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The Organizational Health of Urban Elementary Schools: School Health and Teacher Functioning

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Abstract

This study examined the factor structure of the Organizational Health Inventory-Elementary version (OHI-E; Hoy, Tarter, & Kottkamp, 1991) in a sample of 203 teachers working in 19 high-poverty, urban schools and the association of organizational school health with teacher efficacy, teacher stress, and job satisfaction. Results indicated a similar factor structure of the OHI-E as compared with the population of schools in the original sample (Hoy et al., 1991), and that specific components of organizational health, such as a positive learning environment, are associated with teacher efficacy, stress, and satisfaction. Overall, teachers' relations with their peers, their school leadership, and their students appear especially critical in high-poverty, urban schools. Recommendations for research and practice related to improving high-poverty, urban schools are presented.

Keywords

organizational school health; urban schools; teacher efficacy; teacher stress; teacher job satisfaction

The Organizational Health of Urban Elementary Schools: School Health and Teacher Functioning

The goal of this study was to examine school organizational health in high-poverty, urban schools to advance intervention efforts that positively impact working conditions for teachers. Staff in these schools contend daily with a myriad of challenges originating in the surrounding community and within the school (Boyd & Shouse, 1997; Cappella, Frazier, Atkins, Schoenwald, & Glisson, 2008; Evans, 2004). Specifically, high-poverty, urban communities are often plagued by poverty and violence, risk factors for an assortment of difficulties (e.g., low birth weight, lead exposure; Boyd & Shouse, 1997; Evans, 2004) and the schools within these communities are likely to suffer from large class sizes, insufficient resources, and an inconsistent quality of teaching over time (Dworkin, Haney, & Teschow, 1988; Evans, 2004; Firestone & Rosenblum, 1988; Pianta, Belsky, Houts, & Morrison, 2007). The possible negative consequences for staff in schools within high-poverty, urban communities include a stressful work environment, negative impact on the mental health of teachers and low student achievement (Boyd & Shouse, 1997; Evans, 2004).

One recommended strategy to ameliorate or decrease the negative consequences associated with working at a school in a high-poverty, urban community is to improve school climate (Ingersoll, 1999, 2002). A national focus on improving school climate is apparent by the current popularity of positive behavioral supports: the Technical Assistance Center on Positive Behavioral Intervention and Supports reported that over 4,000 schools across the United States implemented some form of school-wide positive behavior support in an attempt to improve school climate (Office of Special Education Programs, 2005). School climate also has been a focus of educational research for several decades, with an emphasis on identifying classroom, teacher, and student variables that impact student achievement (Anderson, 1982; Hoy, Hannum, & Tschannen-Moran, 1998; Sterbinsky, Ross, & Redfield, 2006). Despite the emphasis on school climate in practice and research settings, pinpointing targets for change to improve school climate is challenging, in part because school climate is inconsistently defined. Furthermore, very little research examines how school climate impacts teachers in some of the most troubled schools in the country: urban elementary schools operating in high-poverty neighborhoods. In this study, we examine the extent to which school climate in high-poverty, urban schools impacts three individual level teacher variables (teacher efficacy, teacher stress, and teacher job satisfaction).

School Climate

Among the earliest, and most highly influential, studies of school climate is Halpin and Croft's (1963) study comparing a school's climate to the "personality" of the school (Hoy, Tarter, & Kottkamp, 1991). This work encouraged a broad interest in school climate and its relationship to school effectiveness (Anderson, 1982; Hoy et al., 1991). Unfortunately, in subsequent research, school climate has been inconsistently defined and measured from a variety of perspectives. School climate has been defined as teacher satisfaction (James & Jones, 1974), academic emphasis (Ma, 2003), and as one dimension of Halpin and Croft's (1963) conceptualization of schools on a continuum of open to closed schools. School climate has been measured utilizing parent report (Esposito, 1999), student report (Fisher & Fraser, 1982), teacher report (Hoy et al., 1991), and objective observers (Kappa, 1980).

Despite variability in operationalization and measurement, an accumulation of research addressing school effectiveness implies that elements of school climate (e.g., strong administrative leadership, high performance expectations, emphasis on basic skills) contribute to an effective school (Hoy et al., 1991). Furthermore, school climate is associated with several teacher outcomes including teacher efficacy and effectiveness (see Anderson, 1982; Hoy et al., 1991; Pas, Bradshaw, & Herschfeldt, 2012) and teacher job satisfaction (Taylor & Tashakkori, 1995; Xiaofu & Qiwen 2007). However, due to the variability in operationalization and measurement it is difficult to identify specific organizational-level intervention targets that will impact school climate and influence teacher outcomes.

