Systematic Review of Evaluations of Trauma-Informed Organizational Interventions That Include Staff Trainings

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Abstract

Enthusiasm for trauma-informed practice has increased dramatically. Organizational interventions that train staff about trauma-informed practice are frequently used to promote trauma-informed systems change, but evidence about these interventions' effects has not been integrated. A systematic review was conducted of studies that evaluated the effects of organizational interventions that included a "trauma-informed" staff training component. A search was conducted in July 2017 and studies were identified in PubMed, PsycINFO, and the Published International Literature on Traumatic Stress database, limited to articles published in English after 2000. Six hundred and thirty-two articles were screened and 23 met inclusion criteria. Seventeen studies used a single group pretest/posttest design, five used a randomized controlled design, and one used a quasi-experimental design with a nonrandomized control group. The duration of trauma-informed trainings ranged from 1 hr to multiple days. Staff knowledge, attitudes, and behaviors related to trauma-informed practice improved significantly pre-/posttraining in 12 studies and 7 studies found that these improvements were retained at ≥1 month follow-up. Eight studies assessed the effects of a trauma-informed organizational intervention on client outcomes, five of which found statistically significantly improvements. The strength of evidence about trauma-informed organization intervention effects is limited by an abundance of single group, pretest/posttest designs with short follow-up periods, unsophisticated analytic approaches, and inconsistent use of assessment instruments. In addition to addressing these methodological limitations, priorities for future research include understanding intervention effects on clients' perceptions of care and the mechanisms through which changes in staff knowledge and attitudes about trauma-informed practice influence client outcomes.

Keywords

trauma-informed, organizational interventions, training, implementation science

Traumatic experiences have significant impacts on well-being and increase risk of many adverse outcomes—including physical and mental health problems (Felitti et al., 1998; Shonkoff et al., 2011), arrest and incarceration (Abram et al., 2004; Messina & Grella, 2006), academic difficulties (Stein et al., 2003), and homelessness (Hopper, Bassuk, & Olivet, 2010; Kim, Ford, Howard, & Bradford, 2010). In recognition of the high prevalence of trauma exposure among people served by public systems, the concept of trauma-informed practice emerged in the 1990s (Becker-Blease, 2017; Bloom, 2013; Harris & Fallot, 2001; Ko et al., 2008). Although there is no universal definition of trauma-informed practice (Branson, Baetz, Horwitz, & Hoagwood, 2017; Hanson & Lang, 2014; Marsac et al., 2016), the core tenets are reflected in the Substance Abuse and Mental Health Services Administration's (SAMHSA) *Four "Rs"* of *realizing* the widespread impact of trauma, *recognizing* the signs and symptoms of trauma among clients and staff, *responding* by integrating knowledge about trauma into practice and policy, and proactively *resisting* retraumatization (SAMHSA, 2014).

Enthusiasm for trauma-informed practice has grown dramatically in recent years (Becker-Blease, 2017). While trauma-informed practice initially gained traction in mental health, substance abuse, and child welfare service sectors, calls for trauma-informed practice have been made across increasingly diverse fields—such as social policy (Bowen & Murshid, 2016), intellectual disabilities (Keesler, 2014), dentistry (Raja et al., 2015), obesity prevention (Mason et al., 2016), and children's sports (D'Andrea, Bergholz, Fortunato, & Spinazzola, 2013). U.S. cities (e.g., San Francisco, CA [SAMHSA, 2017], Philadelphia, PA [Beidas et al., 2016]) and states (e.g.,

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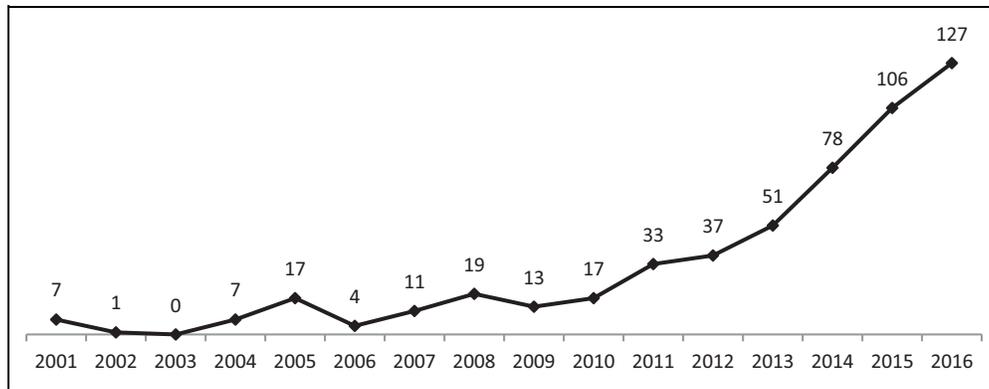Email: jpp46@drexel.edu

Figure 1. New articles in PubMed, PsycINFO, and PILOTS mentioning "trauma-informed" or "trauma-informed" in the title, abstract, or key words by publication year (*N* = 528).

Washington [Kagi & Regala, 2012]) have made commitments to integrating trauma-informed practice into their public service systems. Trauma-informed practice is also gaining traction in U.S. Congress. In 2015, 28 bills were introduced with an explicit purpose to promote trauma-informed practice (Purtle & Lewis, 2017) and similar bills are currently being considered in the 115th Congress (e.g., the Trauma-Informed Care for Children and Families Act of 2017, H.R.1757, S.774; A Resolution Recognizing the Importance and Effectiveness of Trauma-Informed Care, S.Res.346, H.Res.443). Trauma-informed practice is also receiving increasing attention in the peer-reviewed literature. The number of journal articles published annually that mentioned "trauma-informed" in the title, abstract, or key words has increased from 7 in 2010, to 127 in 2016 (Figure 1).

The Importance of Trauma-Informed Trainings

Enthusiasm for trauma-informed practice reflects growing consensus about the reasons why trauma-informed approaches should be embraced, but less is known about how to create trauma-informed organizational and systems change (Hanson & Lang, 2014). Staff training about trauma-informed practice is often the first step an organization takes when it commits to becoming trauma-informed. These trainings provide information about the prevalence and effects and trauma exposure and the tenets of trauma-informed practice with the goals of increasing staff knowledge, improving attitudes, and changing behavior. As noted in SAMHSA's (2014) Treatment Improvement Protocol for Trauma-Informed Care, "Training for all staff members is essential in creating a trauma-informed organization" (p. 177). Trauma-informed training is a leading recommendation of Bethell and colleagues' (2017) agenda for addressing adverse childhood experiences and is central to Marsac and colleagues' (2016) approach to creating Trauma-Informed Pediatric Health Care Networks. In a recent systematic review, Branson and colleagues (2017) found that trauma-informed training for staff was the only recommendation that was unanimously identified in 10 different sets

of recommendations for trauma-informed juvenile justice systems.

