Published in final edited form as:
Child Abuse Negl. 2014 April ; 38(4): 757–767. doi:10.1016/j.chiabu.2013.09.003.

Testing a theory of organizational culture, climate and youth outcomes in child welfare systems: A United States national study

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Abstract

Theories of organizational culture and climate (OCC) applied to child welfare systems hypothesize that strategic dimensions of organizational culture influence organizational climate and that OCC explains system variance in youth outcomes. This study provides the first structural test of the direct and indirect effects of culture and climate on youth outcomes in a national sample of child welfare systems and isolates specific culture and climate dimensions most associated with youth outcomes. The study applies multilevel path analysis (ML-PA) to a U.S. nationwide sample of 2,380 youth in 73 child welfare systems participating in the second National Survey of Child and Adolescent Well-being. Youths were selected in a national, two-stage, stratified random sample design. Youths' psychosocial functioning was assessed by caregivers' responses to the Child Behavior Checklist at intake and at 18-month follow-up. OCC was assessed by front-line caseworkers' (N=1,740) aggregated responses to the Organizational Social Context measure. Comparison of the a priori and subsequent trimmed models confirmed a reduced model that excluded rigid organizational culture and explained 70% of the system variance in youth outcomes. Controlling for youth- and system-level covariates, systems with more proficient and less resistant organizational cultures exhibited more functional, more engaged, and less stressful climates. Systems with more proficient cultures and more engaged, more functional, and more stressful climates exhibited superior youth outcomes. Findings suggest child welfare administrators can support service effectiveness with interventions that improve specific dimensions of culture and climate.

Keywords

organizational culture; climate; child welfare; youth outcomes

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The mission and legal mandate of child welfare systems in each state are to promote the safety and well-being of children who are suspected victims of abuse or neglect. Evidence indicates these systems vary greatly in their effectiveness and many systems experience limited success (U.S. Department of Health and Human Services, 2011). Although a number of factors may explain between-system variance in youth outcomes, growing evidence suggests that the work environments created for caseworkers by child welfare agencies are associated with youth outcomes (Glisson & Green, 2006, 2011; Glisson & Hemmelgarn, 1998; Schoenwald, Sheidow, Letourneau, & Liao, 2003; Yoo & Brooks, 2005).

Decades of empirical studies from the organizational research literature indicate that facets of organizational social context such as organizational culture (i.e., shared behavioral norms and expectations) and organizational climate (i.e., the psychological impact of the work environment on employees' well-being) are two of the most important dimensions of work environments for employee performance and behavior across a range of settings and outcomes (Aarons & Sawitzky, 2006; Carr, Schmidt, Ford, & DeShon, 2003; Hartnell, Ou, & Kinicki, 2011; James et al., 2008; Sackmann, 2011). These studies indicate that organizations can improve their effectiveness by developing specific, strategically-focused organizational cultures and climates that encourage targeted behavior from an organization's members and contribute to organizational success (Schneider, Macey, Lee, & Young, 2009). Researchers have extended this work into child welfare and youth mental health settings with positive preliminary results (Glisson & Green, 2006, 2011; Glisson & Hemmelgarn, 1998; Glisson, Hemmelgarn, Green, & Williams, 2013; Yoo & Brooks, 2005). These studies suggest that child welfare administrators and caseworkers may be able to improve outcomes for youth by transforming the cultures and climates of child welfare work environments.

Models of organizational culture and climate in child welfare settings hypothesize that strategic dimensions of organizational culture (i.e., proficiency, rigidity, resistance) produce organizational climates (i.e., engagement, functionality, stress) that explain system variance in youth outcomes (Glisson, Green, Williams, 2012). These models provide administrators with targets for change efforts by describing the relationships linking behavioral norms and expectations in the work environment (i.e., culture), the psychological impact of the work environment on caseworkers (i.e., climate), and positive youth outcomes.

Although promising, organizational culture and climate theories describing the full set of direct and indirect relationships between culture, climate, and youth outcomes have yet to be tested in a national sample of child welfare systems. Previous studies of organizational culture and climate in child welfare settings have relied on limited samples, incorporated a restricted number of culture or climate dimensions, and failed to test the complete set of structural relationships (Glisson & Green, 2011; Glisson & Hemmelgarn, 1998; Glisson & James, 2002; Yoo & Brooks, 2005). These gaps limit efforts to improve child welfare systems because it is unclear which dimensions of organizational culture and climate may be most critical to youth outcomes and which dimensions of these two facets of organizational social context are related to each other.

Characterizing the Organizational Social Contexts of Child Welfare Agencies

Organizational researchers have studied how characteristics of work environments impact employee and organizational performance since the 1950s (Argyris, 1958; Fleishman, 1953). This body of empirical and theoretical literature confirms that organizational social context can be meaningfully described along two key dimensions—organizational culture and organizational climate—that describe unique aspects of the organization's social context and relate differentially and significantly to organizational and individual performance and outcomes (Hartnell et al., 2011; Sackmann, 2011; Schneider, Ehrhart, & Macey, 2011; Verbeke, Volgering, & Hessels, 1998).