Organizational School Health

In an effort to operationalize school climate more precisely and to increase the practical utility of the construct, Hoy and colleagues (1991) developed the construct of organizational school health by combining Parsons's (1967) view of schools as social systems and Miles's (1965) construct of school health. Parsons (1967) conceptualized schools as social systems that address two categories of needs (a) instrumental needs and (b) expressive needs (Hoy & Woolfolk, 1993; Parsons, 1967). Instrumental needs encompass the goals of the organization and expressive needs are the needs of the organization to support a common set of positive norms and values to promote their common goal (Parsons, 1967). For example, the primary goal of schools is to educate students (instrumental) and therefore effective schools will promote the internal values and norms of high expectations for student achievement

(expressive). Schools have three levels of influence over these needs: technical (teaching-learning process), managerial (internal administration function), and institutional (connects school with environment; Hoy & Woolfolk, 1993; Parsons, 1967). Similarly, Miles (1965) defined school health as the ability of schools to adapt to existing and new challenges as they educate students. From this perspective, a school exhibiting positive organizational school health is successfully pursuing its mission of educating students by aligning the three levels of influence to meet its instrumental and expressive needs as well as coping with and adapting to a constantly changing environment (Hoy et al., 1991). Organizational school health is described as a stable characteristic conceptualized as the physical and psychological characteristics of the school that influence the behavior of teachers, students, and staff (Hoy & Miskel, 1987; Ringeisen, Henderson, & Hoagwood, 2003).

Based on the theoretical construct of organizational school health, Hoy and colleagues developed the Organizational Health Inventory-Elementary to assess the organizational health of elementary schools (OHI-E; see Hoy et al., 1991 for a complete description of the scale development). The OHI-E consists of five dimensions: *Teacher Affiliation*, *Institutional Integrity*, *Collegial Leadership*, *Resource Influence*, and *Academic Emphasis*. *Teacher Affiliation* assesses the social satisfaction teachers experience in their workplace and represents the connection between teachers and among teachers and students, in addition to the teachers' commitment to teaching; *Institutional Integrity* assesses the degree to which teachers feel the institution (school) and its administration (decision makers) are able to proceed with their mission (educating students) without undue influence from outside sources. *Collegial Leadership* taps the principal's concern for the welfare of school staff, combined with high expectations from the principal for school staff performance. *Resource Influence* combines the ability of principals to influence superiors and their ability to procure material supplies for the school. *Academic emphasis* reflects the school's emphasis on high expectations for student achievement (Hoy et al., 1991). These dimensions encompass both the needs of organizations (instrumental and expressive) and the three levels of influence over the needs (technical, managerial, institutional; Hoy et al., 1991; Hoy & Tarter, 1997).

The final version of the OHI-E was tested with a sample of 78 elementary schools from a range of demographic neighborhoods. The reliability of the five factors ranged from .84–.95 and correlation among factors ranged from .87–.94 (Hoy et al., 1991). Organizational health is associated with faculty trust in each other and the principal (Hoy et al., 1991), which are key elements in successful urban schools (Bryk & Schneider, 2002); commitment to an organization, reflecting commitment to participate and support the organization (Hoy et al., 1991); teacher efficacy, a factor associated with student achievement (Hoy & Woolfolk, 1993; Pas et al., 2012); and academic achievement in urban elementary schools (Goddard, Sweetland, & Hoy, 2000).

The OHI-E was developed for use in research, but has been conceptualized as an assessment tool for school administrators and staff to pinpoint school health areas of strength and needing improvement (Hoy et al., 1991). Such a tool could be valuable for schools, especially schools in high-poverty, urban neighborhoods for which an improvement in school climate has been frequently cited as one path to increase teacher performance and impact student achievement (e.g., Ingersoll, 1999). However, little empirical research has investigated associations between OHI-E dimensions and specific teacher characteristics that are related to student achievement in high-poverty, urban schools.