Study Aims

Staff trainings about trauma-informed practice are potentially instrumental to fostering trauma-informed organizational and systems change, but evidence about the effects of these trainings has not been assessed or integrated. The purpose of this review was to begin to address this knowledge gap. A systematic review was conducted of peer-reviewed studies that evaluated the effects of trauma-informed organizational interventions that included a staff training component. The study aims were to:

1. describe the characteristics of studies that have evaluated the effects of trauma-informed organizational interventions that include staff trainings;
2. synthesize evidence about the effects of trauma-informed organizational interventions that include staff trainings on staff and client outcomes; and
3. identify areas for future research about the effects of trauma-informed organizational interventions that include staff trainings.

Scope and Limitations

This review was narrow in scope and its results should be interpreted within the context of its parameters. First, the review was limited to trauma-informed interventions at the organizational level-that included a staff training component. The review did not include evaluations of interventions focused on programing (e.g., trauma-informed yoga), direct services (e.g., trauma-informed case management), or clinical care (e.g., trauma-specific treatments). Second, the review was limited to the peer-reviewed outcome evaluations and did not capture practice-based evidence that is unpublished or published in nonpeer-reviewed venues (e.g., online reports).

Third, perhaps most importantly, the review was limited to organizational interventions that were explicitly trauma-

informed. The rationale for limiting the review to organizational interventions that are explicitly trauma-informed reflects the fact that a single definition of trauma-informed, or the elements that it encompasses, does not exist (Branson et al., 2017; Hanson & Lang, 2014; Marsac et al., 2016). As Hanson and Lang (2014) describe trauma-informed practice "is an amorphous concept that has been defined in a number of ways, making it difficult to evaluate [trauma-informed] initiatives" (p. 96). The use of specific language to classify interventions as trauma-informed allows for systematic and replicable methods to be applied to evaluate the body of evidence, but with the limitation of excluding interventions that embrace principles of trauma-informed practice without using language of trauma-informed.

Method

Article Identification

On July 28, 2017, PubMed, PsycINFO, and the Published International Literature on Traumatic Stress database were searched for all articles that mentioned trauma-informed or "trauma-informed" in title, abstract, or key words. After removing duplicates, this resulted in 632 articles.

Article Screening

The abstracts of all articles were screened for inclusion and classified into one of the three mutually exclusive categories: (1) empiric study, outcome evaluation (e.g., a randomized controlled trial of an intervention that claimed to be trauma-informed); (2) empiric study, not outcome evaluation (e.g., epidemiologic studies that recommend trauma-informed practice based on findings); and (3) nonempiric (e.g., commentaries about the need for trauma-informed practice).

Article Full-Text Review and Data Extraction

Ninety-six articles were classified as empiric outcome evaluations. The full texts of these articles were obtained and reviewed to identify evaluations of organizational-level interventions that included a trauma-informed training. Articles were excluded if they met any of the following criteria:

- evaluations of trauma-informed program/clinical interventions (e.g., trauma-informed parenting interventions, interventions aimed at integrating trauma-specific treatments into primary care);
- exclusively qualitative evaluations;
- single-group, posttest only evaluations; and
- nonempiric descriptions of implementation processes.

Twenty-three articles met inclusion criteria. Figure 2 shows the screening and review process. Information on the following characteristics of each study was extracted from the articles: study design, sample size, population and organizational
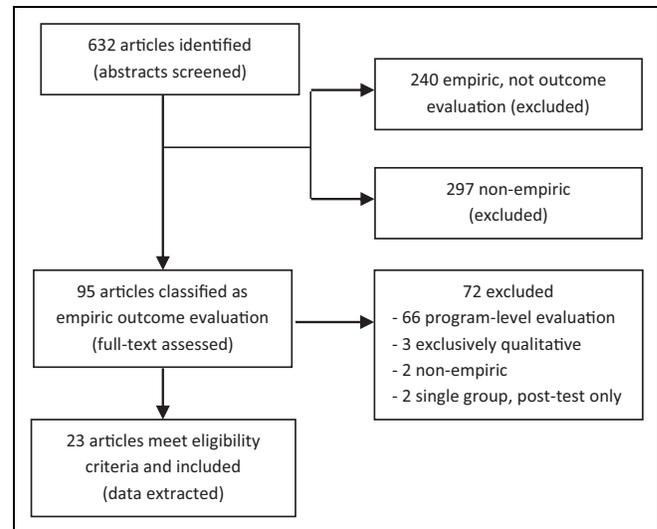

Figure 2. Flow diagram to identify studies evaluating of trauma-informed organizational interventions that include staff training.

setting, follow-up period, intervention components, outcomes and measures, main findings, and limitations.

Results

Characteristics of Trauma-Informed Organizational Interventions and Evaluation Designs

Table 1 presents information extracted from the 23 studies. The majority of evaluations (17 studies) used a single group, pretest/posttest design, five used a randomized controlled design, and one used a quasi-experimental design that had an intervention group and a nonrandomized control group. The interventions targeted a range of sectors, with six being implemented in child welfare agencies, six in psychiatric hospitals, four in general medical settings (e.g., emergency departments, primary care clinics), one in a juvenile justice facility, and one in a school.

The trauma-informed training curricula most frequently used were Risking Connection (four studies) and the National Child Traumatic Stress Network's trauma-informed training (three studies). In most studies, no specific training curriculum was identified and the training was developed in-house by the evaluators. There was substantial variation in the amount of information provided about the content of the trainings and their didactic approach. Some articles provided meticulous detail about the theory behind the training approach and the process used to develop the content, while other articles provided limited information. Common elements of the trainings included information about the psychological and physiological effects of trauma, strategies to avoid retraumatizing clients and cultivate feelings of safety, tools to develop of a "common language" about trauma, and strategies to prevent vicarious trauma and improve self-care among staff. The duration of the

Table 1. Outcome Evaluations of Trauma-Informed Organizational Interventions That Include Staff Training.

