

Risking Connection Trauma Training: A Pathway Toward Trauma-Informed Care in Child Congregate Care Settings

Steven M. Brown

Traumatic Stress Institute of Klingberg Family Centers,
New Britain, CT

Courtney N. Baker

The Children's Hospital of Philadelphia,
Philadelphia, PA

Patricia Wilcox

Traumatic Stress Institute of Klingberg Family Centers,
New Britain, CT

Despite the high prevalence of traumatic experiences and attachment disruptions among clients in child congregate care treatment settings, until recently there has been little formal training on trauma for staff serving this population. Staff trauma training is one important intervention for agencies aiming to implement trauma-informed care (TIC), a term describing an international trend in mental health care whereby treatment approaches and cultures recognize the pervasive impact of trauma and aim to ameliorate, rather than exacerbate, the effects of trauma. The current study examines the impact of the curriculum-based Risking Connection (RC) trauma training on the knowledge, beliefs, and behaviors of 261 staff trainees in 12 trainee groups at five child congregate care agencies. RC is one of several models used nationally and internationally as a pathway toward TIC culture change in human service organizations including residential treatment. For a subset of agencies, measures were collected at four different time points. Results showed an increase in knowledge about the core concepts of the RC training consistently across groups, an increase in beliefs favorable to TIC over time, and an increase in self-reported staff behavior favorable to TIC in the milieu. In addition, these findings suggest that the train-the-trainer (TTT) model of dissemination central to RC is effective at increasing beliefs favorable to TIC. Differences in posttraining changes between three agencies are qualitatively investigated and discussed as examples of the importance of organization-level factors in successful implementation of agency-wide interventions like RC. Implications for implementing RC and trauma-informed agency change are discussed.

Keywords: Risking Connection, trauma-informed care, child mental health, residential

In recent years, society at large and the mental health, education, and criminal justice professions have begun to acknowledge the widespread prevalence of psychological trauma in human experience as well as its pervasive impact on individuals, families, and the wider society. At the same time, there has been an explosion of research and knowledge about trauma's occurrence; its biological, psychological, and social sequelae; and treatment interventions to ameliorate its affects. Despite

this growth of knowledge, and given the fact that psychological trauma so profoundly impacts development, Courtois and Gold (2009) point out that there is a dearth of training about trauma in graduate education in psychology, social work, and other professions. While changing, this is also the situation in the public education, mental health, and criminal justice systems that educate, treat, care for, and house traumatized individuals. This is even more remarkable in social service systems like the child welfare system, where, almost by definition, nearly all clients have suffered traumatic life events as children.

In congregate care treatment for children and adolescents, studies reveal that large percentages of clients have histories of traumatic events, including physical abuse, sexual abuse, neglect, witnessing violence, traumatic loss, and attachment disruptions. One study found that 97% of adolescent inpatients reported a history of trauma and 32% had a severe history of post-traumatic stress disorder (PTSD); (Lipschitz, Winegar, Hartnick, Foote, & Southwick, 1999). Particularly in recent years, as more children are treated in the community, children referred for congregate care treatment have psychiatric disturbances that are increasingly acute and pervasive, and often suffer from what is now being called "complex trauma" (Cook, Blaustein, Spinnazola, & van der Kolk, 2003; van der Kolk, 2005).

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Steven M. Brown and Patricia Wilcox, Traumatic Stress Institute of Klingberg Family Centers, New Britain, Connecticut; and Courtney N. Baker, Department of Child and Adolescent Psychiatry and Behavioral Sciences, The Children's Hospital of Philadelphia, Philadelphia, Pennsylvania.

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Correspondence concerning this article should be addressed to Steven M. Brown, Traumatic Stress Institute of Klingberg Family Centers, 370 Linwood Avenue, New Britain, CT 06052. E-mail: steveb@klingberg.com

In response to the growing knowledge about trauma and public awareness of retraumatizing events, such as restraints and seclusions in the nation's treatment facilities, consumers have joined with treatment providers and government initiatives to further "trauma-informed care" (TIC) in adult and child treatment settings (Jennings, 2007). TIC is grounded in the principle that treatment systems and practices should ameliorate, rather than exacerbate, the negative impacts of trauma (Butler & Wolf, 2009; Elliott, Bjelacjac, Fallot, Markoff, & Reed, 2005; Harris & Fallot, 2001; National Association of State Mental Health Program Directors, 2008). Thus, TIC describes services crafted and provided in a manner recognizing the persistent biological, psychological, and social sequelae of trauma. Organizations such as the National Association of State Mental Health Program Directors (NASMHPD), the Substance Abuse and Mental Health Services Administration (SAMHSA), and the National Trauma Consortium have been instrumental in the movement to adopt TIC.

For children in particular, SAMHSA's National Child Traumatic Stress Network (NCTSN) has been critical in promoting trauma-informed services by facilitating education of professionals and the public about psychological trauma and fostering the development, testing, and dissemination of evidenced-based practices serving traumatized children. NCTSN grantees have worked to develop, evaluate, and disseminate trauma-specific individual and group treatments that are designed to identify and address the symptoms and conditions that result from traumatic life experiences (Cohen, Mannarino, & Deblinger, 2006; Fallot & Harris, 2008). Trauma-specific treatments are generally regarded as one component of TIC that describes the principles and interventions by which the cultures of entire organizations and service systems can be changed. In TIC, the target of the intervention moves from the individual and family to the system. While there has been substantial research about trauma-specific treatments for children and families, the development and research of empirically supported interventions to change entire systems, especially in settings serving children with complex trauma, has lagged.

