

Understanding Therapists' Perceived Determinants of Trauma Narrative Use

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Abstract

Background: Trauma narratives are a critical, exposure-based component of trauma-focused cognitive-behavioral therapy, yet community therapists do not always use them. Given evidence that intentions to deliver elements of cognitive behavioral therapy vary by component, and that intentions to deliver exposure are the weakest, this study focused specifically on trauma narratives. We drew on a social psychology causal theory (Theory of Planned Behavior; TPB) and an implementation science framework (the Consolidated Framework for Implementation Research; CFIR) to glean insight into multilevel influences on trauma narrative use. While the CFIR offers a broad list of factors potentially affecting implementation, the TPB offers causal pathways between constructs that predict behavior, including the uptake of an evidence-based intervention. The integration of these approaches may provide a comprehensive understanding of factors affecting therapists' use of TNs.

Methods: Therapists ($n=65$) trained in trauma-focused cognitive behavioral therapy completed a survey about their use of and beliefs about trauma narratives. Content analysis was used to identify common beliefs about trauma narratives. A subset of participants ($n=17$) completed follow-up qualitative interviews, which were analyzed using an integrated approach informed by the CFIR.

Results: While most participants reported high intentions to use TNs, nearly half reported that they did not use TNs in the last six months. Survey data indicate a number of TPB-related determinants to using on trauma narratives. Qualitative interviews identified CFIR-relevant contextual factors that may influence constructs central to TPB.

Conclusions: These results highlight the importance of integrating approaches that address multiple theoretical determinants of therapist behavior, including therapist, organizational, and client factors with causal explanations.

Contributions To The Literature

- Trauma narratives are a key part of treatment for children who experience trauma, but they are not frequently used in clinical practice
- Existing theories, models, and frameworks do not provide a complete explanation for why therapists rarely use trauma narratives
- This study used quantitative and qualitative methods to assess community therapists' perceptions of trauma narratives
- Several factors, such as agency support and family engagement in treatment may affect therapists' trauma narrative use
- Combining a causal theory (the Theory of Planned Behavior) and an implementation science framework (the Consolidated Framework for Implementation Research) may provide a more complete understanding of barriers to implementation

Background

The majority of youth in the United States experience traumatic events before adulthood, (1). Trauma exposure can lead to persistent trauma *symptoms*, including “emotional, behavioral, cognitive, physical, and/or interpersonal difficulties directly related to the traumatic experience” (2, p. 7) and post-traumatic stress disorder (PTSD). Providing effective treatment is important to reduce the negative sequelae associated with untreated trauma symptoms, including suicidal thoughts and behaviors (3) and high medical costs (4). Trauma-focused cognitive behavioral therapy (TF-CBT) is an evidence-based treatment for youth experiencing PTSD (2, 5). TF-CBT has demonstrated effectiveness in reducing symptoms of post-traumatic stress and PTSD (6, 7).

The trauma narrative (TN) is a core component of TF-CBT that encourages youth to gradually increase contact with details of the trauma while “unlink[ing] thoughts, reminders, or discussions of the traumatic event from overwhelming negative emotions” (2, p. 172). TNs provide insight into specific dysfunctional trauma-related beliefs that can be addressed and corrected in treatment (8). Deblinger and colleagues (9) experimentally evaluated the effects of TNs and found that youth assigned to a TN condition (compared to a TF-CBT without TN condition) experienced less anxiety and fear by the end of treatment. Moreover, youth in the TN condition reported that the most helpful part of therapy was talking about the trauma. These results provide support for the importance of TNs, which adds to the larger body of research regarding the importance of exposure in CBT (e.g., 10).

Despite the importance of TNs, they are not always used in practice. One study examining therapists’ perspectives of TF-CBT found that TNs were rated as the one of the most difficult TF-CBT components to implement (11). Another study found that, although all evidence-based protocols for trauma include some element of exposure, only 14–22% of trauma-exposed youth received any type of exposure during treatment (12). This is consistent with the finding that therapists report being less motivated to deliver exposure compared to other CBT elements (13). This may be due to therapist discomfort, or concern that engaging in the exposure may cause harm (14). Therapists are likely attuned to the heightened negative affect and physiological arousal that youth report experiencing during the development and processing of the TN (15). However, youth acknowledge the benefits and functional improvements they experience as a result of completing the TN portion of TF-CBT (15, 16).

Although several determinants to TN use have been identified, much remains unknown about how these factors influence TN implementation. One validated causal theory that has been adapted from social psychology and increasingly applied to implementation science is the Theory of Planned Behavior (TPB; 17, 18–20). The TPB states that behavioral intentions, which capture one’s strength of motivation to perform a behavior, are the strongest predictor of actual behavior. Intentions are informed by attitudes, subjective norms, and perceived behavioral control (also called self-efficacy). Attitudes are posited to be affected by perceived advantages and disadvantages of performing the behavior (17, 21). Norms are based on perceptions of what one is expected to do, as well as what one believes other people actually do. Finally, self-efficacy is influenced by beliefs about one’s ability to perform the behavior. The TPB

causal model suggests that understanding the role played by attitudes, norms, and self-efficacy is critical to identifying the mechanisms underlying intention to use TN (and use or lack of use). The TPB has several strengths, including standardized, specific definitions of constructs that predict individual behaviors, standardized, predictive methods for measuring these constructs, and a causal explanation for factors influencing implementation. Multi-level factors are likely to influence the beliefs underlying intentions, and to determine the degree to which intentions are correlated with actual behavior (20, 22, 23). For example, policies, resources, and intervention characteristics can influence the relationship between intentions to use and actual use of an EBI.

