Effect of Organizational Climate on Youth Outcomes in Residential Treatment

NEIL JORDAN, PhD, SCOTT C. LEON, PhD, RICHARD A. EPSTEIN, PhD, ELIZABETH DURKIN, PhD, JENA HELGERSON, BS, and BRITTANY L. LAKIN, MA

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This study examined the association between organizational climate and changes in internalizing and externalizing behavior for youth in residential treatment centers (RTCs). The sample included 407 youth and 349 front-line residential treatment staff from 17 RTCs in Illinois. Youth behavior was measured using the Child Functional Assessment Rating Scale. Organizational climate was measured via the Areas of Worklife Survey. Using hierarchical linear modeling, results demonstrated that a higher perception of person-job match on community among front-line staff was associated with more improvement on youth externalizing behaviors. Counter-intuitively, higher person-job match on fairness and workload were each associated with less improvement on internalizing and externalizing behavior. These results offer several potential implications for residential treatment leadership, front line workers, policymakers, youth, and researchers.

KEYWORDS residential treatment, treatment outcomes, organizational climate

Residential treatment outcomes for children and youth have become a subject of growing attention in the literature over the past decade (Bickman, Lambert, Andrade, & Penaloza, 2000; Curry, 1991, 2004). There are at least two trends in mental health service delivery that have renewed focus on this topic. One trend is the rising cost of mental health care for children and

The authors acknowledge Li Zhou’s assistance in preparing the data file for analysis and Brice-Bloom-Ellis for helpful comments.

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Youth (Yelton, 1993). Among all types of mental health services, residential treatment is the most expensive form of care because it has a higher episode cost than psychiatric hospitalization due to the extended length of residential treatment stays (LeCroy & Ashford, 1992; Lyons, Libman-Mintzer, Kisiel, & Shallcross, 1998; Whittaker, 2004). A second service delivery trend is the increased use of managed care initiatives in the public sector of mental health services. These initiatives attempt to redistribute funds from expensive services that treat relatively few children (e.g., residential treatment centers) to less expensive community-based programs that are able to treat larger numbers of children (Burns & Friedman, 1990; Leichtman, Leichtman, Barber, & Neese, 2001; Lyons et al., 1998; Lyons, Terry, Martinovich, Peterson, & Bouska, 2001; Yelton).

An additional reason for the recent research focus on residential treatment outcomes is the emergence of the system of care model, which emphasizes treatment in the least restrictive environment (Stroul & Friedman, 1986). Residential treatment centers (RTCs) have traditionally been excluded from system of care initiatives. In fact, residential programs have often been seen as a last resort for children not successfully treated in the community. As a result, children and youth in RTCs have increasingly severe psychopathology and are more difficult to treat than in years past (Lieberman, 2004). Despite the increased emphasis on treating children in the least restrictive environment and the development of system of care initiatives, there is still evidence of a gap between the needs of some children and the services that are available and/or provided in the community (Asarnow, Aoki, & Elson, 1996; Connor, Miller, Cunningham, & Melloni Jr, 2002). Therefore, it seems that there will continue to be children who require residential treatment (Lieberman).

As a result of these trends, RTCs are experiencing pressure to demonstrate that their services are effective (Lieberman, 2004). Existing research in the field has been methodologically limited and, as a result, the literature is inconsistent and at times contradictory (Bates, English, & Kouidiou-Giles, 1997; Whittaker, 2004). Neither the effectiveness of residential treatment nor the determinants of its effectiveness are well understood. Previous research has primarily focused on child and family level predictors of residential treatment outcomes, yet evidence suggests variation in outcomes across RTCs that cannot be explained by child or family characteristics (Lyons et al., 2001). Organizational level factors that may be related to outcomes have yet to be systematically examined.

