending on educational level, more per year than comparably educated highly-trained staff who left.

But those at the highest level of pay, education and experience who remained at their centers remained at risk of leaving due to the overall low pay in child care centers. They earned at least $10,000 less per year than the *average* California K-12 teacher with equivalent education and $6, 000 less than *starting* teachers (American Federation of Teachers, 2001). In fact, many of the directors we interviewed lamented the loss of teaching and administrative staff to elementary school jobs. While only seven percent of the former teaching staff that we could locate were working in K-12 settings, we do not know if the former teachers and directors that we could not locate made different career choices than those that we were able to reach. Given the high proportion of former teachers in our sample with bachelor's degrees, it is quite possible that some sought employment in elementary schools. Those we interviewed working in elementary schools were pleased to have been recruited, and they found the autonomy and shorter hours, as well as the pay, appealing. Many interviewed teachers with college degrees continuing to work in child care mentioned a desire to become an elementary school teacher in the future.

It is difficult to tease apart the influence of higher wages, higher status, shorter work-year, and greater professional recognition, among other things, that distinguish

early care and education and elementary school teaching positions. As currently structured, employment with older children carries not only greater financial reward, but more respect and acknowledgment. Even within early care and education programs, the influence of wages per se is confounded because those programs paying higher wages typically offer greater benefits, hire better trained staff, and experience greater overall stability which greatly influence the day –to-day experience on the job. It is likely, if early care and education teaching and administrative staff were paid commensurate with their education and training and comparably to other human services fields that wages per se would play a less significant role in the quality of care and staffing.

These findings suggest several directions for future research and public policy development as well as staff training. Knowing that some degree of turnover will always take place in child care centers, training of directors and staff might focus on how it can be managed most effectively to help children, staff and parent cope with change and so that the disruption caused by staff changes might be eased. In addition, practitioners can learn how to reduce turnover by focusing on their compensation packages, hiring procedures, substitute policies and work environments (Whitebook and Bellm, 1999).

More longitudinal research of the child care workforce is needed with larger and more diverse samples. We need to know not only the magnitude of job and occupational turnover in the field, but also whether similar variables distinguish whether highly-trained teaching staff remain on the job across settings and staff with varying characteristics. This information is important for assessing center practices and higher education outreach, as well as for planning initiatives to improve stability and professional development among those working in all types of child care. Currently, attempts are

underway in California to develop methodology and sampling frames for a biannual survey of all licensed child care center staff and home-based providers (Whitebook et al., 2002).

Implication for policy

In the policy arena, more initiatives are needed that help to stabilize the workforce. In the last several years, driven in part by a robust economy and a shortage of trained workers, many states, among them California, Illinois, New York, North Carolina, Rhode Island, Washington and Wisconsin, have initiated or expanded publicly-funded programs focused on building a more skilled and stable child care workforce. Initiatives are also being developed in Connecticut, Idaho, Kansas, Missouri and Pennsylvania. In some states, local governmental entities are also establishing programs. In California, for example, the availability of tobacco tax revenues at the county level, as well as other state revenues, has stimulated over 40 counties to create some type of monetary retention incentive for child care workers based on their level of education and tenure. Dane and other counties in Wisconsin are using "pass-through" federal dollars to support compensation initiatives (Whitebook & Eichberg, 2002).

In spite of the current economic downturn, support for these initiatives remains strong, in part because they appear to be stimulating many in the workforce to pursue more training and education (Bridges & Carlat, 2003). It is unclear, however, whether these programs will successfully weather the budget deficits and shrinking federal dollars facing most states. Evaluations should be conducted of these efforts to understand whether those participating in these initiatives are in fact remaining on the job or in the field for longer periods. This will help policy makers understand the features of initiatives

that successfully retain members of the child care workforce and assist them in upgrading their skills. Knowledge about how to best stem job and occupational turnover in early childhood programs is critical to any efforts to improve the quality of services for young children or to expand programs, such as publicly-supported, universal prekindergarten, now of great interest to many in business and government (Committee on Economic Development, 2000).