Organizational culture describes the shared behavioral expectations and norms that characterize and direct behavior in a work environment (Cooke & Szumal, 1993; Verbeke et al., 1998). These expectations are modeled for new employees and reinforced through formal and informal sanctions as employees adjust to the social milieu of the agency or work unit (Glisson et al., 2012). Organizational culture is important because of its influence on how employees prioritize and execute job tasks, how they make sense of events in their work setting, and how they experience the psychological impact of the work environment on their personal well-being. In child welfare agencies, cultural norms are associated with how caseworkers view and relate to clients, their level of availability and responsiveness to clients, the types of relationships they are able to form with children and families, and the specific practice models they employ to achieve child safety, permanency, and well-being (Glisson & James, 2002).

Organizational climate is an aggregate construct comprised of shared employee perceptions regarding how their work environment impacts their own psychological well-being and functioning (Glisson et al., 2012). Individual employee perceptions regarding the impact of the work environment on their personal well-being are referred to as *psychological* climate and these individual perceptions form the basis for understanding *organizational* climate (James et al., 2008). When individuals in a work unit share similar psychological climate perceptions, these individual perceptions can be aggregated to characterize the work unit (i.e., define its organizational climate; James et al., 2008). Theory and empirical research support the aggregation of psychological climate perceptions to the organizational level and a number of studies have demonstrated the importance of organizational climate to organizational and individual outcomes (Carr et al., 2003; Patterson et al., 2005). Organizational climate is important to outcomes in child welfare systems because of its effects on employee motivation and work attitudes such as job satisfaction and organizational commitment, all of which are associated with individuals' performance in the organization (James et al., 2008; Judge, Thoresen, Bono, & Patton, 2001).

Empirical and theoretical development of the organizational culture and climate constructs have resulted in the identification of strategic dimensions of culture and climate that affect targeted employee behavior and outcome criteria (Schneider et al., 2011). For example, researchers have studied *safety culture* in industrial settings, linking behavioral expectations for the use of safety equipment to decreased rates of workplace accidents (Zohar, 2000).

Similarly, scholars working in the area of customer service have generated robust evidence that an organization's *service climate* impacts customer service outcomes and organizational profitability (Schneider et al., 2009). Strategic dimensions of organizational culture and climate contribute to organizational outcomes by signaling to employees what behaviors are expected and rewarded and by creating a work environment in which those behaviors are supported both materially (i.e., through policies, procedures, and reward structures) and psychologically (Schneider et al., 2011).

Recent theoretical and empirical work in child welfare agencies has built on the notion of strategic culture and climate dimensions to develop and confirm a conceptual model of organizational culture and climate for child welfare agencies (Glisson et al., 2012). The theory hypothesizes that three dimensions of organizational culture—proficiency, resistance, and rigidity—influence youth outcomes in child welfare systems by shaping three dimensions of organizational climate—engagement, functionality, and stress—which ultimately explain system variance in youth outcomes. According to the theory, child welfare agencies with more proficient, less resistant, and less rigid organizational cultures will have more engaged, more functional, and less stressful climates. In turn, more engaged, more functional, and less stressful climates define work environments where caseworkers experience the support and personal involvement they need to effectively advance the well-being of youth. A recent confirmatory factor analysis of the Glisson et al. (2012) conceptual model supported its factorial validity in a national sample of child welfare agencies. However, studies have yet to test the structural relationships among these culture and climate dimensions and youth outcomes. The present study addresses this gap by testing the full structural model linking organizational culture, climate, and youth outcomes in a national sample of child welfare systems.

The Impact of Organizational Culture and Climate on Youth Outcomes in Child Welfare

Several studies have examined the links between organizational culture and climate in child welfare agencies and the outcomes of child welfare services (Glisson & Green, 2006, 2011; Glisson & Hemmelgarn, 1998; Glisson & James, 2002; Yoo & Brooks, 2005). Perhaps the most robust evidence from these studies linked a single dimension of organizational climate—engagement—to youths' psychosocial functioning over a seven year period following contact with the child welfare system (Glisson & Green, 2011). This study showed that youth who received services from child welfare agencies with the most engaged organizational climates exhibited significant improvement in psychosocial functioning over the seven year period; in contrast, youth who received services from agencies with the least engaged organizational climates exhibited significant deterioration in functioning during the same period. Other more localized studies have linked high proficiency and low resistance cultures to higher quality casework services, increased odds of referral for necessary mental health treatment, and decreased employee turnover in child welfare settings (Aarons & Sawitzky, 2006; Glisson & Green, 2006; Glisson & James, 2002). More functional climates and more rigid cultures have also been associated with fewer out-of-home placements in child welfare systems (Yoo & Brooks, 2005).

These studies suggest organizational cultures characterized by high proficiency and low resistance and organizational climates characterized by high engagement and high functionality contribute to service effectiveness in child welfare. Less clear is the direction of the relationship between rigid organizational culture and youth outcomes as studies have reported positive (Yoo & Brooks, 2005), negative (Glisson et al., 2013), and null (Glisson & James, 2002) relationships between these constructs. Similarly, findings relating stressful organizational climate to service effectiveness are mixed. More stressful climates were associated with higher turnover among caseworkers (Aarons & Sawitzky, 2006) and worse outcomes in children's mental health settings (Glisson et al., 2013) but were not related to youth outcomes in a national study of child welfare systems (Glisson & Green, 2011). The mixed results of these studies highlight the need for research that examines the links between organizational culture, climate, and youth outcomes in a large representative sample of child welfare agencies.