Organizational School Health and Teacher Outcomes: Efficacy, Stress and Satisfaction

Teacher efficacy—Teacher efficacy is a teacher's belief that he/she can influence student learning (Gibson & Dembo, 1984; Hoy & Woolfolk, 1993) and is associated with

organizational health (Hoy and Woolfolk, 1993; Pas et al., 2012). Examining the relationship between school climate factors and teacher efficacy could reveal potential targets of support and intervention to influence the development of teacher efficacy (Hoy and Woolfolk, 1993; Pas et al., 2012). In support of this hypothesis, Hoy and Woolfolk (1993) found a statistically significant but moderate association between teacher efficacy and principal influence ($r = .26$) and academic emphasis ($r = .23$) within a sample of elementary teachers from primarily middle-class communities. Furthermore, Pas and colleagues (2012) found a relationship between teacher efficacy and the teacher affiliation factor of the OHI-E ($\gamma = 0.21$, $d = 0.36$, $p = .001$) and the principal leadership factor of the OHI-E ($\gamma = 0.09$, $d = 0.16$, $p = .019$). In the current study, we explore the question as to whether the OHI-E will perform similarly in relation to teacher efficacy as in previous primarily middle-class schools given the myriad of stressors teachers experience in high-poverty, urban schools (Boyd & Shouse, 1997; Shernoff, Mehta, Atkins, Torf, & Spencer, 2011).

Teacher stress and job satisfaction—Teacher stress and low job satisfaction have been shown to impact the learning environment and interfere with achievement of educational goals through impaired teacher performance (Guglielmi & Tatrow, 1998). Empirical studies suggest that prolonged occupational stress is associated with mental and physical illness (Guglielmi & Tatrow, 1998; Kyriacou, 2001), job dissatisfaction (Conley, Bacharach, & Bauer, 1989; Shann, 1998), poorer quality of life (Hart, 1994), and lowered expectations for students (Friedman, 1991). Additionally, teachers experiencing low satisfaction tend to feel anxious and worried ($r = -.344$), or depressed ($r = -.273$; Ho & Au, 2006). Thus, the primary workforce in high-poverty, urban schools (schools with a high need for effective teachers) reports high levels of stress that negatively impact workers (ie., teachers) and can result in lowered work performance (Ferreira & Martinez, 2012).

The primary interventions addressing teacher stress have focused on individual coping skills, such as music therapy and supporting individual help-seeking behaviors (Cheek, Bradley, Parr, & Lan, 2003; Kyriacou, 2001; Tatar, 2009). However, in a qualitative study of fourteen teachers in high-poverty, urban schools the main areas identified as impacting teacher stress were organizational level factors: bureaucracy, economic constraints, and poor administrative support (Shernoff et al., 2011). These findings are consistent with findings reported by Hakanen, Bakker, & Schaufeli (2006) that teacher stress is associated with supervisor support ($r = -.22$, $p < .001$) and adequate sharing of pertinent information regarding job expectations ($r = .25$, $p < .001$). Thus, we are interested in exploring organizational school health factors that influence teacher stress and job satisfaction and may be targeted to improve working conditions for teachers and support effective teacher performance.

Present study

The goals of the present study were to (a) examine in high-poverty, urban schools the factor structure of school health as measured by the OHI-E and (b) explore whether school health is associated with three teacher characteristics: teacher efficacy, teacher stress, and teacher job satisfaction. The component structure of the OHI-E was examined utilizing data from teachers working in schools in high-poverty, urban communities. Following the principal component analysis, we explored how the organizational health of high-poverty, urban schools is related to teacher efficacy and the quality of teacher's work life (stress and satisfaction), with the goal to identify possible new targets for school mental health programs that focus on improving organizational elements of the work environment for teachers.

Method

The data for this study were collected during the course of three studies conducted between 1999 and 2007 exploring models of mental health service delivery and dissemination of evidence based mental health practices in high-poverty, urban, schools (see Atkins et al., 2005, R01MH073749; Atkins et al., 2006; Atkins et al., 2008). Participating schools had poverty rates over 81%, as determined by eligibility for subsidized meals. Across studies, school demographics were as follows: mean number of students equaled 560 (range = 314–982), mean percentage of African American students was 96% (range = 67% – 100%), and the mean percentage of students meeting or exceeding national averages on standardized tests in reading was 31% (range = 9% – 54 %) and in math was 34% (range = 5.9% – 61%). Overall, data from 19 urban public elementary schools in a large Midwestern city were utilized for the present study.