Background and Significance

Recent calls for research in children’s mental health (Glisson, 2002) and child welfare (Courtney, 2000) have highlighted gaps in current knowledge regarding the associations between organizational factors and service
delivery and child and youth outcomes. Previous organizational studies within human services have identified variation in important organizational characteristics such as structure (Schmid, 1992b; Schoenwald, Sheidow, Letourneau, & Liao, 2003), culture (Aarons & Sawitzky, 2006; Glisson & James, 2002), climate (Glisson & James, 2002; Littell & Tajima, 2000), and ownership status (Durkin, 2002; Warner, Pottick, & Bilder, 2005), even across seemingly similar agencies. Yet, less information is known about whether and how these variations shape service delivery decisions and/or outcomes.

Within the arena of children’s mental health, the “organizational context” of children’s mental health service agencies can be modeled as a complex interaction between factors operating at the organizational level and those operating at the worker level (Glisson, 2002). Because a mental health worker’s attitudes (defined as commitment to the organization and job satisfaction) may be shaped in part by this organizational context, the capacity of workers to establish the warm, empathic, and genuine “therapeutic alliance” that is associated with effective treatment (Blanz & Schmidt, 2000; Eltz & Shirk, 1995; Martin, Garske, & Davis, 2000) can be expected to vary across organizations. Prior studies of mental health and other human service agencies have in fact demonstrated a relationship between worker attitudes and behavior and the climate of their organizations (Glisson, 2002).

Often confused with organizational culture (Denison, 1996), organizational climate is a distinct construct concerned with the way organizational members perceive the social environment within that organization and its impact on their individual psychological well being (James & James, 1989). When members of an organization or of an organizational unit share similar perceptions of this impact, a distinct organizational climate emerges; this climate can be characterized by the levels of role conflict, sense of fairness, and role clarity (Glisson, Landsverk et al., 2008; Glisson, Schoenwald et al., 2008). Organizational climates that are high on role conflict and low on sense of fairness and role clarity inhibit the development of positive therapeutic alliances between child service workers and youth, and thus contribute to poorer outcomes.

Despite the growing body of evidence regarding organizational climate’s role in treatment effectiveness, no studies exist that examine this relationship within RTCs. Yet, evidence suggests that the organizational context of residential treatment programs may differ from non-residential settings and thus merit distinct study. A recent analysis of Israeli residential boarding schools (an organization similar to RTCs here in the United States) found relationships between organizational properties and service effectiveness that differed from those that have generally been found in non-residential human service programs (Schmid & Bar-Nir, 2001). In contrast to evidence drawn from non-residential programs (Hasenfeld &
Schmid, 1989; Schmid, 1992a, 1992b), the residential boarding schools with higher levels of formalization and coordination were found to be more effective. In contrast, other organizational properties, such as worker autonomy and worker involvement in decision making, showed the same positive relationships to effectiveness as has been found in most non-residential programs. The Israeli study explained these seemingly contradictory findings by drawing attention to the dual mission of residential mental health service organizations: namely, to provide treatment (social welfare) as well as to isolate severely behaviorally disordered youth from the larger society (social control). This dual nature is reflected in the distinctive roles that are often assigned to organizational members. For example, clinical staff is responsible for providing formal mental health services such as individual, group and family therapy, but front-line staff, usually under the supervision of a clinical staff member, is responsible for establishing and maintaining residential life. The organizational context needed to achieve both goals effectively is likely different than what has been found for mental health services organizations with a unitary focus on clinical goals.

In United States RTCs, the front-line staff has day-to-day responsibility for residential life. These staff members have challenging jobs. They must supervise several children at one time during relatively unstructured times of the day (e.g., after school until bedtime). As a result, they tend to focus their efforts on ensuring the smooth functioning of the residential milieu. Specific types of child behaviors (e.g., internalizing and externalizing) each require front-line staff to use particular intervention techniques that may be differentially promoted or discouraged by aspects of organizational climate. The lack of past research attention on these topics warrants the present study’s examination of the relationship between organizational climate as experienced by front line residential staff and youth outcomes for both externalizing and internalizing behavior. The proposed study will attempt to improve the understanding of the effect of organizational climate on residential treatment outcomes for children and youth and help to strengthen the ability of RTCs to better serve their critical function within the system of care.