Authors (Year)	Study Design, Population, Setting, Follow-Up	Intervention	Outcomes and Measures	Results	Limitations/Notes
Azeem, Aujla, Rammerth, Binsfeld, and Jones (2011)	Study design: Single group pretest/posttest N: 458 Population/setting: Youth admitted to a psychiatric hospital Follow-up: 2 years	Training in National Association of State Mental Health Program Director's seclusion and restraint reduction strategy (six core strategies based on trauma-informed care), training duration unknown	Seclusion and restraint events, measured via administrative data	The number of seclusion and restrain events decreased from 93 in the 6 months prior to the trauma-informed training to 31 two years after the training	Multiple trauma-informed intervention components were implemented concurrently with the training. Thus, the extent to which outcomes are attributable to the training, and not these other components, is unclear Outcomes expressed as counts, not rates. Thus, the extent to which the outcomes are attributable to the training, and not temporal chances in facility census, is unclear Significance testing not conducted Statistical adjustment not conducted
Bartlett et al. (2016)	Study design: Single group pretest/posttest N: 190 Population/setting: Mental health service providers working in a state's child welfare system Follow-up: 1 year	One year learning collaborative (including trainings) focused on trauma-informed practice and trauma-focused treatments	Perceptions of trauma-informed agency policy, agency practice, and individual practices, measured via Trauma-Informed System Change Instrument	No significant changes in perceptions of trauma-informed agency policy Significant improvements in perceptions of agency practices (mean = 86.82 [SD = 16.97] vs. 80.17 [SD = 15.53], p = .007) Significant improvements in perceptions of individual practices (mean = 13.50 [SD = 0.97] vs. 11.46 [SD = 2.04], p = .001)	Multiple trauma-informed intervention components were implemented concurrently with the training. Thus, the extent to which outcomes are attributable to the training, and not these other components, is unclear Statistical adjustment not conducted 80.5% pretest/1-year posttest follow-up retention
Blair et al. (2017)	Study design: Single group pretest/posttest N: 11,913 Population/setting: Patients admitted to a psychiatric hospital Follow-up: 2 years	Two-day risking connection training, 8-hr crisis intervention course emphasizing deescalation, changes to physical environment, formal review of all seclusion/restraint events, and checklists to inform seclusion/restraint decisions	Seclusion/restraint events, measured via administrative data	Significant reduction in the rate of seclusion events (preperiod 9.2 per 100 admissions vs. postperiod 4.4 per 100 admissions, p < .01) No significant reduction in the rate of restraint events Significant increase in the duration of both seclusion and restraints events (negative outcome)	Multiple trauma-informed intervention components were implemented concurrently with the training. Thus, the extent to which outcomes are attributable to the training, and not these other components, is unclear
Borckardt et al. (2011)	Study design: Randomized controlled trial with intervention components implemented in a different order in each hospital unit N: 340 staff, 446 patients Population/setting: Staff and patients in a pediatric psychiatric hospital Follow-up: 3.5 years	Half day trauma-informed training, changes to unit rules and language, changes to physical environment, and involvement of patients in treatment planning	Seclusion/ restraint events Trauma sensitivity ratings among patients and staff, measured via quality of care measure	Significant reduction (82.3%, p = .008) in seclusion/restraint events, trauma-informed in training was not significantly associated with the reduction independent of other intervention components No significant change in patients' ratings of the trauma sensitivity of staff (mean = 3.88 vs. 3.97) No significant change in staff self-rated trauma sensitivity (mean = 4.25 vs. 4.30)	Only multicomponent study that did not implement all intervention components concurrently Statistical adjustment for seclusion/restraint outcomes, but not for self-reported patient and staff outcomes

Table I. (continued)

Authors (Year)	Study Design, Population, Setting, Follow-Up	Intervention	Outcomes and Measures	Results	Limitations/Notes
Brown, Baker, and Wilcox (2012)	Study design: Single group pretest/posttest N: 261 Population/setting: Staff of child welfare agencies Follow-up: Not specified	Three-day Risking Connection training	Knowledge about trauma-informed "intervention content," measured via Risking Connection Curriculum Assessment "Favorable beliefs" about trauma-informed care, measured via the Trauma-Informed Belief Measure Trauma-informed behaviors of staff (self-report), measured via "Staff Behavior in the Milieu"	Significant increase in knowledge about trauma-informed intervention content (e.g., mean = 6.49 [SD = 2.17] vs. 8.93 [SD = 1.44], p < .001)* Significant increase in favorable beliefs about trauma-informed care (e.g., mean = 3.84 [SD = 0.41] vs. 4.22 [SD = 0.38], p < .001)* Significant increase in self-reported trauma-informed behaviors (e.g., mean = 3.77 [SD = 0.50] vs. 3.63 [SD = 0.42], p = .04)*	Statistical adjustment not conducted Posttest appears to be only provided immediately after training. The extent to which improvements were retained for a meaningful amount of time is unclear *Pre-/posttraining mean changes varied across intervention sites and pooled intervention effects are not presented. The statistics provided here are examples of pre-/postmeans from single intervention sites
Choi and Seng (2015)	Study design: Single group pretest/posttest N: 47 Population/setting: Perinatal health-care professionals and personnel Follow-up: Immediately post	1-hr trauma-informed training	Knowledge, skills, and attitudes related to trauma-informed practice, measured via a questionnaire developed by the intervention developers	Significant increase in knowledge related to trauma-informed practice (mean = 12.8 [SD = 1.2] vs. 13.5 [SD = 1.4], p < .001) Significant increase in self-reported trauma-informed skills (mean = 12.0 [SD = 1.7] vs. 13.1 [SD = 1.5], p < .001) Significant increase in positive attitudes toward trauma-informed practice (mean = 18.9 [SD = 1.6] vs. 19.4 [SD = 1.2], p < .001) Significant increase in aggregate trauma-informed practice score (mean = 43.8 [SD = 3.5] vs. 46.0 [SD = 3.5], p < .001)	Convenience sample of attendees who chose to attended the training, arrived on time (to complete the pretest), and stayed until the end (to complete the post-test) Post-test only provided immediately after training. The extent to which improvements were retained for a meaningful amount of time is unclear
Conners-Burrow et al. (2013)	Study design: Single group pretest/multiple posttests N: 438 Population/setting: Staff of a child welfare agency Follow-up: Immediately post for knowledge about trauma-informed practice, 3 months for trauma-informed practice behaviors	One-day trauma-informed training	Knowledge and self-reported use of trauma-informed practices, measured via a questionnaire developed by the intervention developers	Significant increases in knowledge about trauma-informed practice between pretest and immediately posttest (e.g., mean = 2.18 vs. 3.25)* Significant increases in self-reported use of trauma-informed practices between pretest and 3 months follow-up (e.g., mean = 2.61 vs. 3.10)*	Statistical adjustment not conducted 38% pretest/3-month posttest follow-up retention *Pre-/posttraining mean changes varied across different types of service providers and pooled intervention effects are not presented. The statistics provided here are examples of pre-/postmeans for caseworkers
Crable, Underwood, Parks-Savage, and Maclin (2013)	Study design: Randomized controlled trial N: 40 Population/setting: Direct service providers working in a psychiatric hospital Follow-up: 45 days	Eight module (length of each unknown) trauma-informed training entitled "Gender Specific and Trauma-Informed Training Curriculum"	Knowledge about traumatic stress, measured via a questionnaire developed by the intervention developers	No significant changes in knowledge about traumatic stress between intervention and control groups	Statistical adjustment not conducted 100% pretest/45-day posttest follow-up retention