This study pursues two aims. First, it tests a hypothesized *a priori* OCC model, proposed by Glisson et al. (2012), relating organizational culture and climate to each other and to youth outcomes in child welfare settings (see Figure 1). The Glisson et al. (2012) model is among the oldest and most well-developed OCC models for child welfare systems and earlier smaller-scale studies offer supportive, if limited, evidence for the model (Glisson & Green, 2006, 2011; Glisson & James, 2002). However, no study has tested the full structural model in connection with youth outcomes in a national sample nor tested the indirect effects of culture on youth outcomes through organizational climate. This study addresses that gap.

Second, this study advances the Glisson et al. (2012) model by identifying the specific strategic dimensions of culture and climate that are most closely associated with youth outcomes and represent the most promising targets for organizational intervention efforts. The development of OCC theory in child welfare systems has advanced to the point that investigators must begin identifying specific dimensions of culture and climate to target for improvement in administrative practice and organizational interventions.

Method

Data Source

Data for this study are from the second and most recent National Survey of Child and Adolescent Well-Being (NSCAW II). NSCAW II is the second national longitudinal probability study of children in the U.S. child welfare system funded by the Administration on Children and Families of the U.S. Department of Health and Human Services (Dowd et al., 2012). Details of the NSCAW II study design are presented in Dowd et al. (2012) and are summarized here.

Briefly, NSCAW II employed a two-stage stratified random sampling design that built on the sampling framework established in the first NSCAW study (Webb, Dowd, Harden, Landsverk, & Testa, 2010). The target population for the study was "all children in the U.S. who were subjects of child abuse or neglect investigations (or assessments) conducted by CPS [child protective services] and who live in states not requiring an agency first contact of the sample members" (Dowd et al., 2012, p.22). In the first sampling stage investigators

divided the US into nine strata corresponding to the eight states with the largest child welfare caseloads and a single stratum including the remaining 38 states and the District of Columbia. In the second stage, primary sampling units (PSUs) were formed within each stratum based on the geographical areas served by CPS agencies within that stratum. In most cases PSUs corresponded to counties or continuous areas of two or more counties; however, in larger metropolitan areas smaller geographic areas defined the PSUs corresponding to the catchment areas of urban CPS agencies. The two-stage sampling process as implemented in the first NSCAW study resulted in 92 PSUs in 97 counties across the United States. The agencies serving these PSUs were recruited to participate in NSCAW II and a total of 76% were retained. Recruitment of additional agencies for replacement brought the final NSCAW II sample to 86 PSUs representing 81 counties in 30 states. The most common reason for refusal to participate was passage or reinterpretation of legislation requiring the agency to make first contact with families suspected of abuse or neglect (Dowd et al., 2012).

The NSCAW II within-PSU sampling process occurred over a 15-month period from February 2008 to April 2009 and included all eligible children, ages 0- to 18-years-old, investigated or assessed for child abuse or neglect. Children were excluded from the sampling frame if they: (a) had been selected in a previous month, (b) were members of the same family or household of a previously selected child (e.g., sibling), or (c) were being investigated as a perpetrator of abuse on another child. The within-PSU sampling process employed simple random selection within five domains representing youth from all age groups with varying service characteristics. The sampling process resulted in a final sample of 5,872 youth in the NSCAW II database. Wave 2 data collection occurred 18 months after the close of the investigation that brought the child into the study. The present study relies on data from waves 1 and 2.

Analytic Sample

The population of interest for the present study included youth, ages 18 months to 18 years old, who were investigated and monitored for abuse or neglect by the U.S. child welfare system. Child welfare systems are responsible for accurately assessing, preventing, and treating child abuse and neglect and thus bear responsibility for all youth whom they investigate. Because the accuracy of risk assessment and case dispositions cannot be determined *a priori*, the study sample included all youth who were assessed by child welfare systems regardless of case disposition and subsequent service activity. Youths younger than 18 months old were excluded from the study because caregiver report measures of youth psychosocial functioning were not available for children under 18 months old at baseline.

Measures

Child Behavior Checklist (CBCL)—The primary outcome of interest was children's level of psychosocial functioning at 18 month follow-up, controlling for their level of functioning at baseline. Problems in children's functioning are expressed along two broadband dimensions—externalizing problems (e.g., aggression, stealing, disruptive behavior) and internalizing problems (e.g., anxiety, withdrawal, somatic complaints)—which can be monitored over time to assess changes in youths' psychosocial well-being (Achenback & Edelbrock, 1978; Cicchetti & Toth, 1991). Drawing on this

conceptualization, and consistent with past research (e.g., Keiley, Howe, Dodge, Bates, & Pettit, 2001; Glisson, 2010; Glisson & Green, 2011),we measured children's psychosocial functioning using the total problems T-score of CBCL for youth ages 1.5 to 5 years or ages 6 to 18 years depending on the child's age (Achenbach & Rescorla, 2001). The CBCL total problems T-score provides a composite assessment of children's externalizing and internalizing behaviors and is an ideal measure of youth psychosocial functioning for populations such as the current one where clinical levels of psychiatric impairment, although elevated (Heflinger, Simpkins, & Combs-Orme, 2000; Horwitz, Hurlburt, & Zhang, 2010), are not the norm.