The Consolidated Framework for Implementation Research (CFIR; 24), which is commonly applied in implementation science, is a determinant framework that explicitly focuses on the importance of multi-level influences on implementation outcomes (25). The CFIR encompasses five general domains including intervention characteristics (i.e., the features of the intervention), inner setting (i.e., organizational culture and climate), outer setting (i.e., the political and social climate), characteristics of individuals (e.g., therapists' knowledge and beliefs), and implementation process (e.g., planning, engagement). The CFIR includes comprehensive terminology for each domain but does not identify any causal mechanisms or provide insight into *how* or *why* change takes place (26). Furthermore, the CFIR includes fewer specifics than the TPB on therapist-level determinants (27). When used together, the CFIR and the TPB may ideally complement each other and provide a more thorough understanding of factors influencing EBI implementation.

The present study examined therapist perspectives of using TNs in community mental health settings after receiving training in TF-CBT. The first phase of this study identified particular beliefs that, according to a causal theory (TPB), can influence therapists' intentions to use TNs. The second phase involved in-depth qualitative interviews with a subset of participants to identify CFIR factors that may influence individuals' beliefs and use of TNs. The primary aim of this study was to use mixed methods to integrate insights from a causal theory (TPB) and a determinant framework (CFIR) to enhance our understanding of TN implementation.

Methods

Setting

This study took place in Philadelphia, a diverse city of over 1.5 million residents (28). Public behavioral health services, including mental health and substance use treatment, are funded by Medicaid and managed by Community Behavioral Health (CBH). CBH is a non-profit managed care organization that is part of the larger organization overseeing public behavioral health service delivery in Philadelphia County (the Department of Behavioral Health and Intellectual disAbility Services; DBHIDS). In response to high rates of trauma exposure among youth in Philadelphia, DBHIDS began developing a comprehensive trauma-informed public behavioral health system in 2011. DBHIDS was awarded a National Child Traumatic Stress Initiative Community Treatment and Service Center grant (Category III) from the

Substance Abuse and Mental Health Services Administration (SAMHSA) in 2012 and again in 2017 to support the Philadelphia Alliance for Child Trauma Services (PACTS). The goal of PACTS is to increase the number of children in Philadelphia receiving evidence-based trauma treatment (29). Since 2012, PACTS has trained ten cohorts of therapists in TF-CBT with a two-day workshop and eight months of bi-weekly consultation calls with a TF-CBT certified master trainer.

Participants

Participants were therapists ($N=65$) trained through the PACTS initiative. A subset of therapist participants ($n=17$) who completed the initial survey informed by the TPB (Phase 1) were selected for in-depth qualitative interviews informed by the CFIR (Phase 2) using purposive sampling based on their survey responses.

Measures

Phase 1.

Demographics. Questions in the initial survey asked about participants' age, racial/ethnic background, mental health licensure status, education, occupational title, experience conducting psychotherapy, and year in which they completed PACTS training.

TN Intentions and Use. Participants rated the strength of their intentions to use TNs using two items that included Likert-scale response options. The first item asked respondents to rate how strongly they agreed/disagreed with the statement, "In the next six months, I intend to use TN with the majority of my patients who receive TF-CBT." The second item asked respondents to estimate their likelihood of using TNs with the majority of TF-CBT clients in the next six months. Participants were also asked about the percentage of TF-CBT clients with whom they had used TNs in the last six months.

Beliefs about Using TN. TPB beliefs were assessed with a belief elicitation survey, which uses standardized procedures to assess the beliefs that underlie intentions (30, 31). The methodology requires representative respondents to identify the "tip of the tongue" beliefs that spontaneously come to mind when they think about the behavior of interest (32). Rather than relying on preconceived lists of statements identified by researchers, this method identifies stakeholder perspectives more directly. The survey consisted of seven open-ended questions pertaining to therapists' opinions of using TNs with the majority of their clients. Participants were asked about factors affecting their *use of TN with the majority of their patients receiving TF-CBT*. Questions assessed their beliefs underlying (a) attitudes by asking about advantages and disadvantages of using TNs; (b) norms by asking who would disapprove and who would approve of using TNs; and (c) self-efficacy by asking what would make it difficult and what would make it easier to use TNs.

Phase 2.

CFIR Qualitative Interviews. Semi-structured, CFIR-informed qualitative interviews were conducted with participants with a focus on therapist beliefs about using TNs[1], including factors that may interfere or assist with their use. In addition to prompts related to CFIR constructs, participants were asked to elaborate on specific responses they gave during the TPB belief elicitation. Each participant completed one interview lasting between 30-60 minutes. The interviews were audio-recorded and conducted individually at the participants' office or by phone. Interviews included broad, open-ended questions about therapists' beliefs about TNs. No further contact was made with participants after the Phase 2 interviews, and they did not provide feedback on transcripts or results. Interviews were conducted by female doctoral (HEF, BSL) and postdoctoral (BNR) trainees with experience in implementation research. The interviewers did not have prior relationships with any of the participants. The only personal information shared about the interviewers was that they were affiliated with the PACTS study and interested in understanding therapists' perceptions of TNs.

Procedures

All procedures were approved by the City of Philadelphia and the University of Pennsylvania Institutional Review Boards.