Participants

Participants in this study were 203 teachers from 19 high-poverty, urban elementary schools in a large Midwestern city who had participated in three larger intervention studies. The majority of participating teachers were female and African American, with considerable classroom experience. In Study 1 (Atkins et al., 2006) 68% of teachers in the study had more than 10 years' experience, in Study 2 (Atkins et al., 2008) mean years teaching was 16.6 years and in Study 3 (Atkins et al., 2005, R01MH073749) mean years teaching was 13 years (Table 1).

Measures

Organizational health inventory for elementary schools (OHI-E; Hoy et al., 1991)—The OHI-E consists of 37 items assessing school health divided into five dimensions; these dimensions encompass both the two needs of organizations (instrumental and expressive) and the three levels of influence over the needs (technical, managerial, institutional). Teachers indicate along a 4-point scale (rarely occurs, sometimes occurs, often occurs, very frequently occurs) how well each statement characterizes their school. The five dimensions include Teacher Affiliation ($\alpha = .94$), Institutional Integrity ($\alpha = .90$), Collegial Leadership ($\alpha = .95$), Resource Influence ($\alpha = .89$), and Academic Emphasis ($\alpha = .87$) and show good internal reliability. Factor analysis conducted by Hoy and colleagues resulted in a five factor model that accounted for 61% of the variance, supporting the construct validity of the scale (Hoy et al., 1991); significant correlations between Principal Influence, Academic Emphasis, and Institutional Integrity and teacher efficacy (r 's range = .16 – .26) support the concurrent validity of the OHI-E (Hoy & Woolfolk, 1993).

The quality of teacher work life survey (QTWL; Pelsma et al., 1989)—The QTWL is a 36-item measure of teacher stress and satisfaction. Teachers rate each item on two dimensions along a Likert scale (stress: extreme stress (1) to no stress (5); satisfaction: very dissatisfied (1) to very satisfied (5)). Ratings are combined to form a quality score, defined as the sum of perceived stress and perceived dissatisfaction. The survey was standardized on a sample of 227 teachers from a Midwest school district. In the current study, a Total Stress score and a Total Satisfaction score were utilized in the analyses as stress and satisfaction are separate, yet related constructs that influence overall quality of work life and each may be related to different aspects of teaching, as described by Pelsma and colleagues (see Pelsma et al., 1989). Pelsma and colleagues (1989) reported internal reliability for the Stress and Satisfaction scores of .92 and .89, respectively; test-retest reliability coefficients were reported as .43 and .65, respectively.

Ohio state teacher efficacy scale-short form (OSTE-SF; Tschannen-Moran & Hoy, 2001)

The OSTE-SF is a 12-item self-report form that assesses teacher efficacy. Teachers indicate on a 9 point scale (1 = nothing; 9 = a great deal) how much they feel they can affect a particular challenge that might arise in the course of their school activities (sample item: *How much can you do to help your students think critically?*). The instrument presents three dimensions of teacher efficacy (Instructional Strategies, Classroom Management, Student Engagement) and a total self-efficacy score. Internal consistency for this sample ranged from .78–.91 for the separate dimensions and alpha equaled .91 for the overall efficacy scale. The total self-efficacy score was used in the present study.

Procedures

The Organizational Health Inventory-Elementary (OHI-E; Hoy et al., 1991) was completed by all teachers ($N = 203$), whereas a subset of teachers who participated in Study 3 noted above ($n = 74$) completed the Ohio State Teacher Efficacy Scale and the Quality of Teacher Work Life Survey, in addition to the OHI-E. Data presented in this study were baseline data in all three studies, thus, teachers had not received any study related services or support at the time they provided the data. Individual teacher scores on the OHI-E were utilized as the unit of analysis, a strategy that has been employed previously when exploring individual level outcomes (see Tschannen-Moran & Hoy, 2001).

Principal component analysis—A principal component analysis with orthogonal, varimax rotation was conducted to examine the factor structure of the OHI-E; missing items were replaced with the item mean for the sample. Across the sample ($N = 203$), the mean number of items missing for any one item included in the principal component analysis was 17 (*median* = 13); no items were excluded from the principal component analysis based on the number of missing items.

Regression analysis—Three regression analyses were performed with a subset of teachers ($n = 74$) who had also completed the Ohio State Teacher Efficacy Scale and the Quality of Teacher Work Life Scale to explore the unique relationships between each factor and teacher outcomes. For all regression analyses, the derived factors that had a statistically significant relationship with the dependent variable were entered into the regression equation as predictors (see Table 2 for correlation matrix). Factor-based scores were calculated by computing the mean score of each factor.