The CBCL forms are widely used in research and practice applications with youths ages 1.5 to 18 years old and have demonstrated excellent score reliability and validity in numerous large and diverse samples of youth (e.g., Aschenbrand, Angelosante, & Kendall, 2005; Hudziak, Copeland, Stanger, & Wadsworth, 2004; Nakamura, Ebesutani, Bernstein, & Chorpita, 2009). National norms and T-scores for the CBCL are based on data from the 1999 National Survey of Children, Youth, and Adults (Achenbach & Rescorla, 2001). CBCL scoring guidelines indicate that T scores of 60 to 63 represent the borderline clinical range and T scores of 64 or above represent the clinical range (Achenbach & Rescorla, 2001). Caregivers completed the CBCL at baseline and 18 months after the close of the initial investigation or assessment.

Organizational social context—The organizational cultures and climates of the agencies in the NSCAW II sample were assessed based on caseworkers' responses to the 105-item Organizational Social Context (OSC) measure (Glisson et al., 2012). Caseworkers completed the OSC survey during staff meetings, following standardized protocols in which administrators were not present and caseworkers were assured of the confidentiality of their responses. Responses to the OSC were collected in a 12 month period in the second wave of the NSCAW II that paralleled the collection of CBCL follow-up measures from the youths' caregivers.

Two national studies of the full OSC provide evidence for the reliability and validity of scores from the OSC (Glisson et al., 2012; Glisson, Landsverk et al, 2008; Glisson, Schoenwald, et al., 2008). These studies confirmed the factor structure of the OSC and provided evidence that OSC scores predicted caseworker turnover, new program sustainability, job satisfaction, and organizational commitment in mental health and child welfare organizations.

The OSC measures organizational culture on three strategic dimensions of: rigidity, resistance, and proficiency (Glisson et al., 2012). Rigid organizational cultures are characterized by behavioral norms and expectations for highly centralized decision-making, strict divisions of labor, minimal caseworker discretion in implementing work tasks, and an abundance of rules that constrain caseworkers' behavior. Resistant cultures are those in which caseworkers are expected to reject new ideas and innovations through either apathy (passive noncompliance) or active suppression of change. Proficient organizational cultures are characterized by expectations that caseworkers will have up-to-date knowledge to

perform their job duties, will be responsive to clients, and will place the well-being of clients first.

Organizational climate is measured by three dimensions on the OSC including: engagement, functionality, and stress (Glisson et al., 2012). Engaged climates are those were caseworkers feel they are able to accomplish many personally meaningful things in their work, remain personally involved in their work, and treat their clients in a personalized way. Functional climates are those where caseworkers feel they receive the support, cooperation, role clarity, and resources they need to successfully perform their job duties. Stressful climates are those in which caseworkers experience conflicting demands, feel as though they are unable to accomplish necessary job tasks, and are emotionally exhausted.

T-scores were derived for 81 of 86 agencies in the nationwide NSCAW II sample. These T scores included all six dimensions of organizational culture and climate based on surveys completed by 1,740 caseworkers. These scores were used in the present analysis. Five agencies were excluded from the sample because they had fewer than three caseworkers who completed the OSC (n = 3), they did not provide OSC data (n = 1), or they had unacceptably low caseworker agreement on their OSC responses based on the r_{wg} statistic (n = 1; James, Demaree, & Wolf, 1993). On average, 21 caseworkers per agency provided responses to the OSC with a range of 3 to 97 caseworkers per agency. T-scores were computed for each agency on each of the six dimensions of organizational culture and climate based on the aggregate, system-level z-scores [$z = (- \mu)/\sigma$] and T-values [$T = 50 + 10z$] where μ = mean and σ= standard deviation of national sample system scores (Glisson et al., 2012). Glisson et al. (2012) provided evidence of moderate to excellent scale reliabilities, adequate within-agency agreement among caseworkers' responses based on r_{wg} values (James et al., 1993), and significant between-system variance on all six dimensions of culture and climate.

Model covariates—Children enter the child welfare system with a set of personal characteristics that serve as risk or protective factors for their psychosocial well-being (Webb et al., 2010). In order to assess the effects of organizational culture and climate, these characteristics were included in the structural regression models as covariates for each youth at level 1. Youth characteristics included: child age in months at baseline, child gender, child race (coded as African American, Native American/Alaskan Native, or Asian/Hawaiian/Pacific Islander due to small cell sizes), child ethnicity (Latino vs. non-Latino), family income, level of harm resulting from the investigated abuse or neglect, and the agency's substantiation of maltreatment. Level of harm was measured on a five point likert-type scale ranging from minimal to severe as assessed by the investigative caseworker during the baseline investigation or assessment.

Child welfare agencies vary in terms of their size, location, and resources. In order to test the relationships between OCC and youth outcomes, we controlled for agency-level differences in these characteristics in the level 2 structural models. Level 2 covariates included agency size, location (urban versus rural), and resources calculated as the ratio of the agency's annual budget to the number of full time equivalent caseworkers. Agency administrators

reported on agency budget and staff size during in-person interviews conducted during wave 1.