Phase 1. In April and May 2018, Participants who were part of the PACTS initiative and had completed initial training were asked to complete a 10-15-minute online survey that asked about demographics, TN intentions and use, and beliefs about using TNs. Prior to completing the survey, therapists provided written consent or e-consent for all study procedures. Therapists who completed the survey were entered into a lottery to be paid \$50 for completing the survey; a total of five participants were randomly selected to be paid.

Phase 2. In-depth semi-structured CFIR-informed qualitative interviews were conducted with a subset of participants who responded to the initial survey. Recruitment methods for the qualitative interviews were informed by the Dillman Total Design Survey Method (33) and included two follow-up emails sent one week after the initial email requesting participation in the qualitative interviews. We used purposive sampling to recruit therapists in three groups, including: (a) therapists with strong intentions to use TNs who reported using TNs with all or most of their clients in the past ($n=5$), (b) therapists who reported weaker intentions to use TNs and who had mid-levels of past TN use ($n=4$), and (c) therapists with strong intentions to use TNs, but who had used TNs with none or few clients in the past ($n=8$). Of the 26 participants invited to complete the qualitative interview, 17 participants completed interviews by phone or in person (65%). Those who declined either did not respond to attempts to contact them ($n=9$) or reported insufficient time available ($n=3$). Participants received \$50 for completing the interviews.

Data Management and Analysis

TPB Belief Elicitation (Phase 1). Content analysis was done collaboratively by two doctoral students (HEF and BSL) to create categories of similar responses to each question. Disagreements were discussed until consensus was reached. As recommended by Middlestadt (34) and used by Lushin et al. (19), we report

the categories endorsed by ≥10% of participants. To integrate TPB and CFIR findings, each of the TPB beliefs was categorized as belonging to one or more of the five CFIR domains, as shown in Tables 1-3. For instance, the belief that supervisors within the agency would approve of TN use was labeled as being relevant to the CFIR Inner Setting domain.

Table 1. Phase 1: Beliefs underlying attitudes (behavioral beliefs) about using trauma narratives with majority of clients receiving TF-CBT and CFIR domains

Perceived advantages of using TN			
N = 65	Count	%	CFIR Domain
Child is better able to process their trauma	22	34	Int
Child learns to identify and address cognitive distortions	15	23	Int
Reduction in trauma symptoms	10	15	Int
Allows for gradual exposure to trauma	10	15	Int
Client and therapist gain sense of mastery/empowerment over trauma	9	14	Int
Parents able to provide support	8	12	OS
Reduction in child avoidance	7	11	Int
Perceived disadvantages of using TN			
N = 65	Count	%	
None	16	25	-
Negative caregiver reactions	11	17	OS
Increase/worsening of client symptoms	10	15	Int

Notes: Percentages may sum to more than 100% because participants could list multiple answers. All beliefs are inclusive to the “individuals involved” CFIR domain. We also mapped these beliefs on to other potential CFIR domains with which they are associated.

Abbreviations: Int = Intervention; IS = Inner Setting; OS = Outer Setting (includes *Family Characteristics*); Ind = Characteristics of Individuals; IP = Implementation Process

Table 3. Phase 1: Self-efficacy (and perceived behavioral control) beliefs about using trauma narratives with majority of clients receiving TF-CBT and CFIR domains

What would make it easier to use TN				
N = 65	Count	%	CFIR Domain	
Caregiver support	15	23	OS	
Client attendance	13	20	OS	
More training/supervision	9	14	IP	
What makes it difficult to use TN				
N = 65	Count	%		
Inconsistent attendance/treatment dropout	18	28	OS	
Lack of caregiver involvement/support	17	26	OS	
Client avoidance	11	17	OS	
Child is too young	7	11	OS	
Client resists/refuses	7	11	OS	
Client is not ready	7	11	OS	

Notes: Percentages may sum to more than 100% because participants could list multiple answers.

All beliefs are inclusive to the “individuals involved” CFIR domain. We also mapped these beliefs on to other potential CFIR domains with which they are associated.

Abbreviations: Int = Intervention; IS = Inner Setting; OS = Outer Setting (includes *Family Characteristics*); Ind = Characteristics of Individuals; IP = Implementation Process

CFIR Qualitative Interviews (Phase 2). Qualitative interviews were transcribed by undergraduate research assistants and analyzed using an integrated analysis (35), identifying *a priori* attributes (CFIR constructs) and also using modified grounded theory (36, 37). Initial codes included *a priori* codes specific to the CFIR (i.e., intervention characteristics, inner setting, outer setting, characteristics of individuals, implementation process), which were not mutually exclusive. Statements were also coded as being a barrier or a facilitator based on therapists’ descriptions of how a given factor affected their use of TNs. Additional codes, including ‘family characteristics’ and ‘modifications/adaptations to TNs,’ were generated using grounded theory. These two codes are considered sub-themes of outer setting and intervention characteristics, respectively.

Based on a review of transcriptions, thematic saturation was reached. Transcripts were coded by two coders, including an advanced doctoral student (HEF) and an undergraduate research assistant (RA). A subset of transcripts was collaboratively reviewed to develop a codebook and refine code definitions. Then, three transcripts were coded separately to achieve initial reliability (agreement on all codes >90%). Both coders coded the remainder of transcripts independently, overlapping on a subset of transcripts

($n=6$) to assess final reliability for all codes, which remained above 90% agreement (*range* = 90.12 - 96.73%). Codes were summarized in NVivo and collaboratively examined for themes. A post-hoc mixed methods analysis was conducted to determine differences in themes between each of the three sampled groups. Given the small sample size with each subgroup, saturation of themes may not have been achieved.