Table 1. (continued)

Authors (Year)	Study Design, Population, Setting, Follow-Up	Intervention	Outcomes and Measures	Results	Limitations/Notes
Dorado et al. (2016)	Study design: Single group pretest/multiple posttests N: n/a Population/setting: Staff and students in one elementary school Follow-up: 1 and 5 years	Half-day school-wide training trauma-informed training with series of follow-up trainings (frequency/ duration not specified), consultation to address student needs and promote trauma-informed culture, school-based trauma-specific treatments	Disciplinary office referrals and suspensions, measured via administrative data*	Significant (32%, $p < .001$) decrease in disciplinary office referrals 1-year postintervention and 87% ($p < .001$) decrease 5 years postintervention (compared to preintervention year) No significant decrease in out-of-school suspensions 1-year postintervention, but there was a significant (95%, $p < .001$) decrease 5 years postintervention (compared to preintervention year)	Multiple trauma-informed intervention components were implemented concurrently with the training. Thus, the extent to which outcomes are attributable to the training, and not these other components, is unclear Outcomes expressed as counts, not rates. Thus, the extent to which the outcomes are attributable to the training, and not temporal chances in school size, is unclear Statistical adjustment not conducted *"Retrospective posttest" surveys administered in which staff rated how their knowledge, skills, and use of trauma-sensitive practices changed between the pre- and postintervention period. These data are not presented here because they met the exclusion criterion of single-group, posttest only data
Elwyn, Esaki, and Smith (2015)	Study design: Multiple group pretest/posttest* N: n/a Population/setting: Staff and residents at a juvenile justice facility Follow-up: 2 years after intervention had been fully implemented	Five-day training in Sanctuary Model for key staff and ongoing technical assistance for 3 years	Staff outcomes: Injuries to staff, assaults on staff, staff feared for safety, staff grievances filed, measured via administrative data Juvenile outcomes: Youth misconduct, physical restraints, isolation/ confinement, abuse/neglect, injuries to youth, assaults/fights on youth, youth grievances filed, youth feared for safety, measured via administrative data	Staff outcomes: Staff grievances filed reduced by 0.42 per 100 staff days ($p < .05$), assaults on staff reduced by 1.13 per 100 staff days ($p < .01$) Juvenile outcomes: Youth misconduct reduced by 6.7 per 100 person days ($p < .001$), physical restraints reduced by reduced by per 100 person days ($p < .001$), isolation/ confinement reduced by 2.35 per 100 person days ($p < .01$), assaults/ fights on youth reduced by 0.34 per 100 person days ($p < .05$), youth grievances filed reduced by 1.5 per 100 person days ($p < .001$), youth feared for safety reduced by 34 per 100 person days ($p < .01$)	Multiple trauma-informed intervention components were implemented concurrently with the training. Thus, the extent to which outcomes are attributable to the training, and not these other components, is unclear Statistical adjustment not conducted *National data on outcomes were used as a nonequivalent control group. Pre-/postintervention changes at the intervention site were generally more positive than national changes between pre- and postintervention years
Goetz and Taylor-Trujillo (2012)	Study design: Single group pretest/multiple posttests N: n/a Population/setting: Staff and patients at a psychiatric hospital Follow-up: 1, 2, 3 years	Two-day trauma-informed training provided by SAMHSA staff, aggression management training, code event review	Staff outcomes: Staff injuries, measured via administrative data, and staff perceptions of safety, measured via questionnaire developed by the intervention developers Patient outcomes: Hr of seclusion, hr of restraint and number of aggressive-patient incidents, measured via administrative data	Staff outcomes: Number of staff injuries reduced by 48% in first year after implementation Staff perceptions of safety improved in 5 of the 10 areas in first year after implementation (exact figures not presented) Patient outcomes: Hr of seclusion, hr of restraint, and number of aggressive patient incidents were reduced by approximately 50% in first year after implementation (exact figures not presented)	Multiple trauma-informed intervention components were implemented concurrently with the training. Thus, the extent to which outcomes are attributable to the training, and not these other components, is unclear Outcomes expressed as counts, not rates. Thus, the extent to which the outcomes are attributable to the training, and not temporal chances in facility census, is unclear Significance testing not conducted Statistical adjustment not conducted

Table I. (continued)

Authors (Year)	Study Design, Population, Setting, Follow-Up	Intervention	Outcomes and Measures	Results	Limitations/Notes
Green et al. (2016)	Study design: Randomized controlled trial N: 400 patients, 30 primary care physicians Population/setting: Patients at primary care clinics Follow-up: Approximately 1 month	6-hr trauma-informed training that integrates elements from Risking Connection	Patient–provider rapport, measured via patient report Perceptions of clarity of information from providers, measured via patient report Perceptions of shared decision-making between patients and providers (i.e., "partnership" measured via patient report)	No significant differences in patient–provider rapport No significant differences perceptions of clarity of information from providers Significant increase in perceptions of shared decision-making between patients and providers ($p < .01$)	n/a
Green et al. (2015)	Study design: Randomized controlled trial, multiple posttests in experimental group N: 30 Population/setting: Primary care providers at four clinics Follow-up: Not specified	6-hr trauma-informed training that integrates elements from Risking Connection	Patient-centeredness score, measured via Roter Interactional Analysis System ratings of taped visits between primary care providers and standardized patients	Significant increase in patient-centeredness score ($p < .01$) (e.g., mean = 2.8 [$SD = 2.0$] vs. 4.1 [$SD = 2.9$])	n/a
Greenwald et al. (2012)	Study design: Single group pretest/posttest N: 48 Population/setting: Residential psychiatric hospital Follow-up: 1 year	Nineteen-day trauma-informed training over the course of 9 months ("Fairy Tale" model)	Ratings of problem severity, measured via self-report scale Number of days in in-patient treatment, measured via administrative data Discharge to lower level of care, measured via administrative data	Significant 34% decrease in Problem Rating Scale score ($p < .001$) Significant 39% reduction in days spent treatment (e.g., mean = 340.7 [$SD = 267.0$] vs. 208.8 [$SD = 106.7$], $p < .001$) 33% reduction in patients discharged to higher level of care ($p < .05$)	Multiple trauma-informed intervention components were implemented concurrently with the training. Thus, the extent to which outcomes are attributable to the training, and not these other components, is unclear Outcomes expressed as counts, not rates. Thus, the extent to which the outcomes are attributable to the training, and not temporal chances in facility census, is unclear Statistical adjustment not conducted
Greenwald et al. (2008)	Study design: Single group pretest/posttest N: 303 Population/setting: "Mental health professions" practicing in a variety of setting Follow-up: Not specified	Trauma-informed case formulation exercise, duration not specified	Reactivity, measured via single-item Subjective Units of Disturbance Scale "Compassion toward clients," measured via single developed by intervention developers Sense of competence in helpers role, measured via single item developed by intervention developers	Reactivity decreased significantly in four of the six studies (e.g., mean = 6.02 [$SD = 1.55$] vs. 2.95 [$SD = 1.71$], $p < .001$)* Compassion toward clients increased significantly in all six studies (e.g., mean = 0.31 [$SD = 1.12$] vs. 1.05 [$SD = 0.74$], $p < .001$)* Sense of competence in helpers role increased significantly in all six studies (e.g., mean = 0.20 [$SD = 0.90$] vs. 0.89 [$SD = 0.77$], $p < .001$)*	Posttest appears to be only be provided immediately after training. The extent to which improvements were retained for a meaningful amount of time is unclear Multiple trauma-informed intervention components were implemented concurrently with the training. Thus, the extent to which outcomes are attributable to the training, and not these other components, is unclear Statistical adjustment not conducted Information on survey completion rates not presented. Articles states that only "half to two thirds" of training participants completed surveys in some of the studies and the "rate of participation was not carefully tracked"