Data Analysis

The cross-level effects of organizational culture and climate on youth outcomes in the hypothesized model were tested using multilevel path analysis (ML-PA) implemented with Mplus 7 software (Muthén & Muthén, 1998–2012). ML-PA is a special case of multilevel structural equation modeling (Muthén & Asparouhov, 2008; Rabe-Hesketh, Skrondal, & Pickles, 2004) that incorporates random intercepts and allows investigators to specify separate structural models to account for variance at each of the nested levels (Hox, 2010). In the present application, variance in youth outcomes was modeled as the outcome of structural models at the child- (level 1) and agency- (level 2) levels where the level 2 model predicted variance in the random agency-level intercepts. These intercepts represented covariate-adjusted agency means of youths' 18-month CBCL scores.

Mplus derives parameter estimates in ML-PA using maximum likelihood estimation with an accelerated expectation-maximization algorithm (Muthén & Muthén, 1998–2012). Unlike earlier methods for ML-PA, the Muthén & Asparouhov (2008) approach as implemented in Mplus accommodates missing data, unbalanced cluster sizes, and random slopes. The robust maximum likelihood estimator (MLR) was used because it does not require the assumption of normality, it provides robust estimates of standard errors and chi-square, and is more computationally efficient than previous methods (Muthén & Muthén, 1998–2012).

Model adequacy was assessed by examining the model chi-square test for absolute fit and, given the sensitivity of the chi-square test to large sample sizes, approximate fit indices including the RMSEA, or root mean square error of approximation (Browne & Cudeck, 1992), the CFI, or comparative fit index (Bentler, 1990), and the standardized root mean square residual (SRMR). Guidelines for interpreting approximate fit indices suggest a CFI $\geq .95$, in conjunction with a value of RMSEA $< .05$ and SRMR $< .08$ imply adequate model fit (Hox, 2010; Hu & Bentler, 1999).

Following the test of the *a priori* OCC model, we tested a series of trimmed models by eliminating non-significant OCC paths (while still controlling for youth- and system-level covariates) and performing a Wald chi-square difference test to evaluate whether these trimmed models exhibited significantly worse fit than the *a priori* model (Asparouhov & Muthén, 2010). The Wald chi-square difference test evaluates the equal fit hypothesis that the trimmed and full models are statistically equivalent and is appropriate for comparing nested models estimated using multiple imputation and the MLR estimator (Asparouhov & Muthén, 2010).

Results

Descriptive Analyses

The NSCAW II dataset contains information on 5,872 children in 86 agencies. Of these, 2,506 (43%) children did not have a caregiver-report CBCL at baseline because they were less than 18 months old during the initial investigation/assessment (n = 2,412) or because of

missing data (n = 94). Five agencies failed to provide useable OSC assessments, and an additional eight agencies did not report on annual budget or full-time equivalent staffing levels. The final agency count was 73 (85%). Of the remaining 3,040 children in 73 agencies, 2,463 children (81%) had an 18-month caregiver report CBCL and 2,380 children (78%) had complete demographic data with the exception of family income (19% missing) and level of harm (14% missing) which were imputed using Bayesian multiple imputation procedures (Schafer, 1997) across five datasets. Final analyses therefore included 2,380 children in 73 agencies.

Characteristics of youth and agencies in the sample are reported in Table 1. Consistent with prior studies of youth referred for child abuse and neglect, the average CBCL total problems T score was elevated but below the clinical range for mental health problems at both baseline, M = 54.96, SD = 12.29, and follow-up M = 53.73, SD = 12.39, for this sample of youth served by the child welfare system (Glisson, 2010; Heflinger et al., 2000; Horwitz et al., 2010). The proportion of children in the non-clinical, borderline clinical, and clinical ranges at 18-month follow-up were .67, .09, and .24, respectively.

A Priori Model Fit

Values of the approximate fit indices supported the *a priori* model's fit to the data, RMSEA = .028, CFI = .983, SRMR = .078, although, given the power generated by the large sample size, the chi-square test indicated a significant difference between the estimated and observed covariance matrices, $\chi^2(12) = 34.17$, $p < .001$.

Direct and Indirect Effects in the a Priori Model

Significance tests of the unstandardized direct and indirect path estimates from the *a priori* model generally supported the hypothesized relationships. Consistent with expectations, agencies with more proficient organizational cultures had more engaged, B = .56, SE = .12, $p < .001$, more functional, B = .68, SE = .08, $p < .001$, and less stressful climates, B = −.30, SE = .10, $p < .001$, whereas agencies with more resistant organizational cultures had less functional, B = −.36, SE = .14, p = .008, and more stressful climates, B = .59, SE = .14, $p < .001$, with a trend toward less engaged climates, B = −.26, SE = .15, p = .082. In turn, agencies with more engaged, more functional and more stressful climates had superior youth outcomes, B = −.05, SE = .02, p = .040, B = −.06, SE = .03, p = .039, and B = −.10, SE = .02, $p < .001$, respectively.

The indirect effects of proficient organizational culture on youth outcomes were significant through all three climate dimensions of engagement, B = −.03, SE = .01, p = .049, functionality, B = −.04, SE = .02, p = .047, and stress, B = .03, SE = .01, p = .026, as was the indirect effect of resistant culture on youth outcomes through stress, B = −.06, SE = .02, $p = .004$. Rigid culture was not significantly related to any of the climate dimensions and had no significant indirect effects ($p > .318$) The three culture dimensions explained 32%, 53%, and 46% of the variance in engagement, functionality, and stress, respectively. The structural model of strategic organizational culture and climate dimensions and agency covariates accounted for R^2= 70% of the agency-level variance in youth outcomes. Standardized path estimates from the *a priori* model are presented in Figure 1.