[1] Given that TPB calls for focusing on specific behaviors, the interviews aimed to focus on TNs. However, many participants also discussed the broader package of TF-CBT even when questions were focused on TNs. Although analyses focused primarily on statements related to TNs, some themes emerged related to TF-CBT more broadly.

Results

Phase 1

Demographic Characteristics. Participants were predominantly female ($n=60$, 92.3%), master's level ($n=61$, 93.8%), licensed therapists ($n=34$, 52.3%) with a mean age of 34.26 years ($SD=10.62$). The racial makeup of the sample included White ($n=47$, 72.3%), Black/African-American ($n=11$, 16.9%), Asian ($n=4$, 6.2%), American Indian or Alaska Native ($n=1$, 1.5%), Native Hawaiian or Other Pacific Islander ($n=1$, 1.5%), and other ($n=6$, 9.2%). The majority identified as non-Hispanic/Latinx ($n=49$, 75.4%). The plurality of participants were trained in TF-CBT the year prior to the present study ($n=27$, 41.5%); others were trained 7 years prior ($n=2$, 3.1%), 4 years prior ($n=2$, 3.1%), 3 years prior ($n=6$, 9.2%), 2 years prior ($n=6$, 9.2%) and in the year the study was conducted (2018; $n=19$, 29.2%). Three participants (4.7%) did not report when they were trained.

TN Intentions and Use. Therapists agreed with the statement that "I intend to" use TNs with the majority of patients who receive TF-CBT ($M=4.22$, $SD=1.03$) on a 5-point scale. They also reported that they were likely to use TNs ($M=5.94$, $SD=1.18$) on a 7-point scale. However, 47.7% of therapists reported that they did not use TNs with patients receiving TF-CBT over the last 6 months[2]. Participants who completed qualitative interviews were more likely to report being likely to use TNs in the next six months, $t(43.57)=-3.73$, $p=.001$; no other differences were found between participants who did and did not complete qualitative interviews.

TPB Belief Elicitation. Beliefs are described below, along with the CFIR domains they reference (in italics). First, respondents were asked about the advantages of using TNs (i.e., beliefs underlying attitudes, also called behavioral beliefs). Many provided responses that CFIR would categorize as *outer setting* (which includes family characteristics), such as involving parents in a supportive role (Table 1). In addition, therapists identified positive *intervention characteristics*, such as the value of using TNs to help clients better understand their trauma and gain mastery over it. When asked to share the disadvantages of using TNs (which are also beliefs underlying attitudes), the majority of therapists reported that there were none. Those who did identify disadvantages noted concerns related to *outer setting*, including caregivers being

unprepared, unhelpful, or unsupportive. Some therapists also identified concerns related to *intervention characteristics*, including that TNs would worsen the client's symptoms.

When therapists were asked to state who would approve and disapprove of their TN use (to identify normative beliefs), they reported frequently that those who would approve included supervisors (who would be classified by CFIR as part of the *inner setting*), and caregivers and clients (who would be classified by CFIR as *outer setting*; Table 2). Several participants commented on the importance of agency-level support more broadly. The majority of participants reported that no one would disapprove of them using TNs. However, others reported that caregivers and/or clients might disapprove.

Table 2. Phase 1: Normative beliefs about using trauma narratives with majority of clients receiving TF-CBT and the CFIR domains

Those who are perceived to approve of the therapist using TN			
N = 65	Count	%	CFIR Domain
Supervisor	30	46	IS
Caregiver	20	31	OS
Client	14	22	OS
Agency	10	15	IS
Those who are perceived to disapprove of the therapist using TN			
N = 65	Count	%	
No one	29	45	-
Caregiver	18	28	OS
Client	10	15	OS

Notes: Percentages may sum to more than 100% because participants could list multiple answers. All beliefs are inclusive to the “individuals involved” CFIR domain. We also mapped these beliefs on to other potential CFIR domains with which they are associated.

Abbreviations: Int = Intervention; IS = Inner Setting; OS = Outer Setting (includes *Family Characteristics*); Ind = Characteristics of Individuals; IP = Implementation Process

When self-efficacy beliefs were assessed with prompts about what would make it easier to use TNs, therapists stated that support from caregivers and consistent client attendance would make it easier (*outer setting*; Table 3). Participants also identified *implementation process* factors (e.g., training and supervision) as making it easier to use TNs. Topics identified as making TN use difficult largely involved client factors (e.g., client refusal, lack of caregiver support). A summary of the number of beliefs elicited for each prompt is shown in Table 4.

Table 4. Phase 1: Summary of TPB belief elicitation responses ($N=65$).

Question	Total Beliefs	Mean (<i>SD</i>) number of beliefs reported per person	Number (%) of people who gave 3+ beliefs
Advantages	186	2.64 (1.71)	30 (46.2)
Disadvantages	92	1.39 (0.75)	7 (10.8)
Easier	92	1.44 (0.69)	5 (7.7)
Difficult	115	1.78 (1.00)	12 (18.5)
Approve	131	2.06 (1.01)	22 (33.8)
Disapprove	75	1.23 (0.58)	2 (3.1)

Note: Total Beliefs column includes beliefs that are repeated across participants.