Efficacy of Professional Training on Behavior Change

The goal of most training for health care professionals is to impact behavior change in recipients of the training and, ultimately, impact the health outcomes for clients. However, the processes by which knowledge change and shifts in beliefs impact the behavior of trainees and client outcomes are complex. By far, the most popular model for the evaluation of professional training is a four-level typology developed by Kirkpatrick (1967), which includes trainee satisfaction, knowledge and attitude change, behavior change, and change in client health status (Bates, 2004). While this has proven a useful starting point, researchers have critiqued it on the grounds that it is oversimplified (Ford & Kraiger, 1995; Tannenbaum & Yukl, 1992). Fixsen, Blase, Naoom, and Wallace (2009), in particular, suggest a theoretical model of training and supporting practitioners that highlights several "core implementation components," conceptualized within an ecological or systems model, including staff selection, didactic training, consultation and coaching, staff-level performance evaluation, organization-level assessment of implementation success and continuous quality improvement, administrative support, and supportive interactions with external systems (Glisson et al., 2008).

Implementing Trauma-Informed Care in Child Congregate Care Treatment

Given the pervasive impact of trauma on clients in child congregate care, several models have been developed to provide trauma training and guide implementation of TIC in these settings. For example, the Sanctuary Model, which works with child congregate care programs nationally and internationally, is a "whole system approach designed to facilitate the development of structures, processes, and behaviors on the part of staff, children, and the community-as-a-whole that counteract the . . . wounds suffered by the children in care" (Bloom, 2005, p. 65; Rivard, Bloom, McCorkle, & Abramowitz, 2005). Hummer and Dollard (Hummer, Dollard, Robst, & Armstrong, 2010), at the University of South Florida, have also led an initiative in child congregate care facilities in Florida to implement TIC via an organizational self-assessment process, development of a training curriculum, and dissemination using a learning collaborative (Markiewicz, Ebert, Ling, Amaya-Jackson, & Kisiel, 2006). The Massachusetts Department of Mental Health implemented a statewide restraint and seclusion reduction effort, drawing on TIC principles (Lebel & Goldstein, 2005; Lebel et al., 2004). While these various models have strengths and weaknesses, they differ from the intervention in this study in that none offer a theory-based comprehensive staff trauma training model that agencies can adopt system-wide as a way to implement TIC.

The Risking Connection Foundational Trauma Training Program

Risking Connection (RC) is a curriculum-based foundational trauma training program that originally grew out of a 1996 consumer trauma survivor lawsuit against the state of Maine (Giller, Vermilyea, & Steele, 2006; Saakvitne, Gamble, Pearlman, & Tabor Lev, 2001). The states of Maine and New York collaborated with the Sidran Institute, the Trauma, Research, Education, and Training Institute (TREATI), and a diverse editorial board to write the curriculum and design and field-test the training. The original curriculum and training, aimed at professionals serving adult survivors, has been revised and adapted to train other professionals serving trauma survivors including faith leaders (Day, Vermilyea, Wilkerson, & Giller, 2006; DeHart, 2006), domestic violence professionals, foster parents (Wilcox, 2009b), primary care physicians (Giller, 2009), and youth-serving professionals (Farber et al., 2004). Klingberg Family Centers' Traumatic Stress Institute has led the effort in adapting the curriculum to child-serving professionals in congregate care settings and disseminating the program via extensive training in the United States and Canada.

RC provides a philosophy and framework for working with traumatized clients and is not an individual- or family-focused trauma treatment, although these treatments fit well within the framework. The model represents a paradigm shift away from both the traditional medical model and other more control-oriented models historically utilized in congregate care settings. RC is based on constructivist self-development theory (CSDT); (McCann & Pearlman, 1990a; Pearlman & Saakvitne, 1995), an integrative theory drawing on attachment theory, relational psychoanalytic theory, developmental psychopathology, theory of cognitive schemas, and social learning theory. The RC train-

ing teaches a trauma framework (Allen, 2001), which asserts that childhood trauma experiences derail the trajectory of development in three critical areas—attachment (Bowlby, 1998; Schore & Schore, 2008), brain and nervous system (Perry, 2009; Saxe, Ellis, & Kaplow, 2007; van der Kolk, 1996), and self-capacities or self-regulation skills (Pearlman & Saakvitne, 1995; Schore & Schore, 2008). Because of these impairments, when clients encounter stress in the present, they experience intolerable feelings that they cope with through extreme symptoms and negative behaviors. RC asserts that these symptoms are adaptations; they help clients survive intolerable feelings in the short term despite having negative long-term consequences (McCann & Pearlman, 1990a; Pearlman & Saakvitne, 1995). Since trauma happens in the context of interpersonal relationships, therapeutic relationships are the primary agent of change and healing (Schore & Schore, 2008; Stiver, 1992).

Aimed at creating a common language among a variety of agency professionals serving traumatized individuals, the RC training combines presentation of didactic content with active learning exercises, including role-plays and discussions. RC training places particular emphasis on the “self of the treater,” primarily by focusing on vicarious traumatization and countertransference (McCann & Pearlman, 1990b; Pearlman & Saakvitne, 1995; Stamm, 1995). Because of the unique challenges of trauma treatment and the importance of the therapeutic relationships in healing, RC maintains that respect for, and care of, *both* the client and the treatment provider are critical. Finally, RC uses a train-the-trainer (TTT) model of dissemination, whereby organizations gain the internal capacity to conduct ongoing RC trainings.

Hypotheses

First, Kirkpatrick’s (1967) theory about the efficacy of professional training on behavior change suggests that knowledge acquisition is important to behavior change in health care professionals. Therefore, we hypothesize that participants in the RC Basic training will increase their knowledge of RC concepts from pre- to post-test.

