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Child Trauma Exposure and Posttraumatic Stress Disorder: Identification in Community Mental Health Clinics

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Abstract

We examined the identification of trauma exposure and post-traumatic stress disorder (PTSD) in help-seeking urban children ($N=157$) presenting for care in community mental health clinics. Children and their parents completed a standard intake assessment conducted by a community clinician followed by a structured trauma-focused assessment conducted by a study clinician. Clinicians provided ratings of child functional impairment, parents reported on internalizing/externalizing problems, and children provided self-reports of PTSD symptom severity. Although community clinicians were mandated by clinic policy to ask about exposure to physical abuse, sexual abuse, and witnessed domestic violence, they identified exposure to these at significantly lower rates than study clinicians. Rates of PTSD based on community clinician diagnosis (1.9%) were also much lower than rates obtained by study clinicians (19.1%). A review of clinical charts one year after intake revealed no change in PTSD diagnosis rate following additional clinical contacts. Clinician-rated impairment, parent-rated emotional/behavioral problems, and child-rated PTSD symptom severity measures provided support for the validity of trauma exposure and PTSD as identified by study clinicians. Trauma exposure and PTSD diagnosis among help-seeking urban youth appear to be under-identified by community clinicians, which may compromise clinicians' ability to respond to environmental risks and provide appropriate evidence-based treatments.

Keywords

Trauma; PTSD; community mental health; assessment/diagnosis

Childhood exposure to trauma is a risk factor for a wide range of maladaptive child outcomes (Felitti et al., 1998), including posttraumatic stress disorder (PTSD; Yehuda,

Halligan, & Grossman, 2001). More than one in four children experiences a significant traumatic event before adulthood (Costello, Erkanli, Fairbank, & Angold, 2002), with childhood trauma accounting for a significant proportion of variance in childhood psychopathology (Copeland, Keeler, Angold, & Costello, 2007). Of youth receiving mental health services, 13–28% have diagnosable PTSD (Mueser & Taub, 2008; Silva et al., 2000). The increasing recognition of the damaging effects of child trauma, the consequent regulatory pressures to identify trauma exposure (JCAHO, 1992), and the availability of efficacious interventions for childhood PTSD (e.g., Cohen, 2005), all make it important to effectively identify trauma exposure and PTSD.

Identifying trauma exposure and accurately diagnosing PTSD when present are essential for providing effective, evidence-based interventions for youth. Diagnoses obtained through standardized interviews have greater inter-rater reliability relative to clinician-generated diagnoses (Weinstein et al., 1989) and there is also support for their increased validity when compared across markers of external validity, such as expert consensus (Basco et al., 2000; Jewell et al., 2004; Tenney et al., 2003). Studies examining diagnostic agreement in community child mental health settings find overall poor agreement between clinician-generated and standardized interview-generated diagnoses (Lewczyk et al., 2003; Osterberg et al., 2009), with somewhat higher agreement on diagnoses of externalizing problems relative to internalizing problems (Jensen & Weisz, 2002; Jensen-Doss & Weisz, 2008). Agreement between clinician-generated and structured interview-generated diagnoses was found to predict better engagement in therapy and greater reduction in internalizing symptoms (Jensen-Doss & Weisz, 2008), suggesting that diagnostic accuracy is central to successful treatment. However, little is known about how well trauma exposure and PTSD are identified among children and adolescents seeking mental health services in community clinics.

Research on the identification of trauma exposure and PTSD among adults in mental health settings has consistently found that rates noted in clinical charts are much lower than those found by researchers. In the first such study, self-ratings by patients on a standardized checklist were used to assess sexual abuse history and PTSD symptoms (Craine, Henson, Colliver & MacLean, 1988). This study found that 56% of female state hospital patients endorsing sexual abuse on the research instrument had never been identified as victims of sexual abuse. Moreover, 66% of respondents met criteria for probable PTSD, though none had a PTSD diagnosis in their medical record (Craine et al., 1988). Similar findings have been reported for newly admitted psychiatric patients (Cascardi, Mueser, DeGiralomo, & Murrin, 1996), and more generally among adults with severe mental illness (Mueser et al., 1998). In the latter study, nearly all patients surveyed (98%) reported at least one traumatic event and 43% met probable PTSD criteria, but only 2% had a recorded diagnosis of PTSD. Studies using structured clinical diagnostic interviews have found similar results to those using patient self-report, across a wide range of inpatient and outpatient mental health settings (Cusack, Frueh, & Brady, 2004; Cusack, Grubaugh, Knapp, & Frueh, 2006; Frueh et al., 2002; Schwartz, Bradley, Sexton, Sherry, & Ressler, 2005; Shear, et al., 2000; Zimmerman & Mattia, 1999). While the exact percentages of adults identified as being exposed to trauma or diagnosed with PTSD differs across studies, there is a robust finding of

greater identification of trauma exposure and PTSD in the context of research assessments relative to what is identified in standard community care.