Phase 2: CFIR Qualitative Interviews

In addition to the *a priori* CFIR codes, statements were coded as a facilitator, a barrier, or both when participants indicated how a given statement affected their TN use. Table 5 includes example quotes for each code.

Table 5. Phase 2: Example quotes for each code.

Code	Example Quote
Intervention Characteristics	<p>"I really like how structured it is. I think that's very helpful, having the chapters and you know, but also having some freedom to let the kid choose, like okay which chapter are we going to work on today? That's been helpful to have structure and then also flexibility."</p> <p>"[In] some cases the structure is very helpful for a kid to verbalize what they learn[ed] and how things are different ... I've seen kids really proud of their narratives and they share with their parent and they're able to have these "aha" moments."</p>
Modifications and Adaptations to TNs	<p>"I tend to do written narratives. I have clients who have done ... more of rap narrative. [They were able to] talk about their trauma history [in a way] that they wouldn't have been if we did a straight narrative like chapter one, chapter two, chapter three."</p> <p>"I had him dictate it to me because I knew he would really be finicky with grammar and spelling and all of that, and I think that would have held him up a bit."</p>
Inner Setting	<p>"[Something that helps is ...] my supervisor and my coworkers being trained also. To have them to immediately bounce [ideas off of]."</p>
Outer Setting	<p>"I think that when you're in a situation where the community you're living in feels really unsafe, it's hard to get that stuff under control."</p> <p>"I find that the kids that don't have as many outside stressors happening can do their trauma narratives fairly quickly, whereas the kids that come in and they're, you know, still going to court and going through that process... that makes it difficult too."</p>
Family Characteristics	<p>"I think those cultural pieces sometimes can be really difficult. In certain communities when trauma occurs, you don't talk about it, you bottle it up and it just goes unsaid.... I asked what happened next in terms of processing it, and she said, 'Well everything just kind of went on like nothing happened, we didn't talk about it and we just swept it under the rug as a family."</p> <p>"It can be difficult when there's really complex trauma histories ... It's [easier] when there's a single episode or it's a same type of abuse that they experience multiple times. But, when it's physical, emotional, sexual, and neglect and a lot of it, the abuse that impacted them the most might actually be [happening] now."</p>
Characteristics of Individuals	<p>"The trauma narrative is honestly one of my favorite parts of TF-CBT cause it's the culmination of all the work that we've already done. We've done all the gradual exposure and ... they've learned all these skills so then being able to actually sit down and write it is really cool to hear... I feel like the gradual exposure has worked on me too and I'm desensitized to their trauma as well."</p>
	<p>"I remember feeling a little apprehensive beforehand. Is this going to go well? Is the parent going to react in a way that's going to be helpful for the kid? I remember feeling excited that we were in this moment, but then also just apprehensive and a little bit nervous... And then afterward, feeling relieved and also...very hopeful, and having a sense of completion"</p>
Implementation Process	<p>"The second booster was really, really helpful for me after seeing clients for many months... I wish there was more work on processing the narratives and more explanations on the narrative because some of the people had different ideas of how long it should be or how thorough it should be or what it should look like. It</p>

was helpful in my call when the facilitator read some of their narratives of what they had done."

Intervention Characteristics. Therapists generally perceived TF-CBT and TNs positively, often describing them as helpful and effective. There were mixed perspectives regarding whether TNs are sufficiently structured to allow the therapist to know next steps, or whether they are too vague to know exactly how and when to implement each component. Participants described a substantial amount of preparation involved when implementing TF-CBT, including TNs, but many said that it becomes easier with experience. Many therapists highlighted the difficulty of interruption of services as a result of non-attendance by the parent and/or child or other emergent life events. The amount of time required to meet with both the parent and child and to cover all necessary topics was also identified as a barrier. Therapists mentioned the importance of building rapport and a sense of safety with the client prior to beginning TNs and stated that this was made easier by the gradual nature of exposure to TN content. There were some concerns noted about the length of narratives and the feasibility of repeatedly reviewing long narratives given time constraints.

Modifications and Adaptations to TNs. Modifications to TNs were made to address issues of client comorbidity, literacy, attention span, or other life circumstances. Therapists used a variety of mediums for creating TNs, including drawing, rapping, creating PowerPoint presentations, using highlighters, and writing poems. Several participants adjusted the pace of TNs such that they only read parts of a long narrative in response to the child's needs or due to session length. Therapists described various approaches of reading to the child, typing for the child, and getting rid of the TN at the end of treatment. The extent to which caregivers were involved in TNs was often adjusted depending on the child's circumstances. In some cases, it was not feasible for a caregiver to be involved, and some therapists recruited other adults from the child's life to hear the TN.

Inner Setting. Therapists described administrative issues as one of the most pervasive barriers affecting TN implementation. Common issues included lack of reimbursement for longer sessions and insufficient time to complete paperwork. Some therapists said that they typically conduct sessions in the community, which limits privacy for completing TNs. There were also concerns about clinic policies related to conducting TNs in the presence of an open legal investigation. Having supervisors and co-workers trained in TF-CBT was reported as a facilitator, whereas being the only trained therapist was a barrier. Several participants described agency expectations that TF-CBT would be used as a facilitator. Therapists working in school settings noted consistency in child attendance as a facilitator for TN completion. On the other hand, school-based therapists noted concerns about accessing parents, discontinuing therapy over the summer, and having students return to class dysregulated after completing TNs.