Trimmed Models

Given the non-significant effects of rigid organizational culture on any climate dimension, we constrained these paths to zero in a series of trimmed models and compared their fit to the *a priori* model using the Wald chi-square difference test. Results from these model comparisons indicated that the elimination of the paths from rigidity to each of the three climate dimensions did not significantly deteriorate model fit. Fit statistics for the final trimmed model and the Wald difference test are presented in Table 2.

The final trimmed model is presented in Figure 2. Results from this model indicated that all paths from proficiency and resistance to the three climate dimensions conformed to expectations and were significant. Higher proficiency was associated with higher engagement, $B = .54$, $SE = .12$, $p < .001$, higher functionality, $B = .69$, $SE = .08$, $p < .001$, and less stress, $B = -.27$, $SE = .10$, $p = .005$. Higher resistance was associated with lower engagement, $B = -.32$, $SE = .15$, $p = .036$, lower functionality, $B = -.32$, $SE = .10$, $p = .001$, and higher stress, $B = .69$, $SE = .10$, $p < .001$. Consistent with the *a priori* model, all paths linking engagement, $B = -.05$, $SE = .02$, $p = .040$, functionality, $B = -.06$, $SE = .03$, $p = .039$, and stress, $B = -.10$, $SE = .02$, $p < .001$, to youth outcomes were significant with higher levels of each climate dimension predicting better youth outcomes. Furthermore, all three indirect paths from proficiency to youth outcomes were significant through the three climate dimensions of engagement, $B = -.03$, $SE = .01$, $p = .046$, functionality, $B = -.04$, $SE = .02$, $p = .045$, and stress, $B = .03$, $SE = .01$, $p = .028$, and one indirect path from resistance to youth outcomes was significant through stress, $B = -.07$, $SE = .02$, $p = .001$.

Discussion

This study advances theory and research on organizational effectiveness in child welfare systems by confirming the hypothesized relationships between OCC and youth outcomes from one of the most well-developed structural theories of OCC for child welfare systems and by identifying specific dimensions of OCC that are most closely associated with youth outcomes in a national probability sample of child welfare agencies. Study findings confirm that two strategic dimensions of organizational culture—proficiency and resistance—are significantly associated with three dimensions of organizational climate—engagement, functionality, and stress—and that these climate dimensions relate significantly to agency variance in youth outcomes. Child welfare agencies with more proficient and less resistant organizational cultures exhibited more engaged, more functional, and less stressful organizational climates. In turn, more engaged, more functional, and more stressful climates were associated with improved outcomes for youth. The study confirms the indirect association between proficient organizational culture and enhanced youth outcomes through the climate dimensions of engagement and functionality. This is the first study to demonstrate the significant indirect effects of organizational culture on youth outcomes through organizational climate in child welfare systems.

These results suggest child welfare systems may be able to enhance youth outcomes by developing proficient cultures and engaged and functional organizational climates. Work environments with these characteristics are most likely to support the positive casework relationships, tenacity, availability, responsiveness, and continuity that children and families

in the child welfare system need from their caseworkers in order to achieve permanency, safety, and well-being (Glisson & Green, 2011; Glisson & James, 2002). Randomized controlled trials have shown that these dimensions of OCC can be improved in youth mental health systems and that improvement in OCC translates into improved outcomes for youth (Glisson et al, 2013).

The significant relationship between stressful organizational climate and improved youth outcomes addresses gaps in the literature regarding this relationship (Glisson & Green, 2011; Glisson et al., 2013) and highlights the need for further research on the complex and dynamic role of stressful climates in child welfare systems. In the analysis, stressful climate was positively related to improved outcomes for youth after controlling for the effects of engagement and functionality. One interpretation of these findings is that after controlling for engagement and functionality caseworkers who work in child welfare agencies that contribute to child well-being will inevitably perceive their work environments as more stressful because of the complex demands of promoting the well-being of children served by the child welfare system. Caseworkers who expend the necessary energy and effort required to achieve positive outcomes will inevitably feel pulled in conflicting directions, perceive their work to be perpetually unfinished, and experience the emotional demands of the work (all components of a stressful climate). However, if caseworkers also perceive the support they need from the work environment to perform their jobs well, their performance (and youth outcomes) may be enhanced rather than diminished. Similar findings and a similar line of argument have been developed and supported in connection with the job demands and resources model which argues that employees can be effective in inherently stressful and highly demanding jobs if they also receive the support and resources they need to remain highly engaged and motivated in their work (Crawford, Lepine, & Rich, 2010). Findings from this study highlight the need for further research on the relationship between stressful and engaged organizational climates and youth outcomes in child welfare. In particular, studies that compare configural versus dimensional approaches to measuring OCC (e.g., Schulte, Ostroff, Shmulyian, & Kinicki, 2009) and include varied organizational settings (e.g., child welfare versus mental health) may shed light on the complex relationship between stressful climate and youth outcomes.

