

## Quality and Teacher Turnover Related to a Childcare Workforce Development Initiative

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Research consistently identifies specialised training and education of teachers as one of the strongest predictors of child care quality, and subsequently more positive child outcomes (Howes *et al.*, 1992; Cost, Quality, and Child Outcomes Study Team, 1995; Kontos *et al.*, 1995; NICHD Early Child Care Research Network, 1996; Vandell and Wolfe, 2000). Unfortunately, studies of the early childhood workforce in the United States reveal that the quality of early childhood programs is often compromised by low levels of teacher education and high staff turnover (Cummings, 1980; Whitebook *et al.*, 1989).

The reality is that child care employment offers low wages, few job benefits, and limited opportunities for professional advancement (Whitebook, 1999). In fact, the child care profession ranks among the nineteen lowest paid fields from the 700+ occupations surveyed by the Occupational Employment Statistics program in the U.S. Bureau of Labor Statistics. These data also indicate that the median hourly wage for a preschool teacher is ten dollars and sixty-seven cents, and for a child care worker, is eight dollars and thirty-seven cents (Center for the Child Care Workforce, 2004).

Findings from two evaluations (North Carolina's Child Care WAGES Project and the Bay Area Child-Care Retention Incentive Evaluation) suggest that financial incentives can strengthen the child care workforce via reduced turnover and increased educational attainment. In particular, North Carolina reported annual turnover rates of sixteen percent for their WAGES participants, compared to thirty-one percent for the state as a whole. Moreover, eighteen percent of the incentive-receiving providers moved "up a level" on North Carolina's early childhood career ladder because of ongoing educational attainment (Child Care Services Association, n.d.). Likewise, evaluation data of the Bay Area incentive program indicate that the strongest predictor of participant retention was the amount of incentive received, particularly for those providers with a two- or four-year degree (Hamre *et al.*, 2003).

### **Missouri's Workforce Incentive Program (WIN)**

The privately and publicly funded WIN Initiative, one part of Missouri's early childhood career development system (Opportunities in a Professional Education Network, 2001), is a research-based project designed to increase workforce recruitment and retention through the provision of bi-annual incentive payments. The amount of the cash incentive is based on the individual's educational attainment and continued employment in a licensed early childhood setting. In addition to increasing workforce stability, WIN requires

early childhood professionals (teachers and administrators) who have low levels of education (high school diploma, Child Development Associate Credential (CDA) or nine college credit hours) to complete six hours of college credit annually. WIN is a pilot initiative located in seven non-metropolitan counties and one large metropolitan area.

To be eligible to participate in WIN, early childhood professionals who work in licensed centre- and home-based programs must work at least thirty hours per week and nine months per year. In addition, they must work with children from birth through eight years of age, remain in the same program, and make less than \$42,000 per year for twelve-month employment.

In each of the past three years, approximately 700 WIN participants received incentive payments in the three pilot areas. Of these, approximately 100 participants each year increased one level on the educational ladder by taking college credits.

### **WIN Evaluation Project**

As part of the WIN funding requirement, a team of researchers at the Center for Family Policy and Research (University of Missouri) conducted a longitudinal study to assess the effectiveness of the WIN project. In part, the study was designed to evaluate the impact of the WIN project on the early childhood workforce and on the quality of early childhood programs.

To address the overall research objectives, the evaluation included two tiers:

- Tier One focused on workforce development and included all of the participants who consented to participate in the study. Tier One consisted of WIN participants and a comparison group of early childhood professionals who were not participating in WIN;
- Tier Two focused on program quality and included a small group of Tier One evaluation participants. Early childhood professionals for both groups were recruited from state-licensed child care centres and home-based child care programs.

Two of the research study questions were:

- 1 Does WIN participation increase workforce stability (i.e., decrease staff turnover)?
- 2 Does WIN participation increase the quality of the classroom/family child care program?

### **Participants**

An examination of the Tier One participant demographics indicates the two groups of early childhood professionals differed by educational level and by geographical location.

More of the WIN participants had a college degree than the comparison sample. The majority of the WIN teachers and directors who had a college degree lived in the metropolitan area. For the comparison group, the majority of the teachers held a high school diploma in both the metro and non-metro regions. The average years of experience in early childhood programs was about nine years for both groups.