Outer Setting. One outer setting theme that emerged was a concern about using TNs to treat chronic trauma for clients living in communities with high rates of violence. Participants noted that in such cases, some avoidance may be protective. Participants also mentioned external factors, such as court or child protective services involvement, that may hinder the ability to use TNs and TF-CBT.

Family Characteristics. Several key themes emerged related to family factors affecting TN use. Therapists identified poor attendance and drop out as the most common barriers, whereas caregiver involvement and motivation were the most common facilitators. Logistics such as transportation and childcare were described as affecting attendance and consistent TN implementation. Furthermore, therapists mentioned cultural or family norms about the extent to which it is acceptable to speak about trauma and seek help to manage it. Therapists noted that client characteristics, such as developmental level or time since the trauma occurred also affected TN delivery. Participants reported that clients who were young at the time of the trauma had trouble remembering the event, which made completing the TN more challenging. Children who had recently experienced trauma were described by some therapists as not being emotionally ready to start a narrative or too symptomatic to successfully complete one. Therapists reported that it was easier to create TNs with children who were more interested in art and stories, whereas more verbal children sometimes had narratives that were too lengthy to repeatedly use.

Therapists reported that a single trauma was easier to treat compared to multiple or ongoing traumas. Poor attendance, drop out, and interruptions in treatment were described as often being the result of financial or housing instability, which led a shift to treatment focused on crisis management instead of on trauma. Children in foster care were described as the hardest to treat due to the lack of a consistent caregiver, as well as other sources of instability. Most therapists cited good rapport with clients and caregivers as facilitators for completing TNs. In general, stronger child-caregiver relationships were considered to result in more successful and smoother TNs, whereas children who had tense relationships with their caregivers were more difficult to treat.

Characteristics of Individuals. Therapist characteristics related to TN use largely included the emotional impact of using TNs. Many therapists reported experiencing or worrying about burnout and mitigating this risk by having the support of a team or having variety in the types of cases they treated. Several therapists also identified a process of desensitization whereby hearing TNs became easier over time. Therapists reported a wide range of emotions they experienced around TNs, including nervous, proud, fulfilled, sad, frustrated, intimidated, and relieved. Several therapists mentioned doubt and uncertainty when making decisions about how hard to push clients in sharing TNs.

Implementation Process. Initial training, booster training, and consultation calls were generally perceived positively. Several participants noted a desire for additional materials beyond the treatment manual to support implementation (e.g., slides, handouts), with some indicating that that need was met and others suggesting that more materials would have been useful. The booster training was identified as being critical to support TF-CBT and TN use. Overall, it was clear that participants felt that training alone was *not* sufficient, and that being able to implement TNs required support via consultation calls, additional training materials, and adequate time to prepare for sessions.

Post Hoc (Mixed Methods) Analysis. Therapists with high intentions and frequent TN use described using a wider array of mediums (e.g., songs, poems) to implement TNs than other groups. Although all groups described barriers and facilitators related to the inner setting, therapists with strong intentions and low TN

use reported much more variability in their level of agency support for using TNs compared to other groups. This group also identified more themes related to uncertainty about clients' readiness for doing TNs. Finally, the group with weaker intentions and moderate TN use did not mention booster sessions or consultation calls, whereas participants in the other groups described them as being integral to implementation success.

[2] Comparisons between participants trained in the past year ($n=19$, 29.2%) and in prior years indicated that they did not significantly differ in their likelihood of using TNs in the last 6 months, $\chi^2(1, N=61) = 3.42, p=.06$

Discussion

This study integrated a causal theory and a determinant framework to identify factors potentially related to therapists' use of TNs in community mental health settings. Although the majority of therapists in this study reported strong intentions to use TNs, TN use was relatively infrequent. Responses from the TPB-informed belief elicitation and the CFIR-informed qualitative interviews can provide insight into this discrepancy. Although the TPB posits that intentions predict behavior *when one is able to act*, contextual factors across all five CFIR domains might interfere with intentions being translated into action. Notably, family characteristics emerged as one of the most frequently endorsed themes affecting TN implementation. This is consistent with recent research calling for the promotion of 'patient needs and resources' (e.g., patient satisfaction with the intervention) to its own independent CFIR domain (38). Findings from this study suggest that there may be multiple ways in which implementation strategies can enhance TN use. First, implementation strategies may be used to enhance therapists' intentions to use TNs. In addition, implementation strategies that remove barriers between intentions and actions should be developed so that therapists who already have strong intentions to use TN are capable of doing so.

Contextual factors identified in this study based on a determinant framework (CFIR) were largely consistent with previous research on implementation determinants of EBIs for trauma (39, 40), but expand upon this work in important ways. In particular, we identified some ways in which contextual factors may be related to the development of attitudes, norms, and self-efficacy, which in turn may influence therapists' intentions to act. Since not all therapists reported strong intentions to use TNs, findings can also guide the development of implementation strategies that may strengthen intentions to use TNs. For instance, therapists' beliefs about how much families will benefit from and be able to complete TNs (i.e., a behavioral belief that may inform *attitudes*) could be affected by the characteristics of families with whom that therapist typically works (*patient needs and resources*).

Although not directly addressed in this study, the plurality of youth in PACTS identify as Black/African-American (41), whereas the majority of therapists in this study identified as White. Given the role that implicit racial and ethnic bias may play in healthcare providers' delivery of treatment to people of color (42), more work is needed to identify how therapists' implicit bias may affect the selection and delivery of evidence-based intervention components, including TNs. For instance, several therapists identified

caregiver lack of stability as a disadvantage when trying to implement TNs, which may explain attitudes and affect intentions to use them. Interventions that directly address therapists' perceptions and implicit biases about families, as well as how the intervention can be tailored to address families' needs in a strengths-based manner, may be effective strategies for improving attitudes and strengthening intentions (43).

