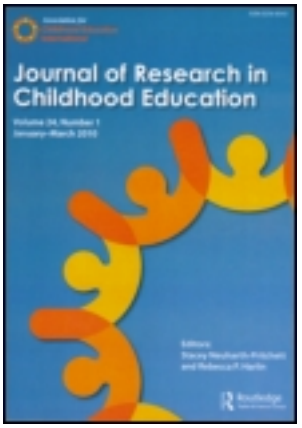

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Reexamining Quality in Early Childhood Education: Exploring the Relationship Between the Organizational Climate and the Classroom

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Reexamining Quality in Early Childhood Education: Exploring the Relationship Between the Organizational Climate and the Classroom

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This study examined the relationship between the organizational climate, the work environment for preschool teachers, and classroom quality among a sample of 37 centers serving low-income families in a large northeastern city. Although a robust body of literature indicates the importance of classroom quality for child outcomes, especially among low-income children, little research has explored whether school-level factors contribute to classroom quality in preschool centers. A significant association between overall organizational climate and classroom quality was found such that classrooms located in centers rated as more positive in terms of overall organizational climate (e.g., collegiality, professional growth, supervisor support, clarity, reward system, decision-making, goal consensus, task orientation, physical setting, and innovativeness) and relational organizational climate (e.g., ratings of teachers' relationships with their colleagues and leadership) were rated higher in regard to classroom quality. Interestingly, a stronger relationship between the organizational climate and classroom quality was found among teachers with more experience and less education. Implications for early childhood education are discussed.

Keywords: organizational climate, early childhood education, work environment, quality

A robust body of literature demonstrates positive associations between preschool children's current and long-term social and academic development and their experiences in high-quality preschools, with especially strong associations among children from low-income families (National Institute of Child Health and Human Development Early Child Care Research Network, 2000; National Research Council, 2001; Schweinhart, 2005). For example, several major syntheses of typical preschool program effects on low-income children report that children enrolled in high-quality preschools evidence achievement and school readiness skills scores approximately one half of a standard deviation higher than peers not in preschool and/or in low-quality programs (National Research Council, 2001; Scarr & McCartney, 1988). "High-quality" early childhood

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education classrooms are defined by structural indicators (e.g., small group size, low student-teacher ratios, and high levels of teacher education) (Scarr, Eisenberg, & Deater-Deckard, 1994) and process indicators (e.g., positive teacher-child interactions and relationships, and developmentally appropriate activities/materials and curriculum) (Phillips, Mekos, Scarr, McCartney, & Abbott-Shim, 2000). In general, associations between process indicators and child outcomes are especially strong (National Research Council, 2001).

Despite significant amounts of research documenting the importance of process quality for child outcomes, very few studies have examined whether school characteristics are related to process quality in the classroom. A classroom is nested within a school or early childhood center, comprised of fellow teachers, administrators, and the physical setting. Although classroom and school characteristics are generally viewed as static and isolated, they are interconnected and interdependent and must be researched as such (Pianta & Walsh, 1996). Only once all the factors that are related to process quality are known can researchers, practitioners, and policymakers work toward improving and sustaining high-quality learning environments for children.

Past research indicates that the organizational climate of the school is related to classroom process quality (Bloom, 1989; Hoy, Tarter, & Kottkamp, 1991; Iutcovich, Fiene, Johnson, Koppel, & Langan, 1997; Lower & Cassidy, 2007). The *organizational climate* is defined as the distinct and unique atmosphere, hence the weather metaphor, that characterizes a setting. Thus, an organizational climate theory can be thought of in terms of a social-ecological model of behavior that stresses the interactive nature between people and their environments (Bloom, 2010). The organizational climate includes the collective perceptions, attitudes, beliefs, and values of the individuals in a particular work environment, and the quality of their relationships with one another (Bloom, Hentschel, & Bella, 2010).

Organizational climate research in industrial settings suggests that the climate influences the behavior and attitudes of the members of the organization (Forehand & Gilmer, 1964). There is a substantial body of evidence, outside the field of education, suggesting that people with more positive feelings about their work and employer tend to be more productive (Weakliem & Frenkel, 2006). For example, a recent meta-analysis of 312 organizational climate research studies with a combined sample of more than 54,400 employees across various industries found a significant, moderate correlation between employees' satisfaction with the work climate and their job performance (Judge, Thoreson, Bono, & Patton, 2001).

A small number of researchers have examined organizational climate in schools. Bloom (2010) identified 10 dimensions of the organizational climate, or work environment (collegiality, professional growth, supervisor support, clarity, reward system, decision-making, goal consensus, task orientation, physical setting, and innovativeness). Furthermore, Hoy et al. (1991) identified subscales related to relationships between individuals within the school: relationships with leadership (e.g., supportive, directive, and restrictive) and relationships with other teachers (e.g., collegial, intimate, and disengaged). This research suggests that organizational climate in schools is best characterized by an overall measure of organizational climate *and* a measure of relational climate. In schools, the organizational climate likely affects the behaviors and attitudes of teachers, which in turn influences classroom quality and child outcomes. For example, Hoy et al., in their research on elementary schools, found that teachers' experiences of openness, collegiality, professionalism, trust, commitment, and cooperation were associated with the health of the work environment (synonymous with organizational climate), which was related to the schools' productivity and effectiveness and ultimately student achievement. Furthermore, in a

study of 780 teachers and more than 19,500 students at 159 elementary schools, researchers found that 72% of the variance in mean school achievement was explained by organizational climate variables in comparison to only about 10% of the total variance explained by composition variables (e.g., income and race) (Brookover et al., 1978). These findings suggest that the organizational climate of schools has a significant impact on classroom quality and children's learning and achievement.