Still garnering investments in early care and education services in general, and staff compensation and professional development in particular, remains a significant challenge. Conflicting political opinions about the role of government, family and cultural values, as well as economic and market constraints often override scientific evidence and professional opinions about the needs of young children (Stevens, 1999). In addition, the absence of an organized early care and education workforce means that quality issues, including wage and working conditions, often are overshadowed by other pressing needs in the field for more affordable and accessible services for families at the point at which policies are made. Building greater public understanding of what early education and care looks like, how it requires well-trained practitioners, and how it benefits children and society at large will be necessary to securing high quality early childhood education jobs and services.

References

American Federation of Teachers. (2001). *State rankings by 1998-1999 average teacher salary adjusted by the 1998 AFT interstate cost-of-living index*. Washington, DC: American Federation of Teachers, Department of Research.

Bloom, D. (1997). *After AFDC welfare-to-work choices and challenges for states*. New York and San Francisco: Manpower Demonstration Research.

Bloom, P. J. (1997, March). Decision-making influence: Who has it? Who wants it? *Child Care Information Exchange*, 6-14.

Bridges, M., & Carlet, J. (2003). *Training and retaining early care and education staff: Bay Area child care retention incentive programs: Evaluation.* Year One Progress Report, 2001-2002. Policy Brief 03-2, February, 2003. University of California at Berkeley: PACE.

Bureau of Labor Statistics. (1998). *State occupational employment and wage data.* Washington, DC: U.S. Department of Labor.

Bureau of Labor Statistics. (2003). *Occupational projections and training data. 2002-2003 Edition*. Washington, DC: U.S. Department of Labor.

Cassidy, D. J., Vardell, R., & Buell, M. J. (1998). If you don't know where you are, how can you get where you're going? A contextual examination of professional development in the early childhood field. *Child and Youth Care Forum, 24(3),151-168.*

Committee on Economic Development. (2002). *Preschool for all: Investing in a Just and Productive Society.* New York and Washington, DC: Committee in Economic Development.

Cost Quality and Child Outcomes Study Team. (1995). *Cost, quality, and child outcomes in child care centers. (Public Report).* Denver, CO: University of Colorado at Denver, Department of Economics, Center for Research in Economic and Social Policy.

Greengard, S. (1995). Leveraging a low-wage work force. *Personnel Journal, 74(1),* 90-102.

Harms, T., & Clifford, R. M. (1980). *Early Childhood Environment Rating Scale.* New York: Teachers College Press.

Helburn, S. W. (Ed.). (1995). *Cost, quality and child outcomes in child care centers. Technical report.* Denver: University of Colorado at Denver, Department of Economics, Center for Research in Economic and Social Policy.

Howes, C. (1995). Reconceptualizing the early childhood work force. In S. W. Helburn (Ed.), *Cost, quality, and child outcomes in child care centers. Technical report.* Denver: University of Colorado at Denver, Department of Economics, Center for Research in Economic and Social Policy, 159-170.

Howes, C. (2002). *The impact of a large wage increase on IHSS Homecare Workers in San Francisco County.* Paper prepared under the auspices of the Institute for Labor and the Economy, University of California, Berkeley.

Howes, C. & Hamilton, C. (1993). The changing experience of child care: Changes in teachers and in teacher-child relationships and children's social competence with peer. *Early Childhood Research Quarterly, 8,* 15-32.

Howes, C., Phillips, D. A., & Whitebook, M. (1992). Thresholds of quality: Implications for the social development of children in center-based child care. *Child*

Development, 63, 449-460.

Kontos, S., Howes, C., Shinn, M., & Galinsky, E. (1995). *Quality in family child care and relative care.* New York: Teachers College Press.

Larson, S. & Lakin, C. (1999). Longitudinal study of recruitment and retention in small community homes supporting persons with developmental disabilities. *Mental Retardation, 37 (4),* 267-280.

Levine, L. (2001). *The child care workforce.* Washington, DC: Congressional Research Services. Order Code #RL31118.

Pearce, D. (1996). *The self-sufficiency standard for California*. Washington, DC: Wider Opportunities for Women.