Second, Kirkpatrick (1967) and others (Ajzen & Fishbein, 1977; Kraus, 1995) assert that while knowledge change is necessary, shifts in attitudes or beliefs from professional training also play a role in professional behavior change. Therefore, we hypothesize that participants in the RC Basic training will improve their beliefs favorable to TIC from pre-Basic training to post-Basic training. Staff who participated in the RC TTT 5 to 10 months after the RC Basic training are hypothesized to demonstrate a decrease in beliefs favorable to TIC at the beginning of the TTT, because of the elapsed time without direct intervention, but then show an increase again by the end of the TTT. We also expect that trainees receiving the same training from agency staff trained as RC trainers via the RC TTT program (as opposed to RC Faculty Trainers) would also show improvement in beliefs favorable to TIC. This finding would suggest that the RC training is being taught with fidelity by trained trainers and the TTT model, used to disseminate the approach, is having the desired impact on agency trainees.

Third, we compared trainees in Agencies B, C, and D, which, while similar in some regard (all had both RC Basic and TTT

trainings), differed on a number of dimensions considered to be important for TI change. Agencies C and D had the RC Basic and TTT as part of a whole-system intervention, with trainees in Agency B only having the RC Basic and TTT trainings. While not measured quantitatively, we believed that the organizations differed in their readiness for TI organizational change, with Agency B having the greatest degree of readiness, Agency D having the least, and Agency C falling somewhere in the middle. This impression was based on observations such as the agency’s general level of clinical sophistication; its awareness of TIC principles; the degree to which it had already adopted TIC principles; and broader organizational dynamics facilitating, rather than inhibiting, change. While one might expect that a whole-system intervention implemented in Agencies C and D would likely lead to more favorable outcomes than Agency B in belief and behavior change, the other factors noted above led us to hypothesize that outcomes in Agency B would exceed those in Agency C, while Agency D would have the least favorable outcomes of the three agencies.

Finally, we hypothesize that participants will report more consistent staff behavior in the milieu indicative of TIC from the RC Basic training to the TTT.

Method

Participants

A total of 261 trainees participated in 12 different RC trainee groups offered by TREATI between March 2008 and July 2009. Most trainees were staff at residential treatment agencies for youth with serious emotional and psychiatric problems. See Table 1 for trainee demographics. The trainee groups in all cases were made up of multiple disciplines, including direct care workers, clinicians, teachers, administrators, and nurses.

Eleven of the 12 trainee groups attended RC trainings with members of their same agency, although the trainees from that agency represented multiple programs (i.e., residential, foster care, school, outpatient). These trainee groups were from five different agencies (Agencies A, B, C, D, and E). One group, “Open 1,” consisted of trainees from many agencies attending an open or freestanding training (see Table 2).

Procedure

Because the RC training program is a grassroots training program largely implemented in the public mental health system, the procedure for intervention and data collection varied somewhat across sites. The variation was driven by several factors—the fact that the intervention package evolved over time as more was learned about agency transformation to TIC; the reality that agencies contracted for different levels of service based on financial constraints and individual agency needs; and the evolution of research measures over time. Table 2 summarizes the procedure for intervention and data collection.

The RC Training Program offers two types of RC training: (a) the 3-Day Basic training, a 16- to 18-hour foundational trauma training that covers the content of the RC curriculum, in this case, specially adapted to child-serving settings; and (b) the TTT, a 16- to 18-hour training aimed at teaching the content and skills necessary to formally and informally teach RC within an

Table 1
Trainee Demographics

| Characteristic | Total Trainees (n = 261) n (%) | Knowledge ^a (n = 127) n (%) | Beliefs ^a (n = 242) n (%) | Behavior ^a (n = 23) n (%) |
|-------------------|-----------------------------------|---|---|---|
| Gender | | | | |
| Male | 83 (32) | 39 (31) | 80 (33) | 10 (44) |
| Female | 174 (68) | 85 (67) | 159 (66) | 13 (56) |
| Job | | | | |
| Administrator | 40 (15) | 27 (21) | 39 (16) | 6 (26) |
| Clinician | 42 (16) | 27 (21) | 40 (17) | 6 (26) |
| Direct care | 115 (44) | 46 (36) | 105 (43) | 10 (44) |
| Nurse | 2 (.8) | 1 (1) | 2 (1) | 0 |
| Teacher | 15 (6) | 5 (4) | 15 (6) | 1 (4) |
| Other | 41 (15) | 18 (14) | 37 (15) | 0 |
| M (SD) | | | | |
| Age | 38.7 (11.49) | 39.8 (11.25) | 38.7 (11.62) | 34.7 (10.25) |
| Years in this job | 5.5 (6.01) | 5.8 (6.38) | 5.4 (6.07) | 4.9 (6.21) |
| Years in field | 10.2 (8.28) | 11.9 (8.36) | 10.1 (8.30) | 11.2 (8.20) |

^a These columns reflect demographics of trainees who were administered the knowledge, beliefs, and behavior measures, respectively.

organization. The initial RC Basic training(s) and the TTT at an agency are taught by RC faculty trainers, who are highly skilled trauma professionals as well as trainers. Agency staff trained as RC trainers then teach subsequent RC Basic trainings within their agency. The amount of RC training and the intervention package in which the five agencies received the training is described next.

Agency A. Agency A had only the RC Basic training (Trainee Group A1), and trainees were a cross section of their agency staff.

Agency B. Agency B, a very large agency, had two RC Basic trainings (Trainee Groups B1 and B2) and an RC TTT (Trainee Group B3). In order to affect the greatest impact on the agency system, we advised Agency B to select trainees for the

initial RC Basic training who met several criteria, including the following: they were influential formal and informal leaders within the agency, they were already practicing using relational principles to some extent, and they would make skilled formal and informal RC trainers within the agency. Therefore, trainees in these trainings tended to be staff thought to be more open to the RC approach. This was also the process with Agencies C and D below.

Agency C. At Agency C, the RC Basic training (Trainee Group C1) and TTT training (Trainee Group C2) were part of a whole-system consultation and training package that included consultation with agency leadership, RC training, training in the Restorative Approach (Wilcox, 2008, 2009a), a TI alternative to point and level systems, and follow-up consultation.