Previous studies have examined the effects on service outcomes of all culture and/or climate dimensions simultaneously rather than assessing the hypothesized causal order implied by theory (e.g., Glisson & James, 2002). Findings from this study suggest that organizational culture acts as an antecedent to climate and has indirect effects on youth outcomes. Although longitudinal studies are needed to confirm the ordering of causal effects, these results provide the first step in untangling the relationships between organizational culture, climate, and youth outcomes. As such, these findings build a basis for future research on intervention development and administrative practice recommendations for improving child welfare services.

The absence of a relationship between rigid organizational culture and youth outcomes raises questions about the extent to which centralized and formalized decision-making negatively impact youth outcomes in child welfare systems as was hypothesized by the Glisson et al. (2012) model. One possible explanation for the null finding is that rigidity

exhibits a contingent relationship with climate and youth outcomes in which high rigidity may be beneficial in some circumstances. For example, children's mental health services researchers have argued that rigid treatment protocols are necessary in order to achieve positive youth outcomes (Schoenwald et al., 2003). In agencies characterized by both high rigidity and high proficiency, youth outcomes may be enhanced. Prior research in child welfare provides some support for this line of reasoning. Using a measure of OCC that combined high rigidity with high functionality, Yoo and Brooks (2005) discovered a positive relationship between their measure of OCC and youth outcomes (out-of-home placements) in child welfare systems. The difference in results between their study and the present one may be attributed to differences in measurement strategies or may signal an interactive relationship between rigid organizational culture, functional climate, and youth outcomes. Alternatively, rigid organizational culture may be an accepted norm within child welfare systems and thus may exert minimal impact on either climate or youth outcomes. Further research and theory development are needed in order to clarify and test the nature of this relationship.

Strengths of the present study include the use of a national sample of child welfare agencies, incorporation of a well-developed theory of OCC specific to child welfare settings, use of multiple respondents to assess the study's key constructs (i.e., caregivers, caseworkers), reliance on front-line caseworkers as informants regarding their agencies' OCCs, and the use of a two-wave design that permitted temporal spacing of certain purported causes (i.e., OCC) and effects (i.e., youth outcomes). However, readers are cautioned against interpreting the results of this study in a causal fashion (e.g., more proficient culture causes improved outcomes for youth) due to the lack of manipulation of the independent variables, lack of random assignment of youth to treatment conditions, and the cross-sectional measurement of culture and climate.

Results from this study echo the findings of a previous U.S. General Accounting Office report (2003) that indicated outcomes for children in the child welfare system may be improved by improving the OCC of child welfare agencies. Although many of the risks facing youth in the child welfare system are not malleable, state agents can influence the types of organizational cultures and climates that develop within child welfare agencies through staff selection, agency policy, and planned organizational interventions (Glisson, Dukes, & Green, 2006). Recent work to develop organizational strategies to improve the organizational cultures and climates of child welfare and youth mental health systems supports the positive impact these types of interventions can have on culture, climate, employee turnover, service quality, and youth outcomes (Glisson et al., 2006; Glisson, Hemmelgarn et al., 2012; Glisson et al., 2013). Efforts such as these should be supported and expanded in the child welfare system.

Acknowledgments

Funding disclosure: This research was supported in part by a grant from the National Institute of Mental Health to NJW (F31MH099846). The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

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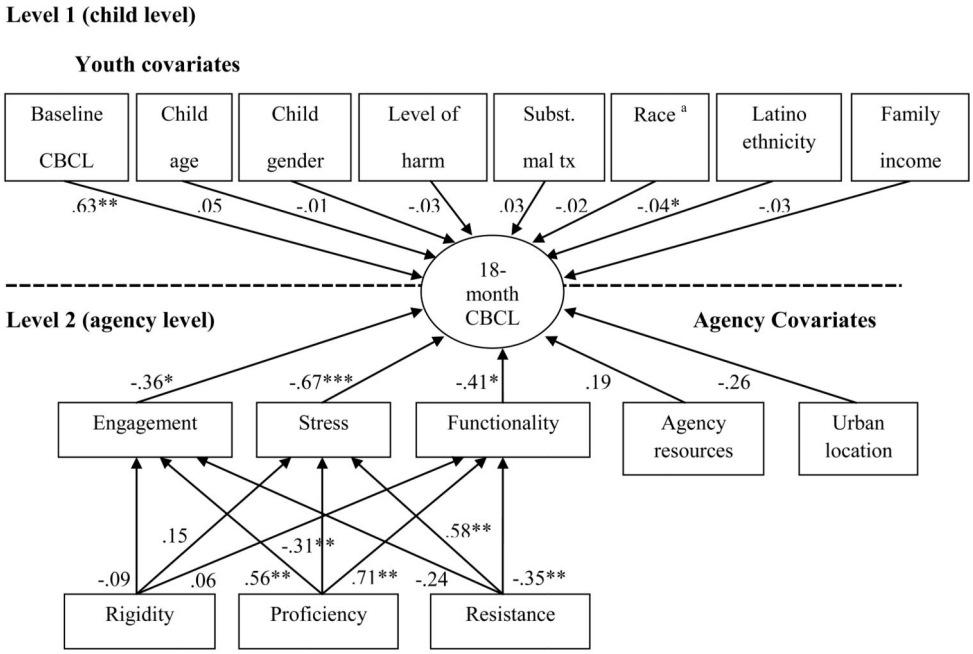

Figure 1. Standardized path estimates for *a priori* multilevel path model of organizational culture, climate and youth outcomes in child welfare

Note: Path p-values based on unstandardized parameter estimates.