Teacher efficacy scores were calculated from the OSTES by computing a mean of all items for a total self-efficacy score. Scores ranged from 4.33 to 9 (1 = low efficacy; 9 = high efficacy $M = 7.10$, $SD = 1.07$, $\alpha = .93$). The stress and satisfaction scores were derived from the QTWL and were computed by calculating a sum of the items on the stress scale and satisfaction scale; overall stress scores ranged from 14 (low stress) to 164 (high stress; $M = 102.18$, $SD = 31.42$, $\alpha = .96$) and overall satisfaction scores ranges from 27 (low satisfaction) to 154 (high satisfaction; $M = 104.65$, $SD = 24.08$, $\alpha = .92$). The correlation between the stress and satisfaction scales was statistically significant ($r = -.492$, $p = .01$).

Following the calculation of subscales, Pearson correlation coefficients between the derived factors and both the teacher efficacy and teacher quality of school life scales (stress and satisfaction) were examined to determine the most promising predictors of teacher outcomes to include in regression analyses (Table 2).

Results

The principal component factor analysis yielded a six-factor solution accounting for 61.5% of the variance (Table 3). Items with a factor loading equal to or exceeding .4 and that

conceptually fit together (face valid) with other items were retained in each factor. Additionally, the reliability of each set of items was computed to ensure adequate internal reliability; reliability for final factors ranged from .74 to .95 (see Table 3).

The first factor (Principal Support) accounted for 23.36% of the variance and consisted of 10 items from the OHI-E Collegial Leadership Scale ($\alpha = .95$). The second factor (Teacher Collegiality) accounted for 9.58% of the variance ($\alpha = .89$). This factor consisted of six items from the OHI-E Teacher Affiliation scale regarding teacher attitude toward other teachers and their commitment to the students. The third factor (Outside Influences), accounted for 8.38% of the variance ($\alpha = .74$), was identical to the OHI-E Institutional Integrity Scale plus one item from the Teacher Affiliation scale. The fourth factor, Positive Learning Environment ($\alpha = .79$) accounted for 7.42% of the variance and consisted of three items from the OHI-E Academic Emphasis scale, in addition to two items from the Teacher Affiliation scale. The fifth factor (Principal Influence) accounted for 6.78% of the variance with a reliability of $\alpha = .87$ and was composed of three items from the original Resource Influence scale that address the principal influence with his/her superiors and peers. The final factor (Material Resources) accounted for 6.02% of the variance ($\alpha = .90$) and consisted of three items from the OHI-E Resource Influence scale referring to concrete supplies and materials for the classroom (Table 3).

Analyses indicated statistically significant correlations between Principal Support, Teacher Collegiality, Positive Learning Environment, Principal Influence, and Material Resources ranging from 0.35 to 0.64 (Table 4). These correlations are similar to those originally reported by Hoy et al. (1991) in their factor analysis conducted on a sample of 78 schools during scale development (correlations ranged from .15–.67).

Correlation analyses between derived factors and each teacher outcome measure yielded several statistically significant results. The correlations between teacher efficacy and Positive Learning Environment ($r = .42, p = .01$) and teacher efficacy and Material Resources ($r = .31, p = .05$) were statistically significant. Correlations between teacher stress and all of the derived factors (Principal Support, Teacher Collegiality, Outside Influences, Positive Learning Environment, Principal Influence, Material Resources) were statistically significant; similarly, correlations between teacher job satisfaction and all factors were statistically significant (Table 2).

For the first regression analysis, teacher efficacy was the dependent variable and Positive Learning Environment and Material Resources were entered as predictors. Results indicated that Positive Learning Environment was a statistically significant predictor of teacher efficacy ($\beta = .356, p = .01$). In the second regression analysis, teacher job stress was entered as the dependent variable and Principal Support, Teacher Collegiality, Outside Influences, Positive Learning Environment, Principal Influence, and Material Resources were entered as predictors. Results indicated that the relationship between Outside Influences and teacher job stress was statistically significant ($\beta = 2.658, p = .01$). In the third regression analysis, teacher job satisfaction was the dependent variable and, again, Principal Support, Teacher Collegiality, Outside Influences, Positive Learning Environment, Principal Influence, and Material Resources were entered as predictors. Results indicated that the relationship of Teacher Collegiality ($\beta = 2.007, p = .05$) and Outside Influences ($\beta = -2.363, p = .022$) with teacher job satisfaction was statistically significant.