Table 2
Key Intervention Factors and Measures Collected by Trainee Group

| Trainee Group | Key Intervention Factors | | | | | Measures Collected | | | | |
|---------------|--------------------------|-------|--------------------------------|--------------------------------|-----------------|--------------------|------|---------|------|----------------|
| | Type of RC Training | Date | Trained by RC Faculty Trainers | Trained by trained RC Trainers | Whole system Ix | Knowledge | | Beliefs | | Behavior |
| | | | | | | Pre | Post | Pre | Post | |
| A1 | RC Basic | 10/08 | × | | | × | × | × | × | |
| B1 | RC Basic | 5/08 | × | | | × | × | × | × | |
| B2 | RC Basic | 11/08 | × | | | × | × | × | × | |
| B3 | RC TTT ^a | 3/09 | × | | | | | × | | × ^e |
| C1 | RC Basic | 12/08 | × | | × | | | × | × | × ^d |
| C2 | RC TTT ^b | 5/09 | × | | | | | × | × | × ^e |
| D1 | RC Basic | 1/09 | × | | × | | | × | × | × ^d |
| D2 | RC TTT ^c | 7/09 | × | | | | | × | × | × ^e |
| E1 | RC Basic | 3/08 | | × | | | | × | × | |
| E2 | RC Basic | 4/08 | | × | | | | × | × | |
| E3 | RC Basic | 4/08 | | × | | | | × | × | |
| Open 1 | RC Basic | 9/08 | × | | | × | × | × | × | |

Note. RC Basic = Risking Connection 3-Day Basic Training; RC TTT = Risking Connection 3-Day Train-the-Trainer. ^a Group B3 was made up of a subset of participants from the 2 RC Basic trainings for Agency B (Groups B1 and B2). ^b Group C2 was made up of a subset of participants from the RC Basic training for Agency C (Group C1). ^c Group D2 was made up of a subset of participants from the RC Basic training for Agency D (Group D1). ^d Baseline measures of self-reported staff behavior in the milieu. ^e Follow up measure of self-reported staff behavior in the milieu.

Agency D. At Agency D, the RC Basic (Trainee Group D1) and TTT (Trainee Group D2) were also part of a whole-system consultation, as described for Agency C.

Agency E. By the time of this research, Agency E had already completed an RC Basic and TTT taught by RC faculty. The trainings in this research were part of their subsequent “roll out” of RC training at the agency, led by their own staff trained as RC trainers. Agency E’s trainee groups (Trainee Groups E1, E2, and E3), in contrast to other groups, were not “hand selected,” as they were in the other trainee groups, but rather were made up of a general cross-section of agency staff attending a newly mandated training for all staff at the agency.

Measures

The three measures used to measure knowledge, beliefs, and behavior were developed by the Traumatic Stress Institute for the purpose of measuring the impact of RC training and other interventions aimed at implementing TIC. No existing measures were found in the literature that measured what the RC training program targets.

As summarized in Table 2, not all measures were collected for all trainee groups because of the evolution of the research program and the needs and limitations of particular agencies. For agencies that received the RC TTT, we were able to collect data at additional time points for the trainees who attended. This permitted us to measure the stability of the interventions over time and the impact of the additional TTT intervention.

Knowledge. The Risking Connection Curriculum Assessment (RCCA; Farber et al., 2004) is an 11-item multiple-choice measure assessing knowledge of RC concepts taught in the 3-day RC Basic training. A sample item includes, “A survivor client goes into crisis every time her clinician goes on vacation. With what self-capacity does this client probably have difficulty?” The RCCA was administered pre- and post-RC Basic training. Cronbach’s alphas were calculated separately for the RCCA at pre- and post-test for those involved in the RC Basic training; alphas were .60 and .46, respectively.

Beliefs. The Trauma-Informed Belief Measure (Brown & Wilcox, 2010) is a 19-item Likert scale that assesses how favorable staff beliefs are toward TIC. A sample item includes, “The clients I work with are generally doing the best they can at any particular time.” Cronbach’s alphas were calculated for the different time points; the alpha at pre-RC Basic was .79, the alpha at post-RC Basic was .85, and the alphas at pre- and post-RC TTT were .81.

Behavior. The Staff Behavior in the Milieu (Brown & Wilcox, 2010) measure is a 12-item self-report Likert scale that describes direct care staff behaviors thought to be indicative of

TIC. A sample item includes, “Staff talk with their peers and supervisors about their strong positive and negative reactions to clients and doing this kind of work.” Cronbach’s alphas were .84 for administration at the RC Basic and .81 at the RC TTT.

Results

Knowledge of Basic RC Content

In order to determine whether participants in the RC Basic Training learned the basic content of the training, we conducted paired samples *t*-tests on the pre- and post-test scores for the four trainee groups that completed this measure (Groups A1, B1, and B2 and Open 1). The analyses indicated that there were significant increases in knowledge from pre- to post-RC Basic for all four trainee groups. The results for these groups are summarized in Table 3.

Beliefs About Trauma-Informed Care

To evaluate the change in beliefs during the initial RC Basic training taught by RC faculty trainers, separate paired-samples *t*-tests were conducted on the six trainee groups (A1, B1, B2, C1, D1, E1, E2, E3 and Open 1) that completed the Trauma-Informed Belief Measure pre- and post-RC Basic. For all groups, there was a significant improvement favorable toward TIC. These results are summarized in Table 4.

TTT model and changes in beliefs favorable to TIC. As noted in the method section, we conducted a follow-up RC TTT at three agencies (Agencies B, C, and D) where the participants were a subset of the participants at the Basic training or trainings. We were training these participants to be RC trainers or champions within their agencies. To determine the stability of favorable beliefs toward TIC over time and the impact of an additional 3-day training intervention on beliefs, we conducted paired-samples *t*-tests on these trainee groups (B3, C2, and D2), comparing their scores at different time intervals.