Phillips, D., Mekos, D., Scarr, S., McCartney, K., & Abbott-Shin, M. (2000). Within and beyond the classroom door: Assessing quality in child care centers. *Early Childhood Research Quarterly, 15(4),* 475-496.

Shonkoff, J. P., & Phillips, D. A. (Eds.). (2000). *From neurons to neighborhoods: The science of early childhood development.* Washington, DC: Children's Defense Fund.

Steele, F., & Jenks, S. (1997). *The feel of the work place.* Reading, MA: Addison Wesley.

Stevens, C. (1999). Child care licensing regulations. *Early Childhood Research Quarterly, 14 (3),* 335-337.

Whitebook, M., & Bellm, D. (1999). *Taking on turnover: An action guide for child care center teachers and directors.* Washington, DC: Center for the Child Care Workforce.

Whitebook, M., Howes, C., & Phillips, D. (1990). *The national child care staffing study. Final report: Who cares? Child care teachers and the quality of care in America.* Washington, DC: Center for the Child Care Workforce.

Whitebook, M., Howes, C., & Phillips, D. (1993). *The national child care staffing study revisited: Four years in the life of center-based child care.* Washington, DC: Center for the Child Care Workforce.

Whitebook, M., Howes, C., & Phillips, D. (1998). *Worthy work, unlivable wages: The national child care staffing study 1988-1997.* Washington, DC: Center for the Child Care Workforce.

Whitebook, M., & Phillips, D. (2000). *Who Leaves? Who Stays: A Longitudinal Study of the Alameda County Workforce.* Proposal submitted to The Administration for Children and Families, Department of Health and Human Services. Unpublished paper.

Whitebook, M., Sakai, L., Gerber, E., & Howes, C. (2001). *Then and now: Changes in child care staffing, 1994-2000.* Washington, DC: Center for the Child Care Workforce.

Whitebook, M., Sakai, L., & Howes, C. (1997). *NAEYC accreditation as a strategy for improving child care quality: An assessment. Final report.* Washington, DC: Center for the Child Care Workforce.

Whitebook, M., Sakai, L., Voisin, I., Duff, B., Waters Boots, S., Burton, A., et al. (2002). *California Child Care Workforce Study. Family Child Care Providers and Assistants in Alameda County.* Washington, DC: Center for the Child Care Workforce.

Footnotes

[1] This study uses the following definitions for child care center staff:

- Teaching Staff are persons who provide direct care to children, including teacher-directors, teachers, assistant teachers and aides.
- Assistant Teachers are persons working under the supervision of a teacher; this term also includes teacher aides.
- Teachers are persons in charge of a group or classroom of children, often with staff supervisory responsibilities. This category includes "head" or "lead" teachers.
- Teacher-directors are persons with both teaching and administrative responsibilities.
- Directors are the administrative heads of child care centers, having an overview of the center operation including information on center finances, staff salaries, turnover, and related matters. In some cases, the director may also have classroom responsibilities along with administrative tasks.

[2] NAEYC established accreditation ready 20 years ago in response to the lack of national standards for early childhood practice and to promote efforts to improve quality within centers (Galinsky, 1990). NAEYC now accredits over 8,000 programs throughout the country, with a similar number engaged in the process to become accredited. In recent years, millions of public and private dollars have been targeted toward helping centers achieve NAEYC accreditation, and 18 states now provide differential reimbursement rates to NAEYC-accredited centers (Gormley & Lucas, 2000).

[3] In 2000, due to financial constraints, we observed only about half of the centers that had been visited in earlier phases of the study. For details about the selection of these centers, see Whitebook, Sakai, Gerber and Howes, 2001.