A small body of intervention research also demonstrates the potentially significant impact that organizational climate can have on classroom quality. Several intervention projects have provided professional development training for preschool center directors and emphasized the school context in their training. One project, a 16-month Early Childhood Leadership Training Program, covered all components of the child care center director's role (e.g., personal and professional knowledge, child development, early childhood programming, organizational theory, leadership style, legal and fiscal issues, parent and community relations, public policy, advocacy, research, and technology) with an emphasis on organizational climate (Bloom & Sheerer, 1992). At the conclusion of this training, observed classroom process quality increased an average of 33 points in centers in which the leadership was involved in the training program (from 174–207 out of a total 232), as compared with a 3-point mean decrease for the comparison group not involved in the training (from 173–170 out of 232), a statistically significant difference. Staff in the intervention centers also rated the organizational climate higher at the end of the training on nine of the 10 dimensions of the early childhood organizational climate (collegiality, professional growth, supervisor support, clarity, reward system, decision-making, goal consensus, task orientation, physical setting, and innovativeness). The simultaneous increases in the organizational climate and classroom quality suggest that improvements in the organizational climate were related to those in classroom quality and may even have caused the increase in classroom quality, as the training was focused on improving the organizational climate, not directly on improving classroom quality.

Similarly, a second project, Taking Charge of Change, provided 110 contact hours of training over a 10-month period to 285 preschool directors. This training focused on organizational climate and leadership skills, such as interpersonal communication, group facilitation (e.g., conducting effective staff meetings), decision-making (e.g., participative management), staff development, creating a vision, and increasing advocacy efforts (Bloom & Bella, 2005). Data collected from 285 individuals in 11 cohorts over 12 years found modest improvements in the centers' organizational climate and classroom process quality (Bloom & Bella, 2005). Directors who participated in a 2-year graduate program showed even more substantial increases on classroom process quality ratings for classrooms at their centers and organizational climate ratings than the participants in the 10-month program. The more substantial increases for directors with more training over a longer period of time provides evidence to underscore the prevailing wisdom that sustained training results in more significant increases to program quality, as well as the belief that changes to organizational systems may need time to take hold before lasting changes in the quality of the organizational climate and teaching performance changes can be realized (Bloom & Bella, 2005).

In sum, previous research indicates potentially important associations between the organizational climate and classroom quality. However, little research has been conducted on the role of the organizational climate in the process quality of center-based preschool classrooms. This study tested the hypothesis that a relationship exists between the organizational climate

and classroom process quality in community-based preschool centers (independent from public school buildings). Prior to this study, only three studies have directly examined the relationship between classroom quality and the organizational climate in early childhood centers. One study of 103 centers in Illinois reported a positive, significant association between classroom quality and the organizational climate (Bloom, 1989). A second study of 60 child care centers in Pennsylvania found significant, positive associations between classroom quality and five dimensions of the early childhood organizational climate (professional growth, clarity, reward system, goal consensus, and task orientation) (Iutcovich et al., 1997). A third study of 225 teachers at 26 preschool centers in North Carolina also found a significant positive relationship between classroom quality and the early childhood organizational climate (Lower & Cassidy, 2007). All three of these studies included a cursory examination of the relationship between classroom quality and organizational climate among the examination of many other constructs. The examination of the relationship between classroom quality and organizational climate has not been the main focus of any existing research.

Although these three previous studies of organizational climate and classroom quality indicate important associations between the two constructs in preschool centers, associations between these two factors have not been examined in models that account for other factors related to classroom process quality. More specifically, in these past studies, director experience, director education, teacher education, teacher experience, and teacher-child ratio were not included in statistical models. However, each of these variables has been shown to be a significant predictor of classroom process quality and/or organizational climate.

For example, in one study, the director's level of formal education was found to be the strongest predictor of program quality and organizational climate, with experience as the second strongest predictor of program quality (Bloom, 1989). In another study, the director's level of experience was found to be highly associated with the overall quality of the preschool center (Phillips, Scarr, & McCartney, 1987), and children in programs with more experienced directors scored higher on measures of language and sociability (Kontos & Fiene, 1987).

In multiple other studies, teachers' education has been found to be a significant predictor of classroom process quality (Early et al., 2006; Early et al. 2007; Pianta et al., 2005). Teachers' quantity of experience also has been found to have a statistically significant negative relationship with classroom process quality (Kontos, Howes, Shinn, & Galinsky, 1995; Wilcox-Herzog & Ward, 2004). Teacher-child ratio, a measure of structural quality, is also associated with process quality as measured by better teacher-child interactions, less restrictive teacher behavior, and children engaging in more complex language interactions and play (National Research Council, 2001). The National Child Care Staffing Study also found better adult-child ratios to be associated with more sensitive and responsive teachers (Whitebook, Howes, & Phillip, 1989).