Discussion

Measuring organizational school health with the OHI-E

Understanding how organizational school health functions in high-poverty, urban elementary schools is important to identify potential new organizational intervention targets to improve school climate for teachers and impact the quality of teaching. The current study explored the factor structure of the Organizational Health Inventory-Elementary version (Hoy et al., 1991), a measure of elementary organizational school health, in a sample of 203 teachers working in 19 high-poverty, urban schools. The items that comprise each factor in the current sample were similar to the original sample (Table 3), comprised of 78 schools from a range of social and economic levels (Hoy et al., 1991). The current study also indicated that the factors important in organizational school health in high-poverty, urban schools are similar to the wider array of schools included in the original development of the OHI-E (see Hoy et al., 1991), with the exception of the two factors (Principal Influence and Material Resources) on the OHI-E that resulted in one factor (Resource Influence) in the current study. This could indicate that in high-poverty, urban schools teachers feel that garnering material supplies is not under the principal's control, perhaps due to general lack of funding within the school system. Additionally, Principal Support, which accounted for the most variance in the current study, may be more important for school health in high-poverty, urban schools than Teacher Collegiality, the factor that accounted for most of the variance in the original OHI-E sample (Teacher Affiliation; Hoy et al., 1991).

The first three factors accounting for most of the variance within the current factor structure focus on relationships: Principal Support (principal-teacher relationship), Teacher Collegiality (teacher-teacher relations), and how the school interacts with Outside Influences (community influence on school policy). The importance of social relationships in school health implied by this factor structure is consistent with previous research of organizational school health at the high school and middle school levels demonstrating that trust in the principal and among colleagues is an important aspect of a healthy school climate (Hoy et al., 1991; Roney, Coleman, & Schlichting, 2007) and is consistent with recommendations for urban schools (e.g., Bryk & Schneider, 2002; Comer, 1988; Tschannen-Moran & Hoy, 2001). Efforts to actively build and support Professional Learning Communities in urban schools are one avenue to build positive relations within a school. Another target for change may be interventions focusing on the school-community relationships (Bryk & Schneider, 2002; Blue-Banning, Summers, Frankland, Nelson, & Beegle, 2004). Providing opportunities for parents and school staff to interact, not only at the school which may inhibit parental involvement (McKay, Atkins, Hawkins, Brown, & Lynn, 2003), but also in community settings where parents might feel more at ease. Additionally encouraging and actively supporting school staff to listen, empathize, and empower parents are strategies that could support positive school-community relations (Blue-Banning et al., 2004). As schools, communities, and their participants become more trusting of each other, and potentially more integrated, a social network across settings could create a safety net for students and reduce risks of early school dropout (Stanton-Salazar & Dornbush, 1995).

Organizational school health and key teacher variables

The second goal of this study was to examine whether organizational school health was related to teacher efficacy, teacher job satisfaction, and teacher job stress in high-poverty, urban schools; a subset of teachers ($n = 74$) from original sample were included in the analyses for the second goal. Our results indicated that teacher efficacy was uniquely related to a Positive Learning Environment, which reflects positive student attitudes toward learning and teacher enthusiasm for their job. Thus, developing interventions that sustain and support positive student attitudes toward learning and create opportunities for professional

development that enhance teacher enthusiasm could positively impact organizational school health in these high-poverty, urban schools. For example, implementing school-wide Positive Behavioral Interventions and Supports (PBIS) appears to provide some support for the academic emphasis of a school (Bradshaw, Koth, Bevans, Ialongo, & Leaf, 2008), and Martin (2008) describes a multidimensional, school-based intervention targeting student motivation that might be relevant for improving a school's Positive Learning Environment. Additionally, focusing on the unique challenges of the urban context for teachers, such as community violence and frequent staff turnover, will be a vital component to include in any intervention within urban schools (Shernoff et al., 2011).