For Agency B, we analyzed the group means for this trainee group of RC trainers and champions (Group B3) at pre-RC Basic training, post-RC Basic training, and pre-RC TTT. Results showed a significant increase in favorable belief scores from pre-RC Basic ($M = 3.88, SD = .31$) to the post-RC Basic ($M = 4.28, SD = .30$), $t(29) = -7.79, p < .001$. There was also a significant increase in this group’s scores from pre-RC Basic ($M = 3.89, SD = .32$) to pre-RC TTT ($M = 4.38, SD = .32$), $t(31) = -9.30, p < .001$. Finally, there was a significant increase in favorable beliefs scores from post-RC Basic ($M = 4.28, SD = .30$) to pre-RC TTT ($M = 4.39, SD = .31$), $t(30) = -2.56, p < .05$, despite no formal RC

Table 3
RC Knowledge Change by Trainee Group

| Group | Pre-Basic <i>M</i> (<i>SD</i>) | Post-Basic <i>M</i> (<i>SD</i>) | <i>t</i> -test |
|--------|-------------------------------------|--------------------------------------|---------------------------|
| A1 | 4.70 (1.68) | 7.70 (1.44) | $t(26) = -9.50, p < .001$ |
| B1 | 6.49 (2.17) | 8.93 (1.44) | $t(40) = -9.78, p < .001$ |
| B2 | 5.72 (1.83) | 8.77 (1.61) | $t(38) = -8.62, p < .001$ |
| Open 1 | 6.85 (2.60) | 9.30 (1.42) | $t(19) = -3.91, p < .001$ |

Table 4
Change in Beliefs Favorable to TIC by Trainee Group

| Group | Pretest <i>M (SD)</i> | Posttest <i>M (SD)</i> | <i>t</i> -test |
|--------|--------------------------|---------------------------|----------------------------|
| A1 | 3.40 (.35) | 3.64 (.33) | $t(22) = -4.18, p < .001$ |
| B1 | 3.84 (.41) | 4.22 (.38) | $t(43) = -10.30, p < .001$ |
| B2 | 3.77 (.30) | 4.23 (.38) | $t(38) = -9.41, p < .001$ |
| C1 | 3.64 (.46) | 3.97 (.48) | $t(41) = -8.19, p < .001$ |
| D1 | 3.45 (.43) | 3.82 (.48) | $t(28) = -6.66, p < .001$ |
| E1 | 3.18 (.22) | 3.45 (.46) | $t(17) = -3.14, p < .01$ |
| E2 | 3.34 (.52) | 3.71 (.42) | $t(18) = -6.65, p < .001$ |
| E3 | 3.53 (.55) | 3.93 (.39) | $t(7) = -3.16, p < .05$ |
| Open 1 | 3.89 (.39) | 4.26 (.31) | $t(19) = -6.16, p < .001$ |

intervention during this time interval, which ranged from 5 to 10 months in length. Comparisons using the belief measure at post-RC Basic could not be completed because data were not collected at that time point.

For Agency C, we analyzed group means for this trainee group of trainers and champions (Group C2) using four time points: pre-RC Basic, post-RC Basic, pre-RC TTT, and post-RC TTT. Results showed a significant increase in favorable belief scores from pre-RC Basic ($M = 3.73, SD = .44$) to post-RC Basic ($M = 4.03, SD = .53$), $t(18) = -4.98, p < .001$. There was a marginally significant increase in favorable belief scores from post-RC Basic ($M = 4.03, SD = .53$) to pre-RC TTT ($M = 4.14, SD = .48$), despite no formal RC intervention during the 5-month interval, $t(18) = 1.77, p = .09$. Even though scores increased only marginally in this 5-month interval, they still increased significantly again from pre- ($M = 4.14, SD = .49$) to post-RC TTT ($M = 4.31, SD = .47$), $t(17) = -5.97, p < .001$.

For Agency D, we analyzed group means for the group of trainers and champions (Group D2) in the same way as Agency C. Results showed a significant increase in favorable belief scores from pre- ($M = 3.79, SD = .25$) to post-RC Basic ($M = 4.16, SD = .29$), $t(6) = -3.70, p = .010$, but favorable belief scores dropped significantly in the 6 months between post-RC Basic ($M = 4.24, SD = .35$) and pre-RC TTT ($M = 3.87, SD = .27$), $t(7) = 4.56, p < .01$. However, there was again significant gain when comparing pre- ($M = 3.87, SD = .27$) to post-RC TTT ($M = 4.36, SD = .31$), $t(7) = -6.41, p < .001$, and pre-RC Basic ($M = 3.79, SD = .25$) to post-RC TTT ($M = 4.32, SD = .31$), $t(6) = -5.35, p < .01$. Despite the downturn in favorable belief scores between the two trainings, the group mean score at post-RC TTT exceeded the mean score achieved at the end of the basic training, but this did not reach statistical significance.

In the TTT model, agency staff who earn a credential to teach the RC Basic training conduct those trainings within their own agency. RC trainers for Agency E presented the training to three trainee groups (E1, E2, and E3). Results showed that Groups E1, E2, and E3 all made significant change toward more favorable beliefs about TIC—E1: pre-RC Basic $M = 3.18, SD = .23$; post-RC Basic $M = 3.45, SD = .46$; $t(17) = -3.14, p < .01$; E2: pre-RC Basic $M = 3.34, SD = .52$; post-RC Basic $M = 3.71, SD = .42$; $t(18) = -6.65, p < .001$; E3: pre-RC Basic $M = 3.53, SD = .55$; post-RC Basic $M = 3.93, SD = .39$; $t(7) = -3.16, p =$

.02—suggesting that RC may have similar effects when taught by agency staff trained as RC trainers as when taught by RC faculty.