It is possible, therefore, that previous research demonstrating associations between organizational climate and classroom process quality reflected the effects of unmeasured variables. Due to likely intercorrelations between the organizational climate and teacher and director variables, as well structural aspects of classroom quality, this study controls for the effects of multiple teacher, director, and structural factors when examining the relationship between the organizational climate and classroom process quality. Additional research examining the influences of organizational climate and the relationship between organizational climate and classroom process quality in preschool centers is needed.

THIS STUDY

This study aims to examine the relationships between classroom process quality and the organizational climate, overall and relational, in preschool centers serving low-income children. This study contributes to the literature in four main ways. First, a relatively extensive number of variables were included in the statistical models to account for any potential omitted-variable bias.

Second, this study is unique in its approach of assessing two different aspects of the organizational climate for early childhood teachers by using two different measures of the organizational climate. The first assessment tool measures the overall organizational climate, using 10 dimensions: collegiality, professional growth, supervisor support, clarity, reward system, decision-making, goal consensus, task orientation, physical setting, and innovativeness. The second measure looks more specifically at adult relationships within the organizational climate (e.g., relationships between teaching staff, and the relationship between the teachers and their leadership). These two distinct measures of the organizational climate have not previously been used simultaneously. It is hypothesized that they may influence classroom quality in different and interesting ways. For example, preschool centers with high relational organizational climate (e.g., collegiality among teachers, and strong relationships with the director) might still have low classroom quality if other dimensions of the overall organizational climate (e.g., clarity, reward system, physical environment) are not strong as well.

Third, this study examines whether the relationship between the organizational climate and classroom quality is different for teachers with different levels of education and different levels of experience. Research on attrition of new teachers and incredibly high turnover rates among preschool teachers, 25% to 50% annually (Barnett, 2003; Saluja, Early, & Clifford, 2002), suggests that support is needed to create environments in which new teachers can be nurtured (Billingsley, Carlson, & Klein, 2004; Gold, 1996). Early career teachers who report problems with aspects of the organizational climate (such as low support from their leadership and colleagues) are particularly susceptible to stress and job dissatisfaction, often leading to job changing (different school) or leaving the field of early childhood education completely (Billingsley, 2002; Billingsley, Pyecha, Smith-Davis, Murray, & Hendricks, 1995; Cross & Billingsley, 1994; Gersten, Keating, Yovanoff, & Harniss, 2001).

Last, this study is the first to focus on preschool centers serving low-income children. As one of the strongest findings in education research is the negative association between poverty in early childhood and long-term academic achievement (Patterson, Kupersmidt, & Vaden, 1990) and the effects of high-quality early care and education on child outcomes are especially strong among low-income children (Caughy, DiPietro, & Strobino, 1994; Helburn, Culkin, & Morris, 1995; Pierson, Walker, & Tivnan, 1984), the examination of the organizational climate as it relates to classroom quality in preschool centers serving exclusively low-income children deserves attention.

These aims are examined through three research questions:

1. Is there an association between the organizational climate and classroom process quality?
2. Do different associations exist between classroom process quality and the overall organizational climate vs. the relational organizational climate?
3. Do associations between the overall organizational climate and relational organizational climate and process quality vary as a function of teacher education and experience?

METHOD

Participants

Programs and directors. One hundred community-based preschool centers (non-public-school based) that had at least two classrooms and served low-income children in a large urban northeast city were invited to participate. Forty directors, who had been directors for at least 8 months, agreed to participate. One randomly selected classroom teacher at each center was invited to participate. Thirty-seven teachers agreed, completed all teacher measures, and were observed by trained assessors. Center demographics are detailed in Table 1. Director demographics are detailed in Table 2. In addition, the directors in the sample were all older than age 35, and 89% were women. All but two of the directors had been classroom teachers. More than 90% of the directors had a master's degree or above. Only 13% of the directors had taken no education courses, and only 15% of the directors had taken no administration courses.

Teachers and classrooms. Of the 37 participating teachers, 97% of them were female and 78% were older than age 35. The teachers taught an average of 5 years at their current center (range 1–20 years), taught at another preschool for an average of 3 years, and taught other ages for an average of 6 years. Ninety-one percent of the teachers who taught children of other ages taught early childhood (kindergarten–3rd grade). Sixty-seven percent of the teachers had earned a master's degree or were halfway to earning their master's degree. An additional 14% had earned

TABLE 1
Demographics of the Centers in the Sample ($N = 37$)

	Minimum	*Maximum*	*M*
Number of classrooms per center	2	11	5
Number of full-time staff	3	16	9
Number of part-time staff	0	9	4
Years teachers employed at center	3	25	12.5
Years center has served children	8	60	35
Teacher: Student ratio	1 : 3	1 : 11	1 : 7

TABLE 2
Demographics of the Directors and Teachers in the Sample ($N = 37$)

	Minimum	*Maximum*	*M*
Length as director at current center	8 months	27 years	9 years
Years directors at other centers	0	27	4
Years directors taught preschool	0	35	13
Years directors taught other ages	0	25	6
Director education	16 years (BA)	19 years (PhD)	17.97 (master's is 18)
Teacher education	14 years (associate's)	18 years (master's)	16.77 (bachelor's is 16)

a bachelor's degree. Eighty-nine percent of the teachers reported having taken more than four education courses, and 58% reported they had taken more than 10 education courses.