Table I. (continued)

Authors (Year)	Study Design, Population, Setting, Follow-Up	Intervention	Outcomes and Measures	Results	Limitations/Notes
					*Pre-/posttraining mean changes varied across intervention sites and pooled intervention effects are not presented. The statistics provided here are examples of pre-/postmeans from single intervention sites
Hall et al. (2016)	Study design: Single group pretest/posttest N: 34 Population/setting: Nurses at two hospital emergency departments Follow-up: Immediately post	One-day trauma-informed training	Knowledge about traumatic stress and confidence in ability to provide trauma-informed care, measured via questionnaire developed by intervention developers	Ratings for nine of 18 items increased significantly ($p < .001$), aggregate score pre-/postmeans not compared	Posttest only provided immediately after training. The extent to which improvements were retained for a meaningful amount of time is unclear Statistical adjustment not conducted
Kenny et al. (2017)	Study design: Single group pretest/multiple posttests N: 203 Population/setting: Staff at a child welfare center staff Follow-up: Immediately post, 1 year	Half day National Child Traumatic Stress Network trauma-informed training	Knowledge about trauma-informed care, measured via questionnaire developed by intervention developers	Knowledge about trauma-informed care increased significantly (mean = 10.8 [$SD = 2.17$] vs. 12.7 [$SD = 2.02$]) between pre- and immediately posttraining and was retained at 12 months follow-up ($p < .05$)	12% pretest/1-year posttest follow-up retention Statistical adjustment not conducted
Kerns et al. (2016)	Study design: Single group pretest/multiple posttests N: 44 Population/setting: Staff at a child welfare agency Follow-up: Immediately post, 6 months	2-hr training on trauma-informed screening tools	Self-reported knowledge and skills gained related to administering two trauma-informed screening tools (Pediatric Symptoms Checklist-17 [PSC-17] and Screen for Child-Related Anxiety Emotional Disorders [SCARED]), measured via questionnaire developed by intervention developers	Knowledge and skills for administering the PSC-17 increased significantly (mean = 7.5 [$SD = 2.1$] vs. 8.6 [$SD = 1.5$] and was retained at 6 months follow-up, $p < .001$) Knowledge and skills for administering the SCARED increased significantly (mean = 3.0 [$SD = 3.4$] vs. 7.0 [$SD = 2.0$] and retained at 6 months follow-up, $p < .001$)	70.5% pretest/6-month posttest follow-up retention Multiple trauma-informed intervention components were implemented concurrently with the training. Thus, the extent to which outcomes are attributable to the training, and not these other components, is unclear Statistical adjustment not conducted
Kramer, Sigel, Conners-Burrow, Savary, and Tempel (2013)	Study design: Single group pretest/multiple posttests N: 102 Population/setting: Staff at a child welfare agency Follow-up: Immediately after training then at 3 months follow-up	Two-day training modeled after the National Child and Traumatic Stress Network trauma-informed training	Knowledge of trauma-informed practice, measured via questionnaire developed by intervention developers Self-reported use of trauma-informed practices, measured via questionnaire developed by intervention developers	Knowledge of trauma-informed practice increased significantly between pretest and posttest immediate after training ($p < .001$) Self-reported use of trauma-informed practices increased significantly between pretest and posttest and were retained at 3 months follow-up ($p < .001$) Changes in knowledge about trauma-informed practice and were significantly associated with changes in trauma-informed practices and assessment ($p < .001$) but not chances in assessment practices	78% pretest/3-month posttest follow-up retention

Table 1. (continued)

Authors (Year)	Study Design, Population, Setting, Follow-Up	Intervention	Outcomes and Measures	Results	Limitations/Notes
Lang, Campbell, Shanley, Crusto, and Connell (2016)	Study design: Single group pretest/posttest N ≈ 230 Population/setting: Staff at a child welfare agency Follow-up: 2 years	National Child Traumatic Stress Network trauma-informed training for ≈1,650 child welfare agency staff, duration not specified Creation of a core team and subcommittee to guide trauma-informed systems change Development of a cohort of ≈40 "trauma champions" who organized ≥1 in-service training about trauma every month "Worker wellness" (i.e.,self-care) teams created and quarterly trainings in self-care provided Revision of agency policies for alignment with trauma-informed practice Training in trauma-focused cognitive behavioral therapy for community-based service providers	Perceptions of individual and agency capacity to provide trauma-informed care, measured via Trauma System Readiness Tool	Perceptions of individual and agency capacity to provide trauma-informed care increased significantly ($p < .05$) for 11 of the 12 domains (e.g., mean $= 3.65$ vs. 3.90, time effect, $p < .01$) for "Individual trauma knowledge and practice" domain	Multiple trauma-informed intervention components were implemented concurrently with the training. Thus, the extent to which outcomes are attributable to the training, and not these other components, is unclear Independent random samples of training participants, response rate less than 45% for pretest and posttest
Lotzin et al. (2017)	Study design: Randomized controlled trial N: 148 Population/setting: Substance use disorder providers in outpatient clinics Follow-up: 3 and 6 months	One-day trauma-informed training at baseline and "short refresher session" at 3 months follow-up	Frequency of asking patients about trauma exposure, measured via single item Knowledge about traumatic stress, measured via questionnaire developed by intervention developers Attitudes toward trauma inquiry and response, measured via questionnaire developed by intervention developers Confidence in trauma inquiry and response, measured via questionnaire developed by intervention developers	Increases in frequency of asking patients about exposure to traumatic events were significantly higher in the intervention than control group between baseline and 3 months follow-up ($b = .43$, $p < .001$) and increase was retained at 6 months follow-up Increases in trauma knowledge ($p = .011$), attitudes toward trauma inquiry ($p < .001$), and confidence in trauma inquiry ($p < .001$) were significantly higher in the intervention than control group between baseline and 3 months follow-up and between 3 and 6 months follow-up	43% pretest/6-month follow-up retention in intervention group and 57% pretest/ 6-month follow-up retention in control group It is unclear to the extent to which the refresher session at 3 months follow-up contributed to the changes from baseline being retained at 6 months follow-up
Raja et al. (2015)	Study design: Single group pretest/posttest N: 102 Population/setting: Second-year dental students Follow-up: Immediately post	Two, 3.5-hr trauma-informed training sessions	Knowledge about trauma-informed care, measured via questionnaire developed by intervention developers Confidence and skills related to trauma-informed practice, measured via questionnaire developed by intervention developers	Knowledge about trauma-informed care increased significantly for five of six items, aggregate score pre-/postmeans not compared Confidence and skills related to trauma-informed practice increased significantly for five of seven items, aggregate score pre-/postmeans not compared	Posttest only provided immediately after training. The extent to which improvements were retained for a meaningful amount of time is unclear Statistical adjustment not conducted
Strait and Bolman (2017)	Study design: Single group pretest/posttest	Three, 2-hr trauma-informed training sessions	Familiarity with, opinions about, and confidence in trauma-informed	Proportion of participants reporting that they would be "extremely	Posttest appears to be only provided immediately after training. The