At the beginning of the study, the mean age of WIN participants was thirty-nine years (N=469); the comparison group mean age was thirty-seven years (N=349). Ninety-seven percent of the teachers and directors in both groups were women. The majority of the teachers and directors self-identified as White (sixty-seven percent of WIN and ninety-five percent of comparison teachers and administrators); the vast majority of the remaining participants reported being African American.

### **Measures**

To collect data on workforce development, participant demographic information was drawn from the Professional Achievement and Recognition System (PARS) enrolment form and updated every six months prior to payment. More extensive information was updated via follow-up telephone interviews conducted every four months for all evaluation participants.

To collect the program quality data, standardized instruments were used. The Early Childhood Environment Rating Scale – Revised (ECERS-R) (Harms *et al.*, 1998) was used to assess program quality in centre-based classrooms. The Family Daycare Rating Scale (FDCRS) (Harms *et al.*, 1989) was used in home-based programs. Trained data collectors conducted program observations. Inter-observer reliability data were gathered during training. The ECERS-R averaged eighty-six percent for exact agreement and ninety-five percent for agreement within one point. For the FDCRS, inter-observer reliability averaged ninety-five percent for exact agreement and ninety-seven percent for within one point. Reliability checks were conducted approximately every six months. In Autumn 2002, percent agreement for exact scores on the ECERS-R and FDCRS was eighty-eight and eighty-nine percent respectively, and for within one point, was ninety-six for both instruments. The next check was in early 2003 and the inter-observer reliability scores were approximately the same for the ECERS-R and slightly lower for the FDCRS.

### **Procedures**

The pilot counties were divided into two groups: WIN pilot counties and comparison counties. In the WIN pilot counties, every individual who completed the PARS enrolment form and who was subsequently selected to participate in WIN, was sent a consent form and a Workforce Questionnaire. WIN participants who returned signed consent forms and workforce questionnaires were considered to be in Tier One of the study.

In the comparison counties, early childhood professionals from a total of 108 centres and seventy homes agreed to participate in Tier One. University researchers contacted the early childhood professionals to inform them of the study and those who agreed to participate were sent Workforce Questionnaires. Follow-up phone calls and letters were sent to participants to encourage them to return the questionnaires. After several attempts, no further efforts were made to contact individuals who did not return their questionnaires.

WIN and comparison county participants in Tier One participated in five follow-up telephone interviews conducted approximately four months apart. The first follow-up call occurred about four months after the participant's initial Workforce Questionnaire was completed. Program quality observations were collected at three time points for the WIN pilot group and at two time points for the comparison group.

### Results and Discussion

*Question 1: Does WIN participation increase workforce stability (i.e., decrease staff turnover)?*

This research question was examined from several perspectives, including education level and geographic location. Averaging across the two-year study, the turnover rate was ten-and-a-half percent for teachers and directors participating in WIN and twenty-three percent for comparison group professionals. The turnover rates for both years were similar. We were also interested to find out if teachers with degrees (Associate's, Bachelor's, or Master's) left their programs at a different rate than non-degreed teachers and the possible effect WIN would have on teachers with different levels of education. Tables 1 and 2 show the data for each year. When taking an average of the two years, non-degreed teachers and directors in the comparison sites left their programs significantly more frequently (22.4%) than the teachers and directors in WIN (9.9%). Degreed participants showed the same significant trend: 11.3% for WIN participants and 22.6% for the comparison group. Therefore, these data support the fact that the workforce turnover rate will decrease with incentive-based programs for teachers and administrators, regardless of educational levels.