THE STUDY

The purpose of this study is to determine the organizational climate characteristics perceived by front-line residential treatment staff that are associated with improvement in youth internalizing and externalizing behavior. This information can be used by residential treatment administrators to improve organizational structure and practice. These results may also have implications for training and development of front-line staff.
Sample
The study sample includes 407 youth and 349 full-time, front-line staff from 17 RTCs in Illinois. Front line staff was operationally defined as those staff members who work in the milieu with the children through their entire shift. They did not include therapists, psychiatrists, nurses, teachers, supervisors, or other management. These RTCs provided permission for their front-line staff to be surveyed on organizational climate issues.

Data Sources
This study combines survey data of residential treatment staff with administrative data that includes outcomes data for youth in residential treatment. Outcomes data for this study were collected through the Residential Treatment Outcomes System (RTOS), an internet-based system designed for the Illinois Department of Children and Family Services (DCFS) to monitor treatment outcomes for wards of the state in residential care. Quarterly clinical assessments are completed for each ward and uploaded to the secure RTOS website.

Measures
CFARS
The clinical measure used in the present study is the Child Functional Assessment Rating Scale (CFARS) (Ward et al., 2006). The CFARS is a measure of the functional and psychiatric status of children age 7–18 and has been shown to have an adequate interrater reliability of $r > .5$ (Ward et al.). The children are evaluated across 16 domains using both descriptive phrases and severity ratings. In each domain raters are asked to select the phrases that best explain the symptomatology (e.g., the depression domain includes depressed mood, sleep problems, sad, hopeless, lacks energy/interest, irritable, etc.), and then rate the severity of the problem. Severity scores range from 1 (no problem) to 9 (extreme problem). The three weeks leading up to the CFARS assessment are included, so that the results provide a snapshot of functioning that is sensitive to change.

Staff members at RTCs around the state were trained and certified in the use of the CFARS. A score of 85% correct on the CFARS was required for certification. Trainees had a master’s degree or a minimum of three years of direct clinical experience. Users upload CFARS assessments to the RTOS website 30 days after admission, and then quarterly thereafter until discharge. Sociodemographic information, including age, gender and race, in addition to the CFARS scores are uploaded as well.

An exploratory factor analysis was conducted on the current sample’s Time 1 CFARS data using a principal axis extraction method with direct
oblimin rotation (Gorusch, 1997; Preacher & MacCallum, 2003). Items with loadings of .30 or higher were assigned to their related scales. Items were allowed to load on multiple factors if absolute values of their factor loadings were greater than .50 on multiple scales. Two interpretable factors emerged from the data and were labeled internalizing (e.g., depression, anxiety, danger to self) and externalizing (e.g., hyperactivity, socio-legal, danger to others).

**Areas of Worklife Survey (AWLS-4th Edition)**

The AWLS-4 is a 29-item, self-report measure assessing individual workers' perceptions regarding six core areas of organizational context that affect their relationships with their work. The six areas of worklife are hypothesized to impact an array of job-related variables such as job satisfaction, commitment, and goals (Leiter, 2006). Items are rated on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The six areas are: workload, control, reward, community, fairness, and values. For each of the six areas there is a range of person-job match or mismatch, from 1 (extreme mismatch) to 5 (extreme match). In the current study, the values domain was not included in the analyses due to its high correlation with fairness.