(continued)

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Table 1. (continued)

Authors (Year)	Study Design, Population, Setting, Follow-Up	Intervention	Outcomes and Measures	Results	Limitations/Notes
	N: 267 pretest, 422 posttest Population/setting: Clinical health professions students Follow-up: Immediately post		practice, measured via questionnaire developed by intervention developers	likely" to administer the Adverse Childhood Experiences questionnaire to their patients was higher posttest than pretest (42.0% vs. 13.6%) Proportion of participants reporting that they were "somewhat" or "extremely" confident knowing what to do to help patients after discussing their trauma history was higher posttest than pretest (83.5% vs 44.4%)	extent to which improvements were retained for a meaningful amount of time is unclear Significance testing not conducted Statistical adjustment not conducted
Weiss et al. (2017)	Study design: Single group pretest/posttest N: 294 Population/setting: Health-care providers at one pediatric hospital Follow-up: Immediately post	1-hr trauma-informed training	Favorable attitudes toward the integration of trauma-informed practice and confidence in delivering trauma-informed care, measured via Trauma-Informed Medical Care Questionnaire	Favorable attitudes toward the integration of trauma-informed practice increased significantly ($p < .001$) Confidence in delivering trauma-informed care increased significantly ($p < .001$) Mean ratings increased significantly for all eight items between pretest and posttest, aggregate score pre-/postmeans not compared	Posttest appears to be only provided immediately after training. The extent to which improvements were retained for a meaningful amount of time is unclear Training participants who only completed the pretest, and not posttest, were excluded from analysis. Information on the proportion of participants in this category is not provided

Note. $N = 23$ studies. SAMHSA = Substance Abuse and Mental Health Services Administration.

trauma-informed trainings varied dramatically, ranging from only 1 or 2 hr (three studies) to multiple days (five studies).

Six interventions had at least one additional, nontraining component aimed at fostering trauma-informed organizational change. Examples of these intervention components include internal steering committees to guide trauma-informed change, policies that require an administrative review to be conducted each time a potentially retraumatizing incident occurs (e.g., seclusion and restraint, violence against staff), checklists to encourage trauma-informed practice, changes to features of the physical environment, ongoing consultation and technical assistance about trauma-informed practice, and wellness programs to improve staff self-care.

Staff knowledge, attitudes, and behaviors related to trauma-informed practice were assessed as outcomes in the majority of evaluations (14 studies). These outcomes were measured using a variety of self-report instruments, ranging from single-item instruments to the 90-Item Trauma System Readiness Tool (Hendricks, Conradi, & Wilson, 2011). The same instrument was not used in any two studies to assess the effect of a trauma-informed training on staff knowledge, attitudes, or behaviors. Seven studies used administrative data (e.g., hospital discharge data, disciplinary action records, and routine quality improve surveys) to assess the organizational intervention's effects on client outcomes. Only two studies collected data from clients to assess intervention effects on their perceptions of the organization's staff and the extent to which the organization was trauma-informed (Borckardt et al., 2011; Green et al., 2016).

Effects of Trauma-Informed Organizational Interventions on Staff Outcomes

Of the 14 studies that assessed the effects of a trauma-informed organizational intervention on staff knowledge, attitudes, or behaviors, 12 found a statistically significant improvement in one or more of these outcomes pre-/posttraining. The effect sizes were typically about one standard deviation (SD) in magnitude. Trainings with shorter durations generally had smaller effect sizes than trainings with longer durations. For example, Choi and colleagues' (2015) evaluation of a 1-hr trauma-informed training on perinatal health-care providers' knowledge and attitudes about trauma-informed practice found pre-/postchanges that were statistically significant but only about half of a SD in magnitude.

Only one study was designed to determine the effect of a trauma-informed training on staff attitudes independent of other, nontraining intervention components. Borckardt and colleagues (2011) used a cluster-randomized design in which each unit of a pediatric psychiatric hospital received trauma-informed organization intervention components in a different order, allowing for the effect of each component to be assessed independently. The study found that the trauma-informed training, in isolation, did not significantly change staff attitudes about their own "trauma sensitivity" and that the training was not significantly associated with a reduction in seclusion and restraint events that was observed.

Administrative data were used to assess intervention effects on staff outcomes in two evaluations, both of which used these data to assess staff safety. For example, an evaluation of a 5-day training in the sanctuary model and ongoing technical assistance in trauma-informed practice at a juvenile justice facility found that assaults on staff reduced by 1.13 per 100 staff days ($p < .01$) between the preintervention period and 2 years postintervention (Elwyn, Esaki, & Smith, 2015). During this same time period, the national rate of assaults on staff at juvenile justice facilities increased significantly. No studies assessed the effects of trauma-informed organizational interventions on staff turnover.