Several *inner setting* factors were also identified as potentially shaping normative beliefs. In particular, having supervisors and co-workers who use TF-CBT as the primary intervention for trauma may shape therapists' perspectives of agency *norms*, and in turn strengthen their own intentions to use TF-CBT and TNs. This highlights the promise of using agency-level implementation strategies to address normative beliefs, such as bringing awareness to therapists about coworkers who consistently use TNs. Finally, there were several examples of *outer setting* factors that may relate to the development of therapists' *self-efficacy* related to TNs. For example, because youth treated in PACTS live in neighborhoods with high rates of poverty and violence (41), therapists may develop (*self-efficacy*) beliefs about how these *outer setting* factors will interfere with treatment, which in turn may reduce the likelihood that they attempt to use TNs. Importantly, therapists' intentions to use TN may vary depending on their patient population. For example, if patients have a single trauma, therapists may have a stronger sense of self-efficacy and higher intentions to use TNs than for a child with multiple traumas. One potential strategy to improve self-efficacy is to ensure that therapist training is responsive to contextual factors that may relate to self-efficacy beliefs.

In addition to shaping the development of therapists' beliefs, CFIR domains are also likely to influence the relationship between intentions and behavior, as shown in Fig. 1. This proposed model was developed based on the data presented in the current study and provides a preliminary understanding of how the CFIR and TPB can be combined; other studies integrating the two may identify different causal models that incorporate the same constructs. The idea of incorporating the CFIR and TPB builds on work by Mandell and colleagues (23), who suggest that organizational variables are likely to (a) influence attitudes, subjective norms, and self-efficacy and (b) moderate the association between intentions and behavior. In the present study, there were several examples of contextual factors that may have functioned as a barrier between intentions and actions. For instance, therapists with high intentions and low TN use reported lower levels of agency support (*inner setting*) relative to other groups, suggesting that even with high intentions, external factors may have interfered with TN use. Therapists' perceptions of client readiness to complete TNs (*patient needs and resources*) may also interfere with acting on strong intentions. This may be particularly true for exposure-based treatment components such as TNs given evidence about therapists' reservations to use exposure (14). Interventions focused on addressing therapists' beliefs about TNs may result in initial changes to beliefs and lead to an increase in intentions to use exposure. However, several contextual factors, such as the severity of the child's psychopathology or the availability of a supervisor trained in TF-CBT, may affect whether those intentions lead to TN use. Overall, these results suggest that consideration of both CFIR domains and TPB constructs may allow for a more nuanced understanding of factors affecting implementation.

This study has methodological strengths, including its specific focus on TNs rather than on TF-CBT more broadly. This is a strength given evidence that the strength of intention varies depending on the component of CBT being studied (13). This variation suggests that underlying beliefs about each component will differ and should be examined separately. Our use of a causal theory and a determinant framework provides unique insight into the implementation of TNs. While the CFIR provides a framework for understanding contextual factors, the TPB contributes an enhanced understanding of how they might relate to belief development, motivation, and behavior.

This study also had limitations. First, this sample is likely not representative of all therapists conducting TF-CBT. Therapists in this study reported having relatively high intentions to use TNs, which could reflect the fact that they were a self-selected group of therapists who generally favored TF-CBT. Another possible explanation for the report of high intentions is that therapists may have reported on intentions to deliver TNs with “ideal” and straightforward cases without accounting for the contextual factors that might affect their intentions with more complex cases. Second, the restricted range in TN intentions precluded us from conducting a quantitative assessment of the association between intentions, beliefs, and EBI use, as other studies have done in the past (44). Third, though therapists reported on their implementation of TNs, we did not objectively measure actual use or fidelity. Studies examining therapist self-report suggest that therapists may overestimate their use of EBIs when therapist self-report is compared to trained observer ratings (45), suggesting that therapists may have used TNs less frequently than they reported. Relatedly, some therapists in our sample had recently completed TF-CBT training and may have had limited opportunities to use TNs since their training.

These results have implications for future implementation research. This study helps integrate a causal theory (TPB) with a contextual framework (CFIR). A proposed integration of these approaches appears promising and will need to be quantitatively examined in future work. The stakeholder-generated beliefs reported here can be used to design a quantitative survey questionnaire that can test the causal pathways posited by TPB in a larger sample. Future work should quantitatively test which factors influence therapists’ beliefs about using TN and/or moderate the relationship between intentions to use TN and TN use. Moreover, there are other theories that aim to understand therapist behavior change and how it relates to constructs measured by CFIR. Future work should conduct head-to-head comparisons of these theories to evaluate which ones are most reliable predictors of provider behavior (27). This empirical work will not only help identify which theories best predict implementation of an EBP, but they will also enable researchers to design mechanistically-informed implementation strategies.

Abbreviations

Community Behavioral Health (CBH)

Consolidated Framework for Implementation Research (CFIR)

Department of Behavioral Health and Intellectual disAbility Services; DBHIDS

Philadelphia Alliance for Child Trauma Services (PACTS)

Post-Traumatic Stress Disorder (PTSD)

Substance Abuse and Mental Health Services Administration (SAMHSA)

Theory of Planned Behavior (TPB)

Trauma-Focused Cognitive Behavioral Therapy (TF-CBT)

Trauma Narrative (TN)

Declarations

Ethics Approval and Consent to Participate

All procedures were approved by the City of Philadelphia (2012-47) and the University of Pennsylvania (817282) Institutional Review Boards. All participants provided written or verbal consent to participate in our research study.