Table 1

2000 Status of Teaching and Administrative Staff Interviewed in 1996

1996 Sample	2000 Status		
	Unable to locate	No longer employed at centers in 2000	Employed at centers in 2000
260 Teaching Staff Interviewed	111	81	68
92 Directors Interviewed	21	26	45

Table 2

Demographic Characteristics of 1996 Observed Teaching Staff: Left the Field, Left the Center, Stayed at the Center

	Teaching Staff who left the Field by 2000 LEFT THE FIELD (n=40)	Teaching Staff who left their 1996 Centers but Remain in the Child Care Field LEFT THEIR CENTER (n=41)	Teaching Staff Continuing to Work at the Center in 2000 STAYERS (n=68)	F, χ^2
Percent Female	97 percent	95 percent	93 percent	ns
Ethnicity				
Caucasian	77 percent	59 percent	71 percent	ns
People of Color	23 percent	41 percent	29 percent	
Average Age in 2000	43 years	41 years	47 years	F(2,146)=4.25, p<.05
Median Household Income Range in 2000	$60,000-64,999	$50,000-59,999	$50,000-59,999	ns
Hold Second Job in 1996	23 percent	26 percent	22 percent	ns
	27 percent	24 percent	24 percent	ns

	Teaching Staff who left the Field by 2000 LEFT THE FIELD (n=40)	Teaching Staff who left their 1996 Centers but Remain in the Child Care Field LEFT THEIR CENTER (n=41)	Teaching Staff Continuing to Work at the Center in 2000 STAYERS (n=68)	F, χ^2
Previous or Current Recipient of Public Assistance	5 percent	29 percent	24 percent	$\chi^2(2)=8.31$, $p<.05$

Table 3

Professional Characteristics of 1996 Observed Teaching Staff: Left the Field, Left the Center, Stayed at the Center

	Teaching Staff who left the Field by 2000 LEFT THE FIELD (n=40)	Teaching Staff who left their 1996 Centers but Remain in the Child Care Field LEFT THEIR CENTER (n=41)	Teaching Staff Continuing to Work at the Center in 2000 STAYERS (n=68)	F, χ^2
Educational background	60 percent with at least a BA degree	44 percent with at least a BA degree	42 percent with at least a BA degree	ns
Early Childhood Training	58 percent completed a practicum	69 percent completed a practicum	59 percent completed a practicum	ns
Average Tenure in the Field, 1996	9.4 years	10.8 years	13.1 years	$\underline{F}(2,141)=6.52$, $\underline{p}<.01$
Average Tenure in the Field, 2000	11.7 years	14.5 years	16.8 years	$\underline{F}(2,102)=3.05$, $\underline{p}=.05$
Average Tenure at the Center, 1996	4.7 years	4.0 years	7.2 years	$\underline{F}(2,141)=6.52$, $\underline{p}<.01$

	Teaching Staff who left the Field by 2000 LEFT THE FIELD (n=40)	Teaching Staff who left their 1996 Centers but Remain in the Child Care Field LEFT THEIR CENTER (n=41)	Teaching Staff Continuing to Work at the Center in 2000 STAYERS (n=68)	F, χ^2
Percent Belonging to at least one Professional Organization, 1996	39 percent	47 percent	44 percent	ns
Percent Belonging to at least one Professional Organization, 2000	17 percent	44 percent	54 percent	$\chi^2(2)=14.25$, $p<.01$
Health Benefits through job	32 percent	47 percent	49 percent	ns
Pension Benefits, 1996	31 percent	49 percent	49 percent	Ns

	Teaching Staff who left the Field by 2000 LEFT THE FIELD (n=40)	Teaching Staff who left their 1996 Centers but Remain in the Child Care Field LEFT THEIR CENTER (n=41)	Teaching Staff Continuing to Work at the Center in 2000 STAYERS (n=68)	F, χ^2
Pension Benefits, 2000	31 percent	49 percent	65 percent	$\chi^2(2)=8.61$, $p<.05$
Average Wage, 1996	$10.00	$10.51	$12.43	$F(2,142)=8.08$, $p<.001$
Average Wage, 2000	$18.40	$14.24	$16.00	$F(2,124)=3.67$, $p<.05$

Table 4

Variables Tested to Discriminate Teaching Staff of Different Educational Levels Who Left or Remained on the Job