The AWLS-4 has been shown to be reliable, with Cronbach's α ranging from .67 to .82 on the five domains included in this study (Leiter, 2006). The workload domain contains 6 items that assess burden associated with the amount of work to be done in a given amount of time (e.g., “I do not have time to do the work that must be done”). The control domain contains 3 items that assess the workers' opportunities to make choices and decisions, solve problems, and contribute to work responsibilities (e.g., “I have control over how I do my work”). The reward domain contains 4 items that assess the workers' perceptions of the financial and social recognition they receive for their work contributions (e.g., “I receive recognition from others for my work”). The community subscale contains 5 items that assess the workers' perceptions of the quality of the social environment at work. These qualities include support, collaboration, and positive feelings (e.g., “People trust one another to fulfill their roles”). The fairness domain contains 6 items that assess extent to which the worker believes the rules are fair and equitable for everyone (e.g., “Resources are allocated fairly here”).

**Analytic Methods**

A hierarchical linear modeling (HLM) strategy (Raudenbush, Bryk, Cheong, & Congdon, 2004) was used to measure the outcomes trajectories (i.e., changes in outcomes over time) of the youth served by 17 RTCs. Hierarchical models (also known as mixed models) are useful for analyzing data that has a
nested structure (e.g., youth within RTCs) and/or multiple observations per person. An HLM strategy was also preferred for these analyses because it allows for the number of assessments and the timing of those assessments to vary from case to case. Each RTC’s trajectory of change was modeled as a log-linear function of time since admission (in years). Based on evidence of log-linear “dose-effect” relationships in a diverse range of psychosocial treatments (Howard, Kopta, Krause, & Orlinsky, 1986), a log-linear function was used to describe rates of change. A log-linear math model is both parsimonious (including only one slope and intercept parameter) and well-suited to describing treatment response patterns entailing early response (either negative or positive) followed by gradual stabilization. The present analyses modeled the change in average CFARS score for all children in each facility as a linear function of log (base square root of 3) of time after admission (in years) plus 1:

\[
\text{CFARS Outcome (change in internalizing or externalizing scores)} = \text{Intercept} + \text{Slope} \times \text{LOG}_{\sqrt{3}}(\text{years} + 1)
\]

This model form results in useful interpretations for intercept and slope terms. Specifically, the “intercept” is the average level at intake of the CFARS and the “slope” is the rate of change of CFARS score during the observation period, which was from admission until 15 months post-admission. Every CFARS administration during the 15-month period was used to calculate slope, so the number of CFARS for each youth ranged from two to four.

Both HLM models include the organizational climate variables (workload, control, rewards, community, fairness), age, gender, and the first CFARS internalizing or externalizing score as predictors. To facilitate interpretation, we reverse coded the change in internalizing and externalizing scale scores so that a positive change indicates improvement in functioning, and a negative change score indicates functioning decline.

**RESULTS**

Forty one percent of the sample of 408 youth were female with an average age of 14.3 years (SD = 2.16). The mean for the CFARS externalizing scale was 32.47 (SD = 11.22), and the mean for the CFARS internalizing scale was 17.14 (SD = 6.55). Both the externalizing and internalizing means were in the moderate range for a population of youth in residential treatment, based on the normative sample (Ward et al., 2006). The externalizing factor and the internalizing factor of the CFARS were utilized as the outcome measure in separate analyses. Tables 1 and 2 present results of the HLM analyses for
the internalizing analyses and Tables 3 and 4 present results for the externalizing analyses. For each of the analyses, fixed effects are first presented, followed by conditional random effects.

From the fixed effect analyses for the internalizing scale, several variables emerged as statistically significant (Table 1). The youth’s first internalizing score predicted slope; higher time 1 scores predicted more change ($\gamma = .57, t = 13.30, p < .001$). With regard to organizational climate, higher