Changes in beliefs favorable to trauma-informed care across three agencies. When comparing Agencies B, C, and D on beliefs favorable to TIC, we conducted one-way ANOVAs at pre-RC Basic, post-RC Basic, and pre-RC TTT. Data were not collected from all three agencies at post-RC TTT. Results showed a between-groups difference at all three time points, all $ps < .001$. Post hoc analyses on the belief measure at pre-RC Basic revealed that Agency B ($M = 3.81, SD = .36$) and Agency C ($M = 3.68, SD = .46$) both scored significantly higher than Agency D ($M = 3.45, SD = .43$). At post-RC Basic, Agency B ($M = 4.22, SD = .38$) scored significantly higher than Agencies C ($M = 4.01, SD = .48$) and D ($M = 3.85, SD = .50$) on the belief measure, but there was no significant difference between Agencies C and D. Finally, at pre-RC TTT, Agency B ($M = 4.39, SD = .31$) scored significantly higher than Agency D ($M = 3.87, SD = .27$) on the belief measure and approached significance when compared with Agency C ($M = 4.14, SD = .48$). Again, there was no difference between Agencies C and D. Across all three waves of data collection, the pattern of scores was as hypothesized, with Agency B demonstrating higher scores than Agency C, which, in turn, had higher scores than Agency D.

Behavior in the Milieu

To determine if the RC Basic and TTT had an impact on staff behavior in the milieu over time, we conducted paired-samples t -tests on group mean scores for participants (of all groups) completing the Staff Behavior in the Milieu measure during the RC Basic training as a baseline and the TTT as a follow-up measure. There was a significant favorable change in self-reported staff behavior from baseline ($M = 3.37, SD = .50$) to follow-up ($M = 3.63, SD = .42$), $t(22) = -2.15, p = .04$.

Discussion

The findings of this study indicate that the RC training impacted trainees at the three levels of knowledge, beliefs, and behavior. As was found previously (Farber et al., 2004), trainees appear to learn the basic content of the RC training during the course of the RC Basic training. Though promising with regard to trainees learning the content of the RC program, this study did not assess whether trainees retain this knowledge over time.

Because knowledge acquisition does not necessarily translate into behavior change (Kirkpatrick, 1967), this study also investigated change in beliefs and behaviors favorable to TIC. All 12 trainee groups demonstrated a statistically significant increase in beliefs favorable to TIC from the beginning to the end of the RC Basic training. This finding strongly suggests that the RC Basic training itself, at least in the short term, shifts attitudes about working in a trauma-sensitive manner in the direction desired by the training program.

It is particularly noteworthy that trainees receiving the same training from agency staff trained as RC trainers (as opposed to highly experienced RC faculty trainers) also showed a significant increase in favorable beliefs. RC uses a TTT model to disseminate the approach, with the assumption that trained trainers can communicate the approach with fidelity and have the desired impact without erosion of the intervention. This type of approach toward dissemination is particularly important in settings like congregate care, where staff turnover can be high. While more data are needed, these findings suggest that RC is successfully being disseminated via the TTT model.

For the group of trainees that completed the TTT, the study investigated how beliefs favorable to TIC are impacted by an additional intervention. This study suggests that the additional intervention of the TTT at least maintains the favorable impact on beliefs achieved in the RC Basic and likely boosts the impact beyond where it was at the conclusion of the initial Basic training. This finding is critical to the TI agency change process because members of this core group of staff representing different roles and disciplines, including senior leadership, become the primary change agents within the agency. Their strong belief in TI principles and commitment to agency change provides momentum to meet the inevitable staff resistance that comes when changing the treatment paradigm in this way. When their belief in TIC deepens, they likely can articulate the rationale for change more convincingly, model TI behavior, and advocate for change in formal and informal ways. Future research should aim to evaluate this process systematically in order to formalize it as an agent of change in the adoption of TIC at the agency level.

Results indicate that self-reported staff behavior favorable to TIC increased when comparing behavior scores at baseline to those reported 5–10 months later. This, of course, is critically important because, regardless of whether a trainee gains knowledge or changes her beliefs, it is most important whether she is actually behaving differently in her interactions with clients. The link between beliefs or attitudes and behavior has been well supported (Ajzen, 1991). Unfortunately, these preliminary results are limited somewhat by our reliance on self-report measures, including the possibility that trainees reported socially desirable rather than objectively true answers. While resource-intensive, independent ratings by trained observers would address this limitation in future research.

This study also addresses the critical issue of how TI change can be maintained over time. Often, trainees leave the RC Basic training with a greater understanding and enthusiasm for a TI approach but then return to the formidable challenges of their day-to-day jobs and agency cultures that are at times skeptical about, or unsupportive of, TIC. One would suspect, and the literature suggests (Fixsen et al., 2009; Ford & Kraiger, 1995; Glisson et al., 2008; Salas & Cannon-Bowers, 2001; Tannenbaum & Yukl,

1992) that broader organizational factors and the implementation process would influence the robustness and sustainability of RC training. Qualitative comparisons across three agencies suggested that this was indeed the case.

The study compared beliefs favorable to TIC in three agencies, Agencies B, C, and D, which differed in terms of the amount of intervention as well as along other dimensions related to the agency context. Despite the fact that Agencies C and D had RC training in the context of a whole-system intervention, Agency B's belief scores were significantly higher than Agency C at two of three time points and significantly higher than Agency D at all three time points. While seemingly counterintuitive, this was not totally unexpected by the authors and speaks to the importance of broader organizational factors on readiness for TI change. RC consultants perceived Agency B to be generally more clinically sophisticated than the other agencies, to have more prior knowledge of TIC principles, and to have already begun building an organizational and treatment culture consistent with TIC principles prior to the implementation of RC. In addition, in comparison to Agencies C and D, Agency B seemed to possess broader organizational strengths facilitative of organizational change toward TIC. These included a well-functioning leadership team, less organizational conflict, more job role clarity, and higher morale. Future research should measure these broader contextual dimensions as readiness factors for TI change.