Persistence of the Effects of Trauma-Informed Organizational Interventions on Staff Outcomes Over Time

Of the 14 studies that evaluated the effect of trauma-informed trainings on staff knowledge, attitudes, or behaviors, nine assessed these outcomes at ≥ 1 month after the training occurred. Seven of these studies found that significant improvements were retained. For example, knowledge about trauma-informed practice among child welfare agency staff increased from a mean score of 10.8 ($SD = 2.17$) prior to a half day trauma-informed training to 12.7 ($SD = 2.02$) immediately after the training and 12.4 ($SD = 2.02$, $p < .05$) at 12-month follow-up (Kenny, Vazquez, Long, & Thompson, 2017).

Three studies found that changes in trauma-informed *behaviors* were retained at ≥ 1-month follow-up. For example, among child welfare agency directors who participated in a 2-day trauma-informed training, self-reported use of trauma-informed practices increased significantly immediately after the training and these increases were retained at 3 months follow-up ($p < .001$; Kramer, Sigel, Conners-Burrow, Savary, & Tempel, 2013). A randomized controlled trial of a 1-day trauma training for substance abuse treatment providers found that self-reported frequency of trauma screening increased significantly between pretraining and 3 and 6 months follow-up ($p < .001$; Lotzin et al., 2017).

Effects of Trauma-Informed Organizational Interventions on Client Outcomes

Eight studies assessed the effects of a trauma-informed organizational intervention on client outcomes, five of which found a statistically significant improvement for one or more outcomes (significance testing was not conducted in two of these studies). Six of the eight studies used administrative data to assess these outcomes. For example, an evaluation of the Healthy Environments and Response to Trauma in Schools intervention—which included a school-wide trauma training, ongoing consultation about trauma-informed practice, and the provision of trauma-specific treatment in schools—found that disciplinary office referrals decreased by 32% between pre- and 1-year postintervention and deceased by 87% 5 years postintervention (Dorado, Martinez, McArthur, & Leibovitz,

2016). Blair and colleagues (2017) found that the incidence of seclusions at a psychiatric hospital was cut in half (9.2 per 100 admissions vs. 4.4 per 100 admissions, $p < .01$) 2 years after an intervention that included a 2-day Risking Connection trauma training, administrative reviews for all seclusion and restraints events, and routine use of checklists to minimize seclusion and restraint.

Two studies assessed the effect of staff trauma-informed trainings on patients' perceptions of care. In one randomized controlled trial, Green and colleagues (2016) assessed the impact of a 6-hr trauma-informed training for primary care physicians on their patients' perceptions of patient–provider rapport, communication, and shared decision-making. The evaluation found that the training significantly improved patient perceptions of shared decision-making ($p < .01$), but not patient–provider rapport or communication. Borckardt and colleagues' (2011) cluster-randomized controlled trial of a trauma-informed organizational intervention at a psychiatric hospital did not find that the intervention significantly improved patients' perceptions of the staff's trauma sensitivity.

Limitations of Evaluations of Trauma-Informed Organizational Interventions

There were serious limitations related to study design, measurement, and analysis in many of the evaluations. In 12 of the studies, staff knowledge, attitudes, and/or behaviors were assessed using questionnaires that were developed by the intervention developers for the purpose of the evaluation. This introduces the risk of a "teaching to the test" effect in which the training heavily emphasizes specific content that is assessed by survey items. In seven studies, posttests were only administered immediately after the training—providing no indication of whether changes in knowledge or attitudes were retained for an amount of time meaningfully enough to impact staff or client outcomes. Although nine studies assessed changes in staff knowledge, attitudes, or behaviors at ≥1-month follow-up, pretest/posttest retention rates varied dramatically. For example, Bartlett and colleagues (2016) achieved 80.5% retention at 1-year follow-up, while Kenny and colleagues (2017) only achieved 12% retention at 1-year follow-up. High loss-to-follow-up rates increase the risk of attrition bias because it is plausible that participants who completed posttests had more favorable perceptions of, and gained more from, the training than participants who did not complete posttests. Studies that assessed outcomes at ≥1-month follow-up were limited by the absence of a control group that did not participate in the training. Without a control group, it is unclear whether changes in outcomes ≥1 month after the training are the result of exposure to the training or exposure to information about trauma-informed practice from obtained from other different sources.

In nine studies, multiple trauma-informed organizational intervention components were implemented at the same time as the trauma-informed training. This limits the ability of studies to determine the extent to which outcomes are attributable to the training as opposed to other intervention components. Of

Table 2. Summary of Key Findings.

– Trauma-informed organizational interventions that include staff trainings have been the focus of at least 23 empirical outcome evaluations
– The strength evidence about the effectiveness of these trainings is limited by an abundance of single group, pretest/posttest designs with short follow-up periods, inconsistent use of assessment instruments to ascertain outcomes, and unsophisticated analytic approaches
– Staff knowledge, attitudes, and behaviors related to trauma-informed practice improve immediately after participating in a trauma-informed training, but it is less clear whether these changes are retained over time and translate into client outcomes
– Trauma-informed organizational interventions appear to have the most meaningful impacts on client outcomes when the intervention includes other components (e.g., organizational policy changes) in addition to trauma-informed trainings for staff

the six studies that used administrative data to assess the effects of interventions on client outcomes, four presented outcome data in the form of counts, not rates (e.g., number of incidents per 100 patient days). Thus, it is unclear whether changes in outcomes are attributable to the training or temporal changes in facility census. Finally, unsophisticated analytic techniques were used to evaluate intervention effects in many of the studies. Three of the studies did not conduct statistical significance testing and only 6 of the 23 studies conducted statistical adjustment (e.g., used multivariate regression) to assess intervention effects while controlling for potentially confounding variables. In four studies, differences in pre-/posttraining means were only reported for individual survey items and aggregate differences in pre-/postmeans were not presented.

Discussion

Trauma-informed organizational interventions that include staff trainings have been the focus of at least 23 empirical outcome evaluations published in the peer-reviewed literature. The strength of this body of evidence is limited by an abundance of single group, pretest/posttest designs with short follow-up periods, inconsistent use of assessment instruments to ascertain outcomes, and unsophisticated analytic approaches. Nevertheless, some well-designed and analytically rigorous evaluations of trauma-informed organizational interventions that include staff trainings have been conducted and demonstrate positive effects. Overall, the review indicates that staff knowledge, attitudes, and behaviors related to trauma-informed practice improve after participating in a trauma-informed training. It is less clear, however, the extent to which staff changes in knowledge, attitudes, and behaviors related to trauma-informed practice are retained over time and translate into client outcomes. Trauma-informed organizational interventions appear to have the most meaningful impacts on client outcomes when the intervention includes other components (e.g., policy changes) in addition to trauma-informed trainings for staff (Table 2).

Table 3. Primary Implications for Practice, Policy, and Research.