<table>
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<tr>
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<th>Coefficient</th>
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<td>.67</td>
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<tr>
<td>Fairness</td>
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<td>Age</td>
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<tr>
<td>Gender</td>
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<td>.50</td>
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<tr>
<td>First Externalizing Score</td>
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<td>.94</td>
<td>12.25</td>
<td>&lt;.001</td>
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<td>Workload</td>
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<td>-1.90</td>
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<tr>
<td>Control</td>
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<td>.85</td>
<td>.42</td>
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<tr>
<td>Community</td>
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<td>.45</td>
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<td>.07</td>
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<td>Fairness</td>
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<td>Age</td>
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<td>.83</td>
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From the fixed effect analyses for the internalizing scale, several 270 variables emerged as statistically significant (Table 1). The youth’s first internalizing score predicted slope; higher time 1 scores predicted more change ($\gamma = .57, t = 13.30, p < .001$). With regard to organizational climate, higher
mean agency scores reflecting a greater person-job match on workload were associated with lower slopes ($\gamma = -1.32, t = -3.61, p < .01$). Similarly, higher mean agency scores reflecting a greater person-job match on fairness were also associated with lower slopes ($\gamma = .51, t = -3.11, p < .05$). Neither age nor gender predicted improvement slopes. The random effects analyses (Table 2) indicate that, after controlling for the study variables, significant variability still existed at the youth level of analysis (Level 2). No significant variability remained at Level 3; however, this is likely due to lower power based on the limited number of providers in the sample.

From the fixed effect analyses for the externalizing scale, only the youth’s first externalizing score predicted slope ($\gamma = .54, t = 12.25, p < .001$) using traditional alpha levels (Table 3). However, due to the small number of providers, limited power prevented rejection of the null hypothesis across three climate variables, all of which had p values of less than .10. First, and consistent with the internalizing results, mean agency scores reflecting a greater person-job match on workload were associated with lower slopes ($\gamma = -1.15, t = -1.90, p = .08$); similarly, higher mean agency scores reflecting a greater person-job match on fairness were also associated with lower slopes ($\gamma = -5.2, t = -1.89, p = .08$). However, unique to the externalizing analyses, higher mean agency scores reflecting a greater person-job match on community were associated with higher improvement slopes ($\gamma = .90, t = 2.01, p = .07$).

The random effects analyses (Table 4) indicate that for externalizing behavior, after controlling for the study variables, significant variability still existed at the youth level of analysis (level 2). No significant variability remained at level 3; however, this is again likely due to lower power based on the limited number of providers in the sample.

**DISCUSSION**

This study applied hierarchical linear modeling to two levels of data (youth and residential treatment center) to predict internalizing and externalizing scores on the CFARS. The analyses produced several interesting results involving the impact of organizational climate on the youths’ CFARS scores. Specifically, a greater person-job match on perceived workload and fairness among front-line RTC staff was associated with less improvement on youth internalizing and externalizing behavior. The only organizational result that emerged in the expected direction involved front-line staff perceptions of community and externalizing behavior scores: a greater person-job match on community was associated with greater improvement on the CFARS externalizing behaviors scale.

The workload and fairness findings were clearly counter-intuitive. For example, the perception of fairness is a commonly studied variable in the
industrial/organizational (I/O) psychology literature and is often associated with positive outcomes (Dailey & Kirk, 1992). Employees who believe they are being treated fairly are better able to cope with and perform under increased job pressure (Janssen, 2001), demonstrate lower turnover rates (Dailey & Kirk), and demonstrate a greater sense of self-efficacy in their work, known in the I/O literature as instrumentality (Walker, Churchill, & Ford, 1977). In addition, over 50% of the stresses reported by human service workers are related to work overload (Weinberg, Edwards, & Garove, 1983). Work–related fatigue and exhaustion, a consequence of a high workload, has been associated with greater absenteeism and high rates of turnover (Lee & Ashforth, 1996). Additionally, poorer workload match has been associated with higher levels of emotional exhaustion and depersonalization among children’s RTC staff (B. Lakin, 2008).