Consent for Publication

Not applicable.

Availability of Data and Materials

The dataset generated and analyzed during the current study is not publicly available due to the highly sensitive nature of interview transcript data. Publication of entire transcripts risk identifying research participants.

Competing Interests

Dr. Beidas receives royalties from Oxford University Press. She provides consultation to the Camden Coalition for Healthcare Providers and serves on the Scientific Advisory Board for United Behavioral Health.

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Authors' Contributions

HEF conceived of and designed the research study; acquired and analyzed the data; interpreted the data; drafted the manuscript and substantially revised it. BSL helped design the research study; acquired and analyzed the data; and substantially revised the manuscript. RR coded and analyzed the data and substantially revised the manuscript. JF and RSB helped conceive of and design the research study; interpreted the data; and substantially revised the manuscript. BNR acquired the data and substantially revised the manuscript. HEK, CH, SFM, KJ, CC, and SS substantially revised the manuscript. All authors approved the submitted version; have agreed to be accountable for the contributions; attest to the accuracy and integrity of the work, even aspects for which the authors were not personally involved.

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Footnotes

Not applicable.

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Figures

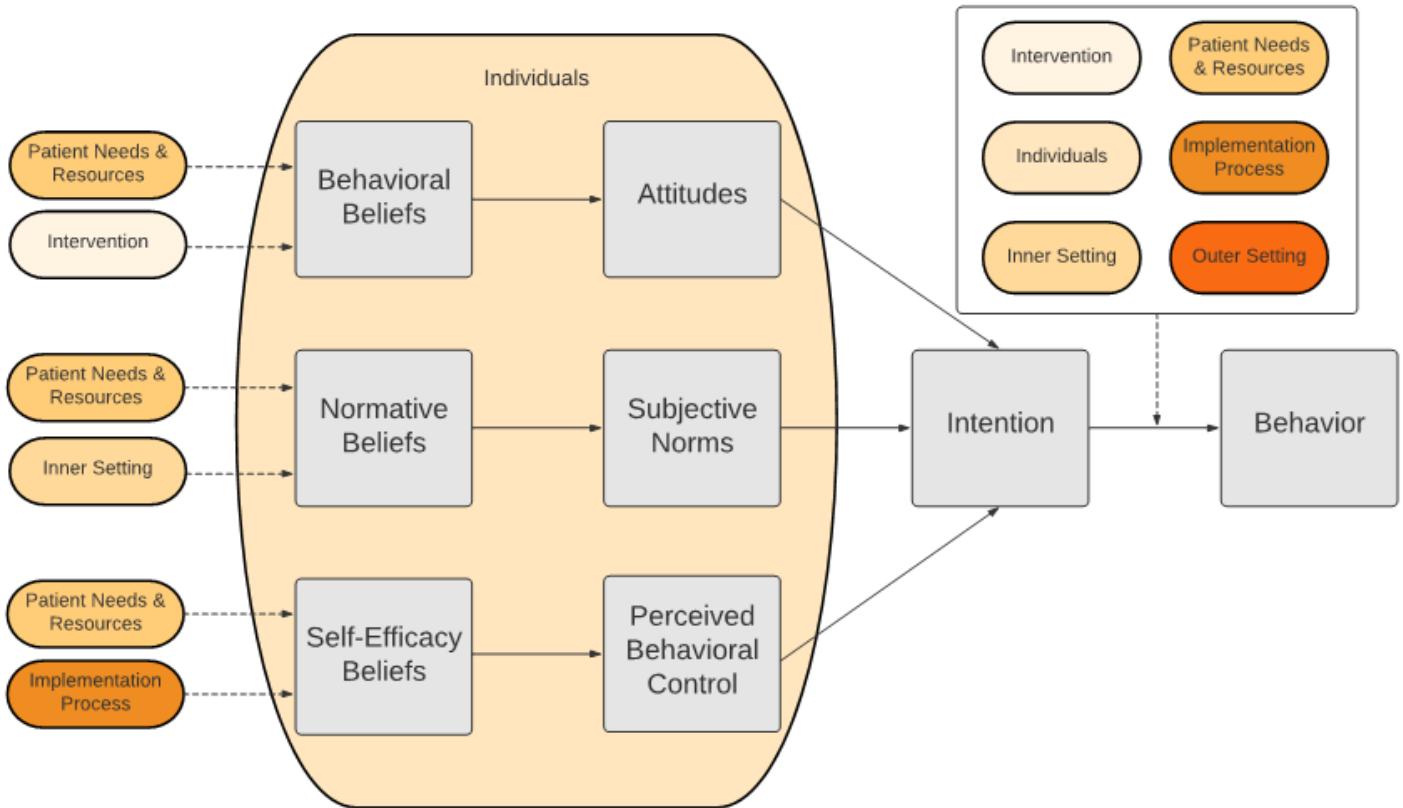


Figure 1

Proposed combined TPB and CFIR Model. Note: This is a proposed conceptual model that we developed based on our data. Orange ovals represent the CFIR domains and grey boxes represent the TPB. This integrated model may look different for other interventions and contexts.

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- CoreQChecklist.docx