**Table 1: Program Turnover by Educational Level (Year One)**

	Non-degree***	Degree***
WIN	8.9%	10.9%
N=469 [46; 9.8%]	(24/268)	(22/201)
COMPARISON	20.9%	26.2%
N=339 [77; 22.7%]	(53/255)	(22/84)

\* $p < .05$ , \*\* $p < .01$ , \*\*\*  $p < .001$

There are missing data for comparison group: inactive=4, active=6

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**Table 2: Program Turnover by Educational Level (Year Two)**

	Non-degree <sup>***</sup>	Degree
WIN	11.1%	11.7%
N=414 [47; 11.4%]	(26/235)	(21/179)
COMPARISON	24.3%	18.3%
N=252 [57; 22.6%]	(44/181)	(13/71)

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

There are missing data for comparison group: active=5

Another comparison we wanted to consider was whether there might be a difference depending on location for those teachers and directors with degrees—metropolitan vs. non-metropolitan areas. For degreed professionals, those residing in non-metropolitan communities in the comparison sites left their programs more frequently (20.7%—average of two years) than those receiving WIN payments (12.9%—average of two years). Teachers and directors residing in metropolitan areas were significantly more likely to remain in their programs. There was a turnover rate of 9.9% for WIN participants and 24.8% for the comparison group. Tables 3 and 4 indicate the turnover rates for degreed teachers and directors by geographical area for years one and two separately.

**Table 3: Program Turnover by Region for Degreed Teachers and Directors (Year One)**

	Non-metro	Metro <sup>***</sup>
WIN	13.4%	8.7%
N=201 [22; 10.9%]	(13/97)	(9/104)
COMPARISON	22.4%	31.4%
N=84 [22; 26.9%]	(11/49)	(11/35)

$p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

**Table 4: Program Turnover by Region for Degreed Teachers and Directors (Year Two)**

	Non-metro	Metro
WIN	12.3%	11.2%
N=179 [21; 11.7%]	(10/81)	(11/98)
COMPARISON	18.4%	18.2%
N=71 [13; 18.3%]	(7/38)	(6/33)

$p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

The literature supports the notion that teachers with higher levels of education are more likely to provide high quality education for the children than those teachers with less education. It is the degreed teachers whom we need to keep in the profession.

*Question 2: Does WIN participation increase the quality of the classroom/family child care program?*

Early childhood program quality was assessed at three time points for the WIN pilot group and at two time points for the comparison group. Quality ratings were based on the ECERS-R and FDCRS, with scales ranging from one to seven points indicating varying levels of quality: 1.0=inadequate; 3.0=minimal; 5.0=good; 7.0=excellent.

For WIN sites (Table 5), there were time effects on child care environmental quality ratings in centre-based classrooms. Among centre-based programs in non-metropolitan areas, the quality scores significantly improved between time one and times two and three. The centre-based quality in the metropolitan areas decreased at time two observations and increased at time three observations. Even though there was a significant gain from time two to time three, the decrease in the quality score at time two was responsible for the significant finding. Although the programs did not improve over time (from time one to three) they did maintain an average quality score above the "good" level (an ECERS score of 5.0 or higher). Among centre-based programs in metropolitan areas, time one observations showed higher quality than centres in non-metropolitan areas. However, at time two and time three observations, centres in metropolitan areas had lower quality scores than non-metropolitan area programs. One should note, however, that at time three, the average for all centre-based WIN programs were in the good to excellent range of quality.

There were no significant differences for time effect for family child care homes in the WIN counties (ranging from 4.38 to 5.41) or for family child care homes in the comparison counties (ranging from 3.84 to 5.24).

**Table 5: Quality Changes by Region and Time in WIN Sites**

WIN	TIME 1	TIME 2	TIME 3	TIME EFFECT
<i>CENTER</i>				
Non-metro	4.67 (1.36)	5.64 (.85)	5.62 (1.04)	F=5.84**
Metro	5.55 (.66)	4.98 (.84)	5.45 (.58)	F=4.89**

Among programs that had an increase in program quality, a closer examination of teacher education levels was conducted to determine if there was a relation between high levels of education and higher program quality scores. In this analysis, a significant difference existed between the WIN and comparison groups. Sixty-six percent of degreed teachers in WIN significantly improved their quality scores, as compared to fifty percent in the comparison group.

Additional research that assesses the amount of incentive it takes to keep degreed professionals, specifically, in the early childhood profession is needed, since we know the majority of the literature shows a positive relationship between teacher education and program quality. And, of course, another important finding in the literature is the link between high quality programs and better child outcomes. The data presented in this study are encouraging—providing monetary incentives to early childhood professionals significantly decreased turnover and provides some evidence of its relationship to quality, although more research is needed in this area.

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