One way to begin conceptualizing the results may be to recognize that residential treatment frontline staff members work in a uniquely complicated and stressful setting. As a result, it is possible that high workload stress and perceptions of unfairness are the “default” experience of many frontline workers. Supporting this idea, normative data from the AWLS suggests that the two jobs surveyed with the highest rates of workload and fairness mismatch were workers employed at nursing homes and hospitals, two settings with institutional characteristics similar to RTCs (Leiter, 2006). It is possible that, in the high pressure residential care work setting, staff that are more emotionally invested and engaged in the youths’ progress are also more vulnerable to experiencing the normal and expected heavy burdens of the job. Regarding the fairness finding, it may be that staff who are more invested in their work and more open to its stresses are also more acutely aware of the discrepancies between their status in the organization and the relatively large burdens of their jobs. Also, many RTC frontline staff members are relatively young, so their concept of fairness may reflect a naïve perspective about workload expectations. Alternatively, an RTC’s organizational climate may be influenced by low organizational expectations (e.g., little or no programming), so that workload may not be that heavy nor is fairness an issue.

Naturally, any interpretations of the results are speculative and await further investigation. However, the counter-intuitive results in this study may have broader implications for how we understand and study work environments. For example, it is noteworthy that very little research in the broader I/O literature has attempted to explore whether organizational constructs such as fairness and community have the same meaning to people in different work settings. Surveys of organizational characteristics (e.g., culture and climate) may not be “one size fits all,” and the I/O literature may need to explore the possibility that some work environments require instruments designed specifically for unique settings and workers.
The results pertaining to perception of community in the current study are consistent with prior organizational research. Early organizational group theory suggested that “cooperation and cohesiveness” are important in a successful organization, especially between members in different hierarchical positions (Blum & Naylor, 1968). A strong sense of community is also likely related to coworker support, which has been found to be an effective coping strategy in stressful work environments. Several studies found that mental health workers often cope with job stress by talking to coworkers or supervisors (Halbesleben, 2006; Kruger, Botman, & Goodenow, 1991; Reid et al., 1999), which in turn protects against burnout (Halbesleben; Kruger et al., 1991; B. L. Lakin, Leon, & Miller, 2008; Lee & Ashforth, 1996; McCulloch & O’Brien, 1986). It is noteworthy that in the current study, perceived community was associated with better outcomes on youth externalizing behaviors. Externalizing behaviors, such as dangerousness and oppositionality, are likely experienced as more of a personal, psychological threat to the worker, a threat which can be mitigated by a sense of community and support from other workers. This may, in turn, allow the workers to better manage the difficult behavior, leading to relatively more positive outcomes.

Baseline severity was also an important predictor of outcome. Youth with more severe internalizing behaviors at Time 1 experienced more improvement in internalizing behaviors at Time 2 than youth with lower Time 1 internalizing behaviors. Similarly, youth with greater externalizing behaviors at Time 1 experienced more improvement in externalizing behaviors at Time 2 than youth with lower Time 1 externalizing behaviors. Existing literature on the impact of baseline symptom severity on mental health treatment outcomes broadly considered suggests that youth who show more signs of dysfunction at baseline are less likely to improve (Phillips et al., 1999). We speculate that our finding that dysfunction was associated with greater improvement may reflect regression to the mean and the reality that individuals with higher Time 1 clinical scores have more potential for improvement.

Study findings are limited by the small sample of residential treatment providers. It is important to note here that in all the HLM analyses, the fixed effects were estimated with non-robust standard errors because the number of providers was less than 50 (Liang & Zeger, 1986). If robust standard errors had been used, then the relationships between externalizing behavior and community and externalizing behavior and workload would have achieved conventional levels of statistical significance.

In spite of these limitations, these results offer several potential implications for residential treatment leadership, front line workers, policymakers, youth, and researchers. The association between workload imbalance and improved functioning suggests that new front line staff should be made aware not only of the demands of the job but also the potentially favorable impact the rigor will have on the youth with whom they work. Similarly,
given the negative association between fairness and functioning improvement, supervisors may want to caution front-line staff that certain features of the work environment in RTCs may seem unfair but are effective for the youth for whom they are caring. Residential treatment leadership should support activities that build a strong sense of community for front-line staff. Future studies should include qualitative data collection in order to explore more fully the relationships between organizational climate and youth outcomes identified in this study.

REFERENCES