The classrooms in the sample enrolled an average of 18 children (range 9–28). Thirty-three percent of the classrooms were mostly 3-year-olds, 25% were mixed ages (3's & 4's), and 42% were classrooms of mostly 4-year-olds. Ninety-two percent of the classrooms had at least one child who was a second language learner or bilingual. The classes had an average of two full-time and one part-time staff, with an average teacher-student ratio of 1:7.

Measures

Classroom quality. Researchers have suggested that direct observation of preschool classrooms, as opposed to self-reporting, is imperative to provide accurate assessments of classroom quality. The Early Childhood Environment Rating Scale–Revised (ECERS-R) by Harms, Clifford, and Cryer (2005), the most widely used tool for observation in preschool classrooms, consists of 43 items measuring a wide variety of quality-related processes that occur in preschool classrooms (Dahlberg, Moss, & Pence, 1999). Ratings are based on at least a 2-hour observation. The authors report that the ECERS-R is reliable at the indicator and item level, as well as at the level of the total score (University of North Carolina, Frank Porter Graham Child Development Institute, 2010).

A factor analysis of the ECERS-R identified two factors that accounted for 69% of the variance in total scores. High internal consistency scores, a moderate correlation between the factors, and a strong correlation between the combined factor scales and the overall ECERS-R scores were reported. This suggested that these 16 items could serve as a proxy for the larger scale (Cassidy, Hestenes, Hegde, Hestenes, & Mims, 2005). This study employed the use of these 16 items, plus the six items of the Parents & Staff section, and the one item excluded from the two-factor model in the Language-Reasoning Section. In total, this study assessed classrooms on 23 of the 43 ECERS-R items, focusing on process quality and not simply environmental factors (such as furniture, room arrangement, space for gross motor play, and such personal care routines as meals, nap, toileting, health, and safety practices).

In this study, interobserver reliability was established through training prior to data collection. Reliability with five raters was established through two to four practice observations conducted in preschool classrooms not associated with the study. Inter-rater reliability was 86% within 1 point of the master coder.

Organizational climate surveys. The Early Childhood Work Environment Survey (ECWES) (Bloom, 2010) assesses the overall organizational climate along 10 dimensions: collegiality, professional growth, supervisor support, clarity, reward system, decision-making, goal consensus, task orientation, physical setting, and innovativeness. Teachers select the descriptive statements (10 in total, some positive and some negative) for each dimension. The total of all 10 dimensions provides an overall rating of the organizational climate. Programs on which the measure was normed included centers serving low-income populations, some accredited by the National Association for the Education of Young Children and most nonaccredited, suggesting that this measure is appropriate for the sample in this study. The measure demonstrated internal consistency (.93) as well as discriminant validity between subscales ($.33 < r <$

.53), suggesting that the dimensions measure different, though related, characteristics of early childhood organizations. The measure demonstrated reliability and validity (Bloom, 2010).

The Organizational Climate Description Questionnaire for Elementary Schools (OCDQ-RE) was the second measure used, a 42-item instrument with six subscales that measure three aspects of school leadership—supportive, directive, and restrictive—and three dimensions of teacher interactions—collegial, intimate, and disengaged behavior. This measure focuses on the relationships that affect organizational climate. All the scales have high reliability coefficients (ranging from .78 to .94) (Hoy et al., 1991).

The OCDQ-RE was created by revising the original Organizational Climate Description Questionnaire (Halpin & Croft, 1962). This process included evaluating current items, pilot testing new items, examining the conceptual validity of items, reducing the number of items, and identifying the factor structure of the revised measure. Last, the final version of the revised measure was field tested to assess the stability of its factor structure and its validity (Hoy et al., 1991). Although it was designed for elementary school, the author of the measure was confident that it would be reliable and valid for preschool settings as well (Hoy, personal communication, 2007).

The OCDQ-RE and the ECWES were included in all analyses, as their intercorrelations were moderate ($r = .63$) and each evaluated different aspects of organizational climate. The ECWES measures the overall organizational climate structures, policies, and practices more broadly, whereas the OCDQ-RE measures aspects of relational organizational climate (e.g., leadership and collegiality). Therefore, it is hypothesized that these two measures will provide different information about the organizational climate of the preschool centers in the sample. All survey and observation data were coded and entered blind to the researcher.

Demographic surveys. Directors and teachers also completed demographic surveys to provide details about structural factors to be controlled for in analyses (e.g., education level, experience, size of program, student-teacher ratio, gender, and age).

Analyses

First, descriptive statistics were analyzed for all variables (e.g., overall process quality, overall organizational climate, relational organizational climate, and demographic data). Examination of these statistics determined whether enough variability existed in the outcome variable, the ECERS-R score, and continuous predictor variables, the ECWES and the OCDQ-RE, to warrant regression analysis. Simple correlations between each of the variables were then examined. This allowed for determination of whether associations existed between the outcome variable and any of the predictor variables, and also whether associations existed between the predictors, potentially indicating multicollinearity.