Consistent with other research in the social services (Glisson et al., 2008), these results indicated that teacher stress and job satisfaction were each related to organizational school health. Specifically, teacher job stress was positively related to perceptions of Outside Influences on school programming; that is, the more outside influences impacted school policy, the more stress teachers reported. Teacher job satisfaction was inversely related to Outside Influences, in that the less influence outside entities held over school policy, the higher job satisfaction was reported. These results suggested that one factor in improving the school health of high-poverty, urban elementary schools may be to insulate teachers from the shifting priorities of the outside community or to include teachers in decisions related to school policy via strong principal leadership. In addition, consistent with Guglielmi & Tatrow's (1998) model of occupational stress that suggests low decision making contributes to increased job stress, our data emphasize that it is important for teachers not feel at the mercy of shifting priorities of the outside community but rather that education decisions and policy are made in a stable and predictable manner, perhaps with teacher input. These results shed light on a recent finding that the *No Child Left Behind* federal mandate imposed on schools was associated with higher rates of teacher job stress (Hargrove, Walker, & Huber, 2004). Our results suggest that in high-poverty, urban schools, rather than increasing teacher effectiveness by holding teachers accountable for student learning, *NCLB* may negatively impact teacher effectiveness by exacerbating job stress due to the emphasis on test-based evaluation imposed by outside entities. The association between teacher job satisfaction and Teacher Collegiality (i.e., teachers' connections with each other, the school, and their commitment to the students) underscores the need to provide teachers the opportunity to create positive relations and contribute meaningfully to the school environment and goals. A current model being supported in many school settings and associated with increased teacher effectiveness that allows for the development of positive relations is the Professional Learning Community model of professional development (Bryk & Schneider, 2002). Effectively implementing a Professional Learning Community may support teacher interactions and create a more effective teaching environment.

A somewhat surprising result was that while Principal Support appeared important to school health in our sample as evidenced by the factor analysis and the correlation with teacher outcomes, it was not uniquely related to teacher efficacy, teacher stress, or job satisfaction. It is possible that Principal Support was not uniquely related to teacher outcomes due to the moderate correlation between Principal Support and four other school health factors included in the analyses. Alternatively, while there is a large literature focusing on the role of the principal in school climate (see Hallinger & Heck, 1996; Taylor & Tashakkori, 1995), our data suggest that focusing solely on principal leadership will be insufficient in high-poverty, urban schools. Instead, a more fruitful avenue reflecting the results of this study might be for principal leadership to focus specifically on creating opportunities to develop Professional Learning Communities and a Positive Learning Environment and foster positive relations with the surrounding community,

Limitations and suggestions for future research

There were several limitations of this study that should be acknowledged. First, the data were collected over the course of almost 10 years from teachers involved in three different projects. Because these cross-sectional data represented a single perspective of organizational school health distributed over time, future research could (a) include a more uniform sample comprised of school health data collected at the same time point(s), and (b) address the longitudinal relationship of school health to changing perspectives both within schools and across school districts locally or nationally to examine the potential effect that school and/or district policies had on organizational school health.

Second, a direct test of the relationship between organizational school health, teacher variables, and student achievement was not possible in this study due to the lack of availability of individual student achievement data. Future research can attempt to untangle the mediating or moderating effects of school health on teacher effectiveness and student achievement. Third, although our sample of teachers was larger than the original sample for the factor analysis of the OHI-E, a larger sample with more schools and teachers would be important to validate these findings across urban, suburban, and rural communities. Finally, the current study examined school climate at an individual level because we were interested in the impact of school health on individual teacher level variables. School health is more often examined as a school level variable and there are likely differences in school health across schools, even in this restricted sample comprised of schools located in high-poverty, urban communities. In fact, the intraclass correlations between schools in this sample for each factor ranged from .09 to .25 suggesting that the differences between schools were not trivial. Thus, future research should explore the school level differences of each factor in a larger sample of teachers and schools to gain a comprehensive picture of how school health operates in high-poverty, urban schools. .

In summary, the current study is one of the first to examine organizational school health in high-poverty, urban schools and points to areas for future research and potential intervention targets for high-poverty, urban schools to improve school climate. Specifically, these results suggested that specific characteristics of high-poverty, urban schools are related to teacher stress and self-efficacy and therefore that these characteristics should be prioritized in school-level interventions focused on improving school health and in turn, teacher mental health and performance.