This preliminary study focused on whether training in the RC curriculum was associated with knowledge of RC content as well as belief and behavior change favorable to TIC. Future research on RC should strive to build a more sophisticated understanding of how, why, and to what degree the RC trauma training and broader TIC interventions are effective. In order to demonstrate efficacy (Flay et al., 2005), future research on RC must utilize more sophisticated methodological approaches, including study designs that allow comparisons between randomly assigned control and intervention groups. An additional content area for further investigation includes whether RC training favorably impacts the treatment providers' vicarious trauma, which is a primary emphasis of RC training. Finally, linking the RC training to both agency-level outcomes (i.e., positive vs. negative vs. neutral discharges; restraints and seclusions; critical incidents; staff and child injuries) and client-level outcomes (i.e., anxiety, depression, aggression, PTSD symptoms, self-esteem) is a critical next step in demonstrating the efficacy of the RC trauma training and program implementation in congregate care settings.

In summary, this study demonstrated that RC training shows promise as a strategy for implementing TIC in child congregate care settings. While the trainings favorably impacted knowledge, beliefs, and self-reported staff behavior, other factors, including broader organizational factors, clearly play important roles in the pace, sustainability, and success of TI change.

References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, 179–211. doi:10.1016/0749-5978(91)90020-T
- Ajzen, I., & Fishbein, M. (1977). Attitude-behavior relations: A theoretical analysis and review of empirical research. *Psychological Bulletin*, 84, 888–918. doi:10.1037/0033-2909.84.5.888

- Allen, J. G. (2001). *Traumatic relationships and serious mental disorders*. West Sussex, England: Wiley.
- Bates, R. (2004). A critical analysis of evaluation practice: The Kirkpatrick model and the principle of beneficence. *Evaluation and Program Planning, 27*, 341–347. doi:10.1016/j.evalprogplan.2004.04.011
- Bloom, S. L. (2005). The sanctuary model of organizational change for children's residential treatment. *Therapeutic Community: The International Journal for Therapeutic and Supportive Organizations, 26*, 65–81.
- Bowlby, J. (1988). *A secure base*. New York, NY: Basic Books.
- Brown, S. M., & Wilcox, P. (2010, April). *From resistance to enthusiasm: Implementing trauma-informed care*. Paper presented at Massachusetts Department of Mental Health Grand Rounds, Worcester, MA.
- Butler, L. D., & Wolf, M. R. (2009). Trauma-informed care: Trauma as an organizing principle in the provision of mental health and social services. *Trauma Psychology Newsletter, 4*, 7–11.
- Cohen, J. A., Mannarino, A. P., & Deblinger, E. (2006). *Treating trauma and traumatic grief in children and adolescents*. New York, NY: Guilford Press.
- Cook, A., Blaustein, M., Spinazzola, J., & van der Kolk, B. (Eds.). (2003). *Complex trauma in children and adolescents: White paper*. Los Angeles, CA: National Child Traumatic Stress Network.
- Courtois, C. A., & Gold, S. N. (2009). The need for inclusion of psychological trauma in the professional curriculum: A call to action. *Psychological Trauma: Theory, Research, Practice and Policy, 1*, 1–23. doi:10.1037/a0015224
- Day, J. H., Vermilyea, E., Wilkerson, J., & Giller, E. (2006). *Risking connection in faith communities: A training curriculum for faith leaders supporting trauma survivors*. Baltimore, MD: Sidran Press.
- DeHart, D. D. (2006). *Collaborative response to crime victims in urban areas: Final evaluation report*. Columbia, SC: University of South Carolina, Center for Child & Family Studies.
- Elliott, D. E., Bjelacjac, P., Fallot, R. D., Markoff, L. S., & Reed, B. G. (2005). Trauma-informed or trauma-denied: Principle and implementation of trauma-informed services for women. *Journal of Community Psychology, 33*, 461–477. doi:10.1002/jcop.20063
- Fallot, R. D., & Harris, M. (2008). Trauma-informed approaches to systems of care. *Trauma Psychology Newsletter, 3*, 6–7.
- Farber, C. H., Pollak, K., Brown, S., Pearlman, L. A., Lev, B. T., & Taylor, P. (2004). *Risking Connection trainee outcome research: A pilot study*. Unpublished manuscript. Traumatic Stress Institute/Center for Adult & Adolescent Psychotherapy (TSI/CAAP), South Windsor, CT.
- Fixsen, D. L., Blase, K. A., Naoom, S. F., & Wallace, F. (2009). Core implementation components. *Research on Social Work Practice, 19*, 531–540. doi:10.1177/1049731509335549
- Flay, B. R., Biglan, A., Boruch, R. F., Castro, F. G., Gottfredson, D., Kellam, S., . . . Ji, P. (2005). Standards of evidence: Criteria for efficacy, effectiveness and dissemination. *Prevention Science, 6*, 151–175. doi:10.1007/s11121-005-5553-y
- Ford, J. K., & Kraiger, K. (1995). The application of cognitive constructs and principles to the instructional systems design model of training: Implications for needs assessment, design, and transfer. *International Review of Industrial and Organizational Psychology, 10*, 1–48.
- Giller, E. (2009). NIH grant funds Risking Connection study. *Division 56 Trauma Psychology Newsletter, 4*, 31.
- Giller, E., Vermilyea, E., & Steele, T. (2006). Risking Connection: Helping agencies embrace relational work with trauma survivors. *Journal of Traumatic Practice, 5*, 65–82. doi:10.1300/J189v05n01_05
- Glisson, C., Landsverk, J., Schoenwald, S., Kelleher, K., Eaton, K., Hoagwood, K. E., & Green, P. (2008). Assessing the organizational social context (OSC) of mental health services: Implications for research and practice. *Administration Policy and Mental Health, 35*, 98–113. doi:10.1007/s10488-007-0148-5
- Harris, M., & Fallot, R. D. (2001). Envisioning a trauma informed service system: A vital paradigm shift. In M. Harris & R. D. Fallot (Eds.), *New Directions for mental health services, Using trauma theory to design service systems*. (pp. 3–22). San Francisco, CA: Jossey-Bass.
- Hummer, V. L., Dollard, N., Robst, J., & Armstrong, M. I. (2010). Innovations in implementation of trauma-informed care practices in youth residential treatment: A curriculum for organizational change. *Child Welfare, 89*, 79–95.
- Jennings, A. (2007, December). *Blueprint for action: Building trauma-informed mental health service systems*. Retrieved from <http://www.theanainstitute.org/2007%202008%20Blueprint%20By%20States02.08.pdf>
- Kirkpatrick, D. I. (1967). Evaluation of training. In R. Craig & I. Bittel (Eds.), *Training and development handbook* (pp. 87–112). New York, NY: McGraw-Hill.
- Kraus, S. J. (1995). Attitudes and the prediction of behavior: A meta-analysis of the empirical literature. *Personality and Social Psychology Bulletin, 21*, 58–75. doi:10.1177/0146167295211007
- Lebel, J., & Goldstein, R. (2005). The economic cost of using restraint and the value added by restraint reduction or elimination. *Psychiatric Services, 56*, 1109–1114. doi:10.1176/appi.ps.56.9.1109
- Lebel, J., Stromberg, N., Duckworth, K., Kerzner, J., Goldstein, R., Weeks, M., . . . Sudders, M. (2004). Child and adolescent inpatient restraint reduction: A state initiative to promote strength-based care. *Journal of the American Academy of Child & Adolescent Psychiatry, 43*, 37–45. doi:10.1097/00004583-200401000-00013
- Lipschitz, D. S., Winegar, R. K., Hartnick, E., Foote, B., & Southwick, S. M. (1999). Posttraumatic stress disorder in hospitalized adolescents: Psychiatric comorbidity and clinical correlates. *Journal of American Academy of Child & Adolescent Psychiatry, 38*, 385–392. doi:10.1097/00004583-199904000-00010
- Markiewicz, J., Ebert, L., Ling, D., Amaya-Jackson, L., & Kisiel, C. (2006). *Learning collaborative toolkit*. Los Angeles, CA: National Center for Child Traumatic Stress.
- McCann, I. L., & Pearlman, L. A. (1990a). *Psychological trauma and the adult survivor: Theory, therapy, and transformation*. New York, NY: Brunner/Mazel.
- McCann, I. L., & Pearlman, L. A. (1990b). Vicarious traumatization: A framework for understanding the psychological effects of working with victims. *Journal of Traumatic Stress, 3*, 131–149. doi:10.1007/BF00975140
- National Association of State Mental Health Program Directors (NASMHPD). (2008). *Training curriculum for the reduction of seclusion and restraint: Preventing violence, trauma and the use of seclusion and restraint in child/adolescent settings*. Alexandria, VA: Authors.
- Pearlman, L. A., & Saakvitne, K. W. (1995). *Trauma and the therapist: Countertransference and vicarious traumatization in psychotherapy with incest survivors*. New York, NY: Norton.
- Perry, B. D. (2009). Examining child maltreatment through a neurodevelopmental lens: Clinical applications of the neurosequential model of therapeutics. *Journal of Trauma and Loss, 14*, 240–255. doi:10.1080/15325020903004350
- Rivard, J. C., Bloom, S. L., McCorkle, D., & Abramowitz, R. (2005). Preliminary results of a study examining the implementation and effects of a trauma recovery framework for youths in residential treatment. *Therapeutic Community: The International Journal for Therapeutic and Supportive Organizations, 26*, 83–96.
- Saakvitne, K. W., Gamble, S., Pearlman, L. A., & Tabor Lev, B. (2001). *Risking Connection: A training curriculum for working with survivors of childhood abuse*. Baltimore, MD: Sidran Press.
- Salas, E., & Cannon-Bowers, J. A. (2001). The science of training: A decade of progress. *Annual Review of Psychology, 52*, 471–499. doi:10.1146/annurev.psych.52.1.471
- Saxe, G. N., Ellis, B. H., & Kaplow, J. B. (2007). *Collaborative treatment of traumatized children and teens: The trauma systems therapy approach*. New York, NY: Guilford Press.