Practice
 – Evaluations of trauma-informed trainings should use established, validated, and reliable instruments to assess the effects on participants—not develop entirely new instruments

Policy
 – Policies that mandate, fund, or incentivize trauma-informed trainings should also support organizational policy changes that are aligned with the principles of trauma-informed practice

Research
 – Studies of trauma-informed trainings should assess participant outcomes at least 1-month posttraining and also assess client outcomes
   – Also see Tables 4 and 5

Informed by the results of the review, Table 3 summarizes primary implications for practice, policy, and research. Table 4 specifies priority questions for future research about the effects trauma-informed organizational interventions and trainings. Table 5 summarizes recommendations for measurement, analysis, study design, and reporting in the evaluation of trauma-informed organizational interventions that include staff trainings.

Future Research Related to Intervention Components

The duration of the trauma-informed trainings varied dramatically, ranging for 1 hr to 5 days. A question for future research relates to the minimum "dose" of trauma-informed training needed to produce meaningful changes in staff and client

Table 4. Priority Questions for Future Research About the Effects of Trauma-Informed Organizational Interventions.

Intervention Components	Staff Outcomes	Client Outcomes
– What is the minimum duration of a trauma-informed training needed to produce meaningful results? – What content is most important to include in trauma-informed trainings? – To what extent do trauma-informed trainings need to be tailored for different organizational contexts? – What nontraining components of trauma-informed organizational interventions have the greatest effects on staff and client outcomes?	– What instruments most reliably and efficiently assess the effects of trauma-informed organizational interventions on staff knowledge, attitudes, and behaviors related to trauma-informed practice? – What constitutes a "clinically significant" change in staff knowledge and attitudes about trauma-informed practice? – What effects do trauma-informed organizational interventions have on staff job satisfaction, burnout, and turnover?	– How do trauma-informed organizational interventions effect clients' perceptions of care, staff, and the organization? – What types of client outcomes are most important to clients, their families, policy makers, and payers? – What are the mechanisms through which changes in staff knowledge and attitudes about trauma-informed practice influence client outcomes?

Table 5. Recommendation the Measurement, Analysis, Design, and Reporting of Evaluations of Trauma-Informed Organizational Interventions.

Measurement/Analysis	Study Design	Reporting
– Calculate and report aggregate means of trauma-informed knowledge, attitudes, and behaviors as opposed to only reporting means for single items – Use multivariate techniques (e.g., regression) to statistically adjust for client, staff, and facility characteristics – When reporting administrative outcomes (e.g., patient days) express data as rates, not counts – Document and analyze how trauma-informed training participants who complete surveys differ from those who do not complete surveys	– When a trauma-informed organizational intervention has multiple components, stager implementation so that the independent effects of the training can be assessed – If a randomized controlled design is not possible, have a matched control group and assess outcomes at the same time points to help control for factors other than the training that could account for improvements in knowledge, attitudes, and behaviors related to trauma-informed practice – Conduct a posttest at least 1 month after trauma-informed training to assess whether improvements have been retained for a meaningful amount of time	– Report the duration of trauma-informed training and provide details about the training content – Report details about trauma-informed training implementation (e.g., who led the training, collected survey data, and what their relationship was to the training participants) – Report survey participation rates and information about precisely when the pre-/posttest surveys were completed – Report whether trauma-informed training was mandatory or optional

outcomes. There was also substantial variation in the content of the trauma-informed trainings. This raises questions about what types of content (e.g., information about the biology of trauma, information about specific trauma-informed practices) are most important and the extent to which the content from existing trauma-informed trainings (e.g., Risking Connection) should be tailored for different organizational contexts. Lastly, only one study was designed to assess the effects of a trauma-informed training independent of other components of the organizational intervention (Borckardt et al., 2011). SAMHSA's (2014) Treatment Improvement Protocol for Trauma-Informed Care enumerates 16 nontraining components that could be integrated into trauma-informed organizational interventions (e.g., create a trauma-informed oversight committee, change the physical environment) and future research should assess the effects of such components independent of, and in combination with, trauma-informed trainings.

Future Research Related to Staff Outcomes

Staff outcomes were measured in a variety of ways. A different instrument was used in each evaluation to assess the effect of trauma-informed trainings on staff knowledge, attitudes, or behaviors. In most instances, the instrument was developed by the same people who developed the intervention and the instrument's validity and reliability was not assessed. Many valid and reliable instruments for measuring trauma-informed organizational interventions have recently been developed (e.g., the Trauma-Informed Medical Care Questionnaire, Weiss et al., 2017; Trauma System Readiness Tool, Hendricks et al., 2011; Trauma-Informed System Change Instrument, Richardson, Coryn, Henry, Black-Pond, & Unrau, 2012; Attitudes Related to Trauma-Informed Care Scale, Baker, Brown, Wilcox, Overstreet, & Arora, 2016; Trauma-Informed Practices Scale, Goodman et al., 2016; and the "TICOMETER," Bassuk, Unick, Paquette, & Richard, 2017), and future research should examine which instruments most efficiently assess the effects of trauma-informed organizational interventions. More standardized use of instruments would also allow for the results of different trauma-informed organizational interventions to be compared. This would also enable the results of multiple evaluations to be pooled together and help establish what constitutes a "clinically significant" change in staff knowledge, attitudes, and behaviors related to trauma-informed practice. Beyond assessment staff knowledge, attitudes, and behaviors, future research should examine the effects of trauma-informed organizational interventions on staff outcomes such as job satisfaction, burnout, and turnover. None of the evaluations included in the review assessed these outcomes.

Future Research Related to Client Outcomes

Evidence about the impacts of trauma-informed organizational interventions on client outcomes is less developed than it is for staff outcomes. Although six studies used administrative data to assess client outcomes, only two examined the effect of a trauma-informed organizational intervention on clients' perceptions of care. This represents an important area for future research given the person-centered orientation of trauma-informed practice. Formative research is also needed to identify the types of client outcomes that are most important to clients, their families, policy makers, and payers, and other system leaders. The scale-up and sustainability of trauma-informed organizational interventions will likely be influenced by the extent to which they achieve outcomes that are important to policy makers and payers. Lastly, research is needed about the mechanisms through which staff knowledge, attitudes, and behaviors related to trauma-informed practice impact client outcomes. This information can inform the design and enhance the effectiveness of trauma-informed staff trainings.

Conclusions

Organizational interventions that train staff about trauma-informed practice appear to improve staff knowledge, attitudes, and behaviors for some period of time. It is less clear, however, extent to which staff trainings, independent of other components of trauma-informed organizational interventions, translate into meaningful outcomes for the clients the organizations serve. Use of more rigorous evaluation designs, sophisticated analytic techniques, and valid and reliable assessment instruments would substantially improve the evidence base for trauma-informed organizational interventions and help ensure that their effects on staff and client well-being are maximized.

Declaration of Conflicting Interests

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