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Table 1

Teacher Demographics by study

	PALS^a (<i>N</i> = 16)	KOL^b (<i>N</i> = 114)	LINKS^c (<i>N</i> = 74)
Gender (Female)	84%	91%	90.2%
Ethnicity -- African American	75%	71%	42.4%
Ethnicity -- Caucasian	46%	27%	39.4%
Highest Degree	n/a	44% (M.S.)	65.6% (BA/BS) 32.8% (MA/MS) 1.6% (Ph.D./Ed.D.)
Mean # Students in Class	24.8	23.6	n/a
Mean Years Teaching (Total)	68% > 10 years experience	16.6	13.03
Mean Years Teaching (Current School)	n/a	11.2	8.41

^a Atkins, Frazier, Birman, et al., 2006.

^b Atkins, Frazier, Leathers, et al., 2008.

^c Atkins et al., 2005, R01MH073749

Table 2

School Health Factors Associated with Teacher Outcomes (N = 74)

	Teacher efficacy	Job satisfaction	Job stress
Principal support	.15	.59	-.52 **
Teacher collegiality	.20	.61 **	-.47 **
Outside influences	-.23	-.44 **	.48 **
Positive learning environment	.42 **	.54 **	-.56 **
Principal influence outside school	.25	.41 **	-.44 **
Material resources	.31 *	.55 **	-.61 **

*
 $p < .05$.**
 $p < .01$.

Table 3

OHI-E principal component analysis items^a

Principal support (23.36%; $\alpha = .95$)	Teacher collegiality (9.58%; $\alpha = .89$)	How school interacts with outside influences (8.38%; $\alpha = .74$)	Positive learning environment (7.42% $\alpha = .79$)	Principal influence at organizational level (6.78%; $\alpha = .87$)	Material Resources (6.02%; $\alpha = .90$)
1. The principal explores all sides of topics and admits that other opinions exist (CL; .80) ^b	13. Teachers in this school like each other (TA; .86)	8. The school is vulnerable to outside pressures (II; .43)	7. Students are cooperative during classroom instruction (AE; .72)	2. The principal gets what he or she asks for from superiors. (RI; .71)	5. Extra materials are available if requested. (RI; .50)
3. The principal discusses classroom issues with teachers (CL; .78)	23. Teachers exhibit friendliness to each other (TA; .84)	14. Community demands are accepted even when they are not consistent with the educational program (II; .74)	18. Students respect others who get good grades (AE; .61)	9. The principal is able to influence the actions of his or her superiors. (RI; .72)	12. Teachers are provided with adequate materials for their classrooms (RI; .72)
4. The principal accepts questions without appearing to snub or quash the teacher. (CL; .77)	27. Teachers express pride in their school(TA; .47)	19. Teachers feel pressure from the community (II; .71)	31. Students try hard to improve on previous work (AE; .53)	20. Principal's recommendations are given serious consideration by his/her peers (RI; .66)	16. Teacher's receive necessary classroom supplies (RI; .67)
10. The principal treats all faculty members as his or her equal (CL; .80)	28. Teachers identify with the school. (TA; .42)	25. Select citizen groups are influential with the board (II; .62)	32. Teachers accomplish their jobs with enthusiasm (TA; .54)		22. Supplementary materials are available for classroom use. (RI; .60)
11. The principal goes out of his or her way to show appreciation to teachers (CL; .80)	35. There is a feeling of trust and confidence among staff (TA; .67)	29. The school is open to the whims of the public (II; .64)	33. The learning environment is orderly and serious(TA; .54)		
15. The principal lets faculty know what is expected of them (CL; .67)	36. Teachers show commitment to their students(TA; .59)	30. A few vocal parents can change school policy. (II; .69)			
17. The principal conducts meaningful evaluations (CL; .73)		37. Teachers are indifferent to each other (TA; .42)			
21. The principal maintains definite standards of performance (CL; .65)					
26. The principal looks out for the personal welfare of faculty members. (CL; .79)					
34. The principal is friendly and approachable (CL; .83)					

^aOriginal OHI-E factors: CL-collegial leadership; TA-teacher affiliation; II-institutional integrity; AE-academic emphasis; RI-resource influence

^bFactor loading per item is reported in parentheses following each item

Table 4

Inter-factor correlations (N = 203)

	1	2	3	4	5	6
1. Principal support		.561**	.026	.504**	.551**	.641**
2. Teacher collegiality			-.019	.565**	.351**	.511**
3. Outside influences				-.007	.036	-.056
4. Positive learning environment					.412**	.495**
5. Principal influence outside school						.453**
6. Material resources						

**
 $p < .01$, two-tailed.