Then, a taxonomy of multiple regression models was fit with quality of classroom scores as the outcome and organizational climate scores as the primary predictors. In all models, multiple control variables were included. The control variables were teacher education, director experience, director education, and teacher-child ratio. Including these control variables allowed for disentanglement of the effects of organizational climate on classroom quality from other variables associated with classroom quality. Model 1 included only the control variables. Model 2 contained the control variables plus a variable for relational organizational climate as assessed

on the OCDQ-RE. Model 3 included the control variables plus a variable for overall organizational climate as assessed by the ECWES. Using this strategy, the stability of variables across model specifications could be examined. Model 4, the full model, included the control variables plus variables for relational and overall organizational climate as assessed on both the OCDQ and ECWES. Changes in the beta coefficients for relational and overall organizational climate between Models 2 and 3, respectively, and Model 4 indicated the extent to which each of these aspects of the organizational climate contributed separately to classroom climate. Interactions between teacher education and experience and each of the organizational climate ratings were entered in Model 4. Interactions were tested in separate models to avoid problems of multicollinearity. This last set of analyses explored whether the organizational climate mattered more for some teachers than others to examine whether specific aspects of the organizational climate matter most in terms of supporting teachers. When adding variables to the model, the *t* statistics associated with the added variables were evaluated to examine whether significant associations existed between each of the variables and classroom quality, controlling for the effects of the other variables in the model. Lastly, two teachers were selected, based on demographic data as case studies to help illustrate the statistical findings through more qualitative descriptions of these teachers' experiences. These teachers, though similar in demographics, had very different quality classrooms and described very different organizational climates. These profiles allowed for more in-depth examination of differences across teachers with similar demographics (e.g., education level and years of teaching experience) on specific items of classroom process quality, providing a richer picture of the relationship between the organizational climate and classroom process quality.

RESULTS

Descriptive Statistics

Means and standard deviations for continuous variables related to the organizational climate and classroom quality are presented in Table 3 and bivariate correlations are located in Table 4.

Associations were found between the preschool organizational climate and classroom quality. Specifically, significant correlations were found between total classroom quality as measured by the ECERS-R and the overall organizational climate as measured by the ECWES ($r = .35$,

TABLE 3
Descriptive Statistics ($N = 37$)

Measures	*Minimum*	*Maximum*	*M*	*SD*
Total classroom quality (ECERS-R) (measure range 23–151)	58	146	121	19
Work environment (ECWES) (measure range 0–100)	37	90	69	15
Relational organizational climate (OCDQ-RE) (measure range –52 to +82)	2	52	27	11

Note. ECERS-R = Early Childhood Environment Rating Scale–Revised; ECWES = Early Childhood Work Environment Survey; OCDQ-RE = Organizational Climate Description Questionnaire for Elementary Schools.

TABLE 4
Bivariate Correlation Table

	Director education	*Director experience*	*Teacher education*	*Teacher experience*	*Teacher-child ratio*	*OCDQ-RE total*	*ECWES total*	*ECERS-R total*
Director education	—							
Director experience	.24	—						
Teacher education	−.11	.08	—					
Teacher experience	−.01	.31	.24	—				
Teacher-child ratio	.16	.36*	−.14	−.13	—			
OCDQ-RE total	.26	−.28	.11	.02	−.22	—		
ECWES total	.04	−.33*	.10	−.08	−.25	.63***	—	
ECERS-R total	.36*	−.26	.01	−.21	−.15	.32*	.35*	—

Note. ECERS-R = Early Childhood Environment Rating Scale–Revised; ECWES = Early Childhood Work Environment Survey; OCDQ-RE = Organizational Climate Description Questionnaire for Elementary Schools.

$p < .05$). This suggests that a relationship exists between classroom quality and the overall organizational climate. Programs with better organizational climate for teachers also had higher quality classrooms. In addition, a significant association was identified between total classroom quality on the ECERS-R and relational organizational climate as measured by the OCDQ-RE ($r = .32$, $p < .05$).

Regression models. When controlling for teacher education, director experience, director education, and teacher-child ratio, significant associations between organizational climate (as rated on the ECWES and OCDQ-RE) and total classroom quality were found such that both organizational climate measures were associated with variance in total classroom quality (ECWES: $\beta = .44$, $p < .05$; OCDQ-RE: $\beta = .54$, $p < .05$) reported in Table 5. Furthermore, in the full model (Model 4) variables for both overall organizational climate (ECWES: $\beta = .27$, $p < .05$; OCDQ-RE: $\beta = .15$, $p = .05$) and relational climate were associated with classroom quality, indicating that these aspects of climate have independent and significant effects on total classroom quality. However, the beta coefficients for the OCDQ-RE and ECWES decreased from Model 2 and Model 3 to Model 4, suggesting that these measures assess some similar aspects of the school environment, as indicated by their significant association in the bivariate correlation table. In addition, examination of the beta coefficients in Model 4 indicates that in regard to standardized effects, the effects of relational organizational climate on classroom quality were almost twice that of the standardized effect for teacher-child ratio, whereas the effects for overall climate were 3 times that for teacher-child ratio. These findings translate as further evidence of the strength of the relationship between the organizational climate and classroom quality in preschool centers serving low-income children.