Working Conditions	• Related to center polices: written contracts, salary schedules, job descriptions, grievance procedures, paid breaks, paid lunch, staff lounge. • Involving payment for duties and wage adjustments: paid staff and parent meetings, on-side and off-side training or workshops, preparation time, compensation for overtime work, periodic merit or cost-of-living increases.
Benefits Package	• Paid sick, holiday and vacation days; pension plan or other retirement option; reduced-fee child care; and paid unpaid maternity leave.
Personal Characteristics	• Related to demographics and family composition: age, ethnicity, number of children, marital status, household income, and whether the person held a second job (gender not included because 96 percent of staff were female). • Related to professional characteristics: early childhood education and training, membership in professional organizations, and involvement in continuing education or efforts to upgrade the early childhood field; tenure in the child

	care field, in the center, and in current position.
Center Characteristics	• Auspices, income area, size, hours of operation. • Relation to accreditation—achieved, sought or did not seek—and level of support for centers that sought and/or achieved accreditation.
Background Climate	• Percentage low-background staff. • Percentage high-background staff.
Turnover Climate	• Same or new director. • Percentage of high-background staff who remain on the job. • Percentage of high-background staff who leave the job. • Percentage of low-background staff who remain on the job. • Percentage of low-background staff who leave the job. • Overall turnover between 1996 and 2000.

Table 5

Discriminant Function Analyses of Variables Identified with Stability and Turnover Among Interviewed Teachers

Predictor Variable	Correlations of Predictor Variables with Discriminant Functions		Univ. F^{++}	Highly Trained Stay Mean (SD)	Low Trained Stay Mean (SD)
	Function 1	Function 2			
Interviewed Teachers					
Background Climate	.88^{+}	-.31	22.28***	.63 (.25)	.31 (.23)
Teacher Wages	.67^{+}	.21	13.86***	$14.39 ($4.50)	$11.68 ($3.03)
Turnover Climate	.70^{+}	.56	16.36***	.33 (.29)	.10 (.13)
Professional Affiliation	.32^{+}	-.04	2.82*	.60 (.50)	.38 (.49)
Pension	.12	.10	2.69*	.40 (.50)	.54 (.51)
Tenure in Child Care	.14	.01	2.74*	10.70 (5.72)	12.51 (5.64)
Health Care	.19	-.12	2.37	.44 (.51)	.51 (.51)

$^{*}p<.05$, $^{***}p<.0001$; $^{+}$Denotes largest absolute correlation between each variable and any discriminant function.

$^{++}$For interviewed teachers, df=3,184

Function 1 eigenvalue=.45; function 2 eigenvalue=.13.

Function 1 accounts for 68 percent of the variance; function 2 accounts for an additional 19 percent of the variance.

Table 6

Discriminant Function Analyses of Variables Identified with Stability and Turnover Among Teaching Staff with Different Educational Levels.

Predictor Variable	Correlations Of Predictor Variables with Discriminant Functions		Univ. F[++]	Highly-Trained Stay Mean (SD)	Less-Trained Leave Mean (SD)	Less-Trained Stay Mean (SD)	Highly Trained Leave Mean (SD)
	Function 1	Function 2					
All Teaching Staff							
Teaching Staff Wages	.76[+]	-.05	45.14[***]	$15.03 ($5.24)	$9.37 ($3.02)	$10.84 ($3.36)	$11.93 ($4.68)
Background Climate	.73[+]	.51	52.52[***]	.55 (.25)	.30 (.23)	.31 (.25)	.52 (.21)
Turnover Climate	.72[+]	-.38	46.99[***]	.55 (.23)	.30 (.09)	.31 (.12)	.52 (.11)
Director Turnover	-.34	.25	13.23[***]	.15 (.36)	.51 (.50)	.29 (.45)	.41 (.49)

[*] $p<.05$, [***] $p<.0001$; [+] Denotes largest absolute correlation between each variable and any discriminant function.

[++] For all teaching staff, df=3,629.

Function 1 eigenvalue=.37; function 2 eigenvalue=.20.

Function 1 accounts for 64 percent of the variance, function 2 accounts for an additional 34 percent of the variance.

Table 7

Where Teaching Staff Go When They Leave a Center

Teacher, different child care center	42%
Non-child-related	21%
Not currently employed, at home with children	15%
Elementary school teacher	7%
Family child care	4%
Attend school full-time	4%
Other child care agency, such as resource and referral	2.5%
Retired	2.5%
Nanny	1%
Director, different center	1%