- Schore, J. R., & Schore, A. N. (2008). Modern attachment theory: The central role of affect regulation in development and treatment. *Clinical Social Work Journal, 36*, 9–20. doi:10.1007/s10615-007-0111-7
- Stamm, B. H. (Ed.). (1995). *Secondary traumatic stress: Self-care issues for clinicians, researchers, and educators*. Lutherville, MD: Sidran Press.
- Stiver, I. (1992). A relational approach to therapeutic impasse. *Work in Progress, No. 58*. Wellesley, MA: Stone Center Working Paper Series.
- Tannenbaum, S. I., & Yukl, G. (1992). Training and development in work organizations. *Annual Review of Psychology, 43*, 399–441. doi:10.1146/annurev.ps.43.020192.002151
- van der Kolk, B. A. (1996). The body keeps the score: Approaches to the psychobiology of posttraumatic stress disorder. In B. A. van der Kolk, A. C. McFarlane, & L. W. Weisaeth (Eds.), *Traumatic stress: The effects of overwhelming experience on mind, body, and society*. New York, NY: The Guilford Press.
- van der Kolk, B. A. (2005). Developmental trauma disorder: Toward a rational diagnosis for children with complex trauma histories. *Psychiatric Annals, 35*, 401–408.
- Wilcox, P. (2008). A restorative approach to residential care. *Children's Voice, 17*, 16–19.
- Wilcox, P. (2009a). *The restorative approach*. Unpublished manuscript. Klingberg Family Centers, New Britain, CT.
- Wilcox, P. (2009b). *Risking Connection: Adapted materials for foster parents*. Unpublished manuscript. Klingberg Family Centers, New Britain, CT.

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