TABLE 5
Multiple Regression Models

Predictor	*Model 1*	*Model 2*	*Model 3*	*Model 4*
Director education	.36*	.27	.33*	.65∼
Director experience	−.18	−.09	−.14	.02
Teacher education	.07	.04	.05	.25
Teacher experience	−.15	−.12	−.17	−.07
Teacher-child ratio	−.13	−.12	−.13	−.09
OCDQ-RE total		.54*		.15*
ECWES total			.44*	.27*

Note. ECWES = Early Childhood Work Environment Survey; OCDQ-RE = Organizational Climate Description Questionnaire for Elementary Schools.
R^2 (total) = .23, $F(5, 31) = 3.10$, $p < .05$
R^2 (total) = .25, $F(6, 25) = 3.82$, $p < .05$
R^2 (total) = .29, $F(6, 25) = 4.00$, $p < .05$
R^2 (total) = .31, $F(75, 30) = 4.82$, $p = .05$

Several significant interactions were identified. Specifically, an interaction between years of teaching experience and organizational climate as measured by the ECWES was found. A stronger relationship existed between the organizational climate scores and classroom quality among teachers who had been teaching longer ($\beta = .12$, $p < .05$). In addition, a significant interaction between the education level of the teachers and the organizational climate as measured by the ECWES was identified. The more education teachers had, the less the organizational climate was related to their classroom quality ($\beta = -.40$, $p < .05$).

Teacher "profiles." Both teachers profiled have an associate's degree plus some college credits toward a bachelor's degree and have been teaching for many years (e.g., Teacher A has been teaching 18 years, and Teacher B has been teaching 10 years). The variation in classroom quality noted among these two teachers provides interesting case study examples of the relationship between organizational climate and classroom process quality. See Table 6 for Profiled Teacher Results on Three Measures. Teacher A's classroom quality was the lowest of the sample (ECERS-R: 2.5). Likewise, her ratings of the overall organizational climate (ECWES: 41) and the relational climate (OCDQ-RE: 13) were more than 1 standard deviation below the mean. This is an example of a teacher with substantial experience and limited higher education whose

TABLE 6
Profiled Teachers' Results on Three Measures

Measures	*Teacher A*	*Teacher B*
Classroom quality (ECERS-R)	2.5 (below "minimal")	5.7 (above "good")
Overall work environment (ECWES)	41	87
Relational climate (OCDQ-RE)	13	41

Note. ECERS-R = Early Childhood Environment Rating Scale–Revised; ECWES = Early Childhood Work Environment Survey; OCDQ-RE = Organizational Climate Description Questionnaire for Elementary Schools.

organizational climate was strongly related to her classroom quality. Teacher B, with similar background characteristics, had a much higher classroom quality (ECERS-R: 5.7), which was above the mean, and her ratings of the organizational climate and relational climate were both greater than 1 standard deviation above the mean (ECWES: 87; OCDQ-RE: 41).

A closer look at some of the items of the overall organizational climate and relational environment measures, as well as the classroom quality measure, helps to provide a more detailed profile of these teachers' experiences. Table 7 provides statements from the relational environment measure (OCDQ-RE) and the ratings of Teacher A and Teacher B. Each item was rated on a scale from 1 (*rarely occurs*), 2 (*sometimes occurs*), 3 (*often occurs*), to 4 (*very frequently occurs*). Some statements are written negatively, so a high item rating does not necessarily imply better quality. The scores from these negative statements are subtracted, rather than added, when total quality is calculated.

The differences in these teachers' reported experiences give a portrayal of the relational climate at these centers and illustrate the relationship between the climate and classroom quality. Teacher A, who had the lowest classroom quality in the sample, felt that staff meetings were a waste of time, and her director did not listen to or accept teachers' suggestions and did not treat teachers as equals. Similarly, Teacher A describes the lack of collegiality at this school in that teachers only sometimes help and support each other, rarely provide strong social supports for each other, and rarely respect the professional competence of their colleagues.

Teacher B described a polar opposite relational organizational climate. Teacher B found staff meetings to be valuable and described a director who listens to and accepts teachers' suggestions and goes out of her way to show appreciation to teachers. At the same time, Teacher B describes the collegiality at this school in that teachers provide strong social supports for each other, and respect the professional competence of their colleagues.

TABLE 7
Sampling of Profiled Teachers' Organizational Climate Description Questionnaire for Elementary Schools Responses

#	*Statement*	*Teacher A*	*Teacher B*
Leadership			
3	Staff meetings are useless.	4 (VFO)	1 (RO)
16	My Director listens to and accepts teachers' suggestions.	1 (RO)	4 (VFO)
17	My Director schedules work for the teachers.	4 (VFO)	1 (RO)
22	My Director looks out for the personal welfare of teachers.	1 (RO)	4 (VFO)
23	My Director treats teachers as equals.	1 (RO)	4 (VFO)
30	My Director closely checks classroom (teacher's) activities.	1 (RO)	4 (VFO)
42	My Director goes out of her/his way to show appreciation to teachers.	1 (RO)	4 (VFO)
Collegiality			
2	Teachers' closest friends are other teachers at this school.	1 (RO)	3 (O)
19	Teachers help and support each other.	2 (SO)	4 (VFO)
20	Teachers have fun socializing together during school time.	2 (SO)	4 (VFO)
27	Teachers have parties for each other.	1 (RO)	4 (VFO)
38	Teachers provide strong social support for colleagues.	1 (RO)	4 (VFO)
40	Teachers respect the professional competence of their colleagues.	1 (RO)	4 (VFO)

Note. VFO = Very Frequently Occurs; RO = Rarely Occurs; O = Often Occurs; SO = Sometimes Occurs.