[a] The model included three of four mutually exclusive and exhaustive race categories—Black, Asian, and Native American/Alaskan Native—contrasted against the majority White racial group. The standardized coefficients for all three race categories had the same value after rounding.

***$p < .001$

**$p < .01$

*$p < .05$

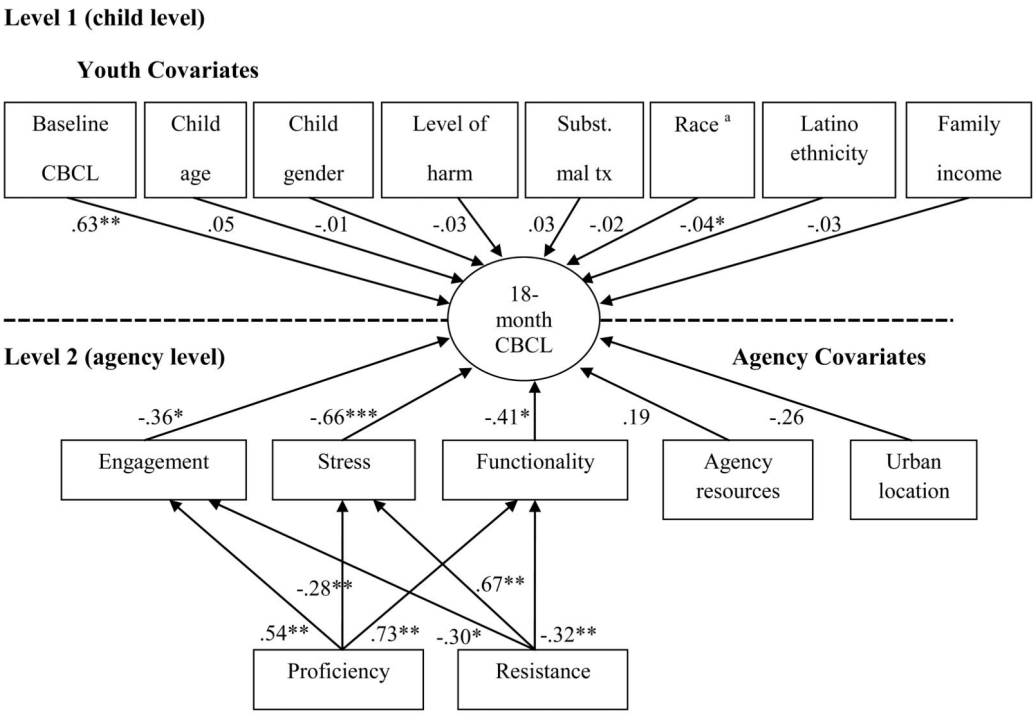

Figure 2. Standardized path estimates for final trimmed path model of organizational culture, climate and youth outcomes in child welfare

Note: Path p-values based on unstandardized parameter estimates.

[a] The model included three of four mutually exclusive and exhaustive race categories—Black, Asian, and Native American/Alaskan Native—contrasted against the majority White racial group. The standardized coefficients for all three race categories had the same value after rounding.

***$p < .001$

**$p < .01$

*$p < .05$

Table 1

Descriptive statistics for youth and agencies: Means or proportions.

	Means (SD) or proportions
Characteristics of Youth (*N* = 2,380)	
Total Problem Behaviors, 18 month follow-up (t-scores)	53.73 (12.39)
Total Problem Behaviors, Baseline (t-scores)	54.96 (12.29)
Caseworker's Assessment of Harm to the Child[a]	2.24 (1.02)
Child Age (in months)	95.03 (53.22)
Family income (in $1,000s)[a]	34.87 (36.29)
Report of Child Maltreatment Substantiated	.58
Female	.49
Race	
American Indian/Alaskan Native	.09
Asian/Hawaiian/Pacific Islander	.04
African American	.34
White	.53
Latino	.27
Characteristics of Child-welfare Agencies (*N* = 73)	
Organizational Culture (T-scores)	
Proficiency	49.56 (10.16)
Rigidity	49.81 (9.93)
Resistance	50.84 (9.46)
Organizational Climate (T-scores)	
Engagement	49.53 (10.19)
Functionality	49.64 (9.70)
Stress	50.78 (9.70)
Resources [b]	1.02 (.70)
Urban location	.85

[a] Mean value over five imputed datasets.

[b] Resources was calculated as agency expenditures divided by full-time equivalent (FTE) staff. Expenditures and FTE staff variables were categorized into five and nine categories, respectively.

Table 2

Absolute and approximate fit indices for multilevel path models linking organizational culture, climate, and youth outcomes in child welfare systems.

Model	RMSEA	CFI	SRMR	Model X^2 (*df*)	ΔWald X^2 (*df*)
A priori model	.028	.983	.078	34.17 (12)***	
Final model	.024	.984	.080	35.88 (15)**	2.13 (3)

Note: K = 73 child welfare agencies; *N* = 2,380 youth. RMSEA = root mean square error of approximation; CFI = comparative fit index; SRMR = standardized root mean square residual.

*** $p < .001$

** $p < .01$

* $p < .05$