TABLE 8
ECERS-R Results for Teacher A and Teacher B

	Teacher A	*Teacher B*
Physical environment and activities (ECERS-R)	2.22	5.17
	Uniform group art projects	Individual expression encouraged
	Rote counting and worksheets for math	Developmentally appropriate materials
Interaction items (ECERS-R)	1.28	6.28
	Teachers rarely responded to children's talk, used mostly punitive or overly controlling supervision (e.g., yelling, belittling children, constant "No's")	Teachers often responded to children's talk in positive ways
	Interactions were unpleasant (e.g., voices sound strained and irritable)	Interactions were pleasant
	Physical contact was used principally for control (e.g., hurrying kids along)	Physical contact used appropriately to communicate affection
	Interactions among children were discouraged (e.g., no talking, few opportunities for children to choose their own playmates)	Positive interactions between staff and children, and among children were encouraged
	Kept children together as a whole group most of the day	Many opportunities for self-selection and to play with small groups of kids.

Note. ECERS-R = Early Childhood Environment Rating Scale–Revised.

Items on the classroom quality measure, the ECERS-R, also demonstrate a wide range in quality between these two classrooms. Teacher A's physical environment and activities scored a 2.22, whereas Teacher B's physical environment and activities rating was a 5.11 (out of 7). The difference in quality was even larger on the interaction items. Teacher A's interaction score was 1.28 (minimal quality) whereas Teacher B's was 6.28 (very high quality). Table 8 provides specific examples from the ECERS-R items to illustrate these differences in scores.

These differences in classroom quality and relational organizational climate suggest the importance of further examination of how organizational climate affects classroom quality, especially as it relates to children's development. The overall organizational climate measure found similar distinctions between these two classrooms as it relates to different dimensions of the organizational climate. Table 9 highlights the different experiences of Teacher A and Teacher B related to their overall organizational climate.

Teacher A and Teacher B described very different centers on the "innovation" dimension of the ECWES. Teacher A scored her center a 3, noting that things pretty much stay the same, and problems are not addressed. Teacher B scored her center a 10 (of 10), saying her center emphasizes creativity, implements needed changes, encourages diverse opinions, regularly looks at new educational approaches, and tries out new ideas. The variation in classroom quality suggests that the innovativeness of the center is related to higher quality.

TABLE 9
Teacher A and Teacher B Sample Ratings on the ECWES

	Teacher A	*Teacher B*
Centers' physical environment (ECWES)	4	9
	cramped & crowded	efficiently uses space, neat, tidy and safe, sufficient supplies/materials, well-organized storage space
Innovation (ECWES)	3	10
	things pretty much stay the same	emphasizes creativity
	problems are not addressed	implements needed changes
		encourages diverse opinions
		regularly looks at new educational approaches
		tries out new ideas
Commitment (ECWES)	I'm just putting in time.	I intend to work here at least two more years.
	I don't care what happens to this place after I leave.	I take pride in my center.
	It's hard to feel committed to this place.	I put a lot of extra effort into my work.
	I sometimes feel trapped in this job.	I feel very committed to this center.

Note. ECWES = Early Childhood Work Environment Survey.

Lastly, the ECWES also includes ratings of the teachers' commitment to the center. These scores provide additional insight into differences among these two profiled teachers. Teacher A characterizes her feelings about her commitment as, "I'm just putting in time," "I don't care what happens to this place after I leave," "It's hard to feel committed to this place," and "I sometimes feel trapped in this job." On the other hand, Teacher B describes her commitment as, "I intend to work here at least two more years," "I take pride in my center," "I put a lot of extra effort into my work," and "I feel very committed to this center."

DISCUSSION

The overall purpose of this study was to examine the relationship between organizational climate and classroom process quality in early childhood centers serving low-income children. This study is one of the first to apply the organizational theory framework to preschool classrooms. A significant association was found between the overall organizational climate and classroom quality, such that classrooms located in preschool centers with better organizational climates were of higher quality. These results suggest that the overall organizational climate, such as policies and practices, as well as the relational organizational climate, which includes relationships with the leadership and colleagues, are significantly related to classroom process quality. Of note, the effects of organizational climate on classroom quality were almost two times that of teacher-child ratio. Teacher-child ratio has been largely targeted in policies focused on improving classroom

process quality. The findings from this study suggest that policies should focus less on structural influences on quality (e.g., teacher-child ratio) and more on process quality and the organizational climate, which has such a strong relationship with classroom process quality.

Interestingly, among teachers with more teaching experience, a stronger relationship existed between organizational climate and classroom process quality. This might be explained by more experienced teachers feeling less tolerant of lower-quality organizational climate policies, practices, and relationships. These more experienced teachers have worked with more teachers and directors, often in various centers, and so have more previous experiences to compare with their current situation. On the other hand, this finding also might be explained by newer teachers' naiveté, enthusiasm for the new position, or lack of previous experiences with which they could compare their current organizational climate. New teachers also may be more focused on themselves as new teachers, rather than on the organizational climate, as suggested by Frances Fuller's (1969) work on teachers' stages of development. Fuller proposed a model describing how student teachers' concerns moved through four levels: unrelated to teaching, self-concerns, task concerns, and impact concerns. These stages, although initially developed to describe student teachers' concerns, have been applied to the development of in-service teachers' concerns as well. Teachers with fewer experiences may have more concerns unrelated to teaching or self-concerns that are less affected by the organizational climate.

Interestingly, the relationship between organizational climate and classroom quality was smaller among more educated teachers. This might be a result of less-educated teachers feeling more dependent on colleagues or leadership to help them establish their classroom environment and support their classroom quality (e.g., with help planning lessons, gathering materials, with tips for classroom management). This finding also may be attributable to the fact that teachers with more education may have a wider range of knowledge and may be more equipped with resources to improve their classroom quality. It can be hypothesized that the teachers' educational background provides strategies for creating a high-quality classroom, irrespective of the organizational climate. Teachers with more education may feel independent of the larger work context for support and may be more able to ignore outside influences of the organizational climate.

To illustrate the statistical findings, profiles of two teachers (Teacher A & Teacher B) were provided. Each teacher had limited higher education (an associate's degree and some credits towards a bachelor's) and a significant amount of teaching experience (10 & 18 years). Teacher A's profile portrayed a high-quality classroom within a high-quality organizational climate, overall and relationally. Teacher B's profile depicted the opposite—a very low-quality classroom within a low-quality organizational climate, including low-quality relational organizational climate. These findings lead one to wonder whether Teacher A's classroom process quality would improve if her organizational climate was improved. If Teacher A worked at Teacher B's center, would her classroom quality improve significantly due to the support of her colleagues, leadership, and practices at her new center?

Limitations and Future Directions

There are two main limitations to this study. The first limitation is the small sample size. Sometimes, a small sample size limits the power to detect significant effects. Yet, despite the relatively small sample size, this study's statistically significant findings suggest an area of research

ripe for further exploration. The second limitation is that only one teacher and one classroom was surveyed within each center. Furthermore, these findings, at best, provide some indication that there are meaningful associations between organizational climate, overall and relational, and classroom quality. It should, however, be noted that overall climate predicted only 2% of the variance in overall classroom quality and only 6% of relational quality.

Additional work is needed to better understand associations between organizational climate and classroom quality. First, it is important to examine organizational climate and classroom quality in large samples, which would provide additional evidence regarding the strength of the relationship between the organizational climate and classroom process quality. Second, it is necessary to include more than one teacher per center for a more representative portrayal of the organizational climate at that center and more than one classroom to examine the relationships between organizational climate and classroom process quality. However, one person's opinion still provides relevant information about the organizational climate. Third, it is necessary to conduct further studies to examine in more depth the direction of effects between organizational climate and classroom quality. It is possible that higher quality classrooms drive perceptions of organizational climate.

IMPLICATIONS FOR RESEARCH AND PRACTICE

As the early childhood educational experiences of low-income children in the United States tend be of low quality (Phillips, Voran, Kisker, Howes, & Whitebook, 1994), and many intervention projects aimed at improving classroom quality by providing professional development training to teachers often have shown only modest improvements in quality (Fontaine, Torre, Grafwallner, & Underhill, 2006; Palsha & Wesley, 1998) and have not significantly affected children's development (Jackson et al., 2007), further exploration of influences on quality in preschool classrooms is essential.

The findings of this study have various implications for practice and research. First, professional development efforts typically focus solely on teachers in their classrooms. These findings suggest that professional development efforts need to include early childhood center leadership and a focus on the organizational climate. Teachers and classrooms do not exist in isolation, but rather within the context of a school. A study where the professional development focused on the classroom and organizational climate, as compared to a control group where professional development was provided only to classroom teachers, would provide further insight into the relationship of the organizational climate to classroom quality. The results of this study raise further questions: What strategies are effective in enhancing the quality of the organizational climate? If the quality of the organizational climate increases dramatically, is there a corresponding increase in classroom process quality? Do centers with higher-quality organizational climates for teachers also demonstrate increased growth in children's outcomes?

Second, these findings suggest a complex relationship between the organizational climate and classroom quality. The early childhood field could benefit from further research, including interviews with teachers and observations of organizational climate interactions such as staff meetings and classroom consultation visits with directors and teachers. Future research also could focus on the relative influences of practice and policy changes on classroom quality (e.g., curriculum, improved teacher-child interactions), as compared to improvements in relationships within

the organizational climate (e.g., between teachers and their leadership, between teachers and each other).

Third, the interaction results that suggest the organizational climate affects teachers' classroom quality who have been teaching longer and with less education more than teachers with greater levels of higher education and less experience warrants further examination. Again, qualitative interviews or case studies with a few of each type of "profiled" teacher may provide richer insights into professional development, research, and policy implications as a means to improve quality.

Finally, this study examined the relationship between classroom quality and the organizational climate, irrespective of children's outcomes. To more fully understand the potential impact of the work environment on children's development, it would be beneficial to study all three constructs simultaneously. Similarly, if intervention projects to improve the organizational climate could assess classroom quality and children's development before and after the intervention, this type of information would be invaluable to understanding more fully the relationship between the organizational climate, classroom quality, and children's development.

As national focus turns to the value and quality of preschool experiences, the time seems ripe for future research examining the organizational climate's relationship to classroom process quality.

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