Unfortunately, only two prior studies have addressed this issue in youth. Mueser and Taub (2008) studied adolescents with severe emotional disorders in contact with multiple service systems and found PTSD to be under-diagnosed. Only 26% of those adolescents meeting DSM-IV PTSD criteria based on a structured clinical interview had a chart diagnosis of PTSD (Mueser & Taub, 2008). More recent research with adolescent psychiatric inpatients suggests similar discrepancies when comparing rates of PTSD identified through routine psychiatric evaluations in the emergency room (2.2%) relative to rates obtained through the use of evidence-based rating scales (28.6%; Havens et al., 2012). Although PTSD was under-identified through standard practice, adolescents with probable PTSD nonetheless had histories of greater clinical severity and service utilization, were prescribed more psychotropic medications, had an increased likelihood of being diagnosed with bipolar disorder, and were more likely to be prescribed antipsychotic medications relative to adolescents without probable PTSD (Havens et al., 2012). Osterberg and colleagues (2009) examined the related question of to what extent self-reported trauma symptoms agree with diagnoses assigned by community clinicians. Overall, they found poor agreement between clinically elevated scores on the trauma symptom measure used and the diagnoses assigned. Notably, the two most recent studies did not obtain criterion diagnoses (i.e., structured diagnostic interview diagnosis), the “gold standard” for determining whether a diagnosis was present or absent.

Overall, there are several limitations in the existing research on trauma and PTSD identification. First, no existing study utilizing a structured clinical interview has utilized a design wherein diagnostic assessments were conducted contemporaneously by clinic evaluators and study clinicians. It is possible that differences in findings were therefore due to when the assessment was conducted. The cross-sectional design of prior studies is a second limitation. In this regard, the competing demands model (Rost et al., 2000) provides a possible explanation for differences between chart records and research findings. The model posits that patients and providers each bring an implicit agenda of concerns to the initial encounter and address some problems, while leaving others for subsequent visits. A diagnosis given during an initial evaluation may only reflect the clinician’s and patient’s focus at that particular time. Over time, however, the clinician would recruit additional information resulting in a more comprehensive account of the patient recorded later in time. A third limitation is that community clinicians and researchers typically do not have access to each other’s data, although the research of Osterberg and colleagues (2009) suggests that access to information from evidence-based assessment measures is not the sole factor impacting diagnostic agreement.

We studied the identification of trauma exposure and PTSD diagnosis in urban community mental health clinics by comparing the findings of initial intakes of children and families conducted by community mental health clinicians with assessments conducted contemporaneously by study clinicians. Supported by the National Institute of Mental Health Research Infrastructure Support Program (IP-RISP), this study was conducted in 2006 as part of a larger community agency-academic program of collaboration that occurred

between 2002 and 2006 and aimed to identify and address barriers in the dissemination of evidence-based trauma interventions for children. It should be noted that children exposed to trauma often meet criteria for a range of other disorders (D'Andrea, et al., 2012) and there is a high rate of comorbidity between PTSD and affective disorders (Ackerman et al., 1998). Given the potential complexity of symptoms present following chronic exposure to trauma in childhood, ongoing research in the field also examines whether new diagnoses that may better account for the wide-ranging dysregulation in emotions, behavior, cognition, and relationships that can follow exposure to trauma are needed (e.g., Cloitre et al., 2009; van der Kolk et al., 2005). Despite the potential for a wide-range of trauma-related problems, in this study we focused exclusively on (a) the identification of trauma exposure and (b) the diagnosis of PTSD (where trauma exposure is a prerequisite for the diagnosis (APA, 2013)) in the context of a mental health intake. This work was undertaken as part of a phased approach towards identifying areas for improvement in the provision of trauma-related services in a community agency committed to best practices for youth and their families.

The study addressed several hypotheses. First, consistent with the previous literature, we hypothesized that community clinicians conducting child and adolescent intakes would identify trauma exposure and PTSD less often than study clinicians conducting *contemporaneous* assessments using structured interviews. Here, we were specifically interested in assessing the rates at which community clinicians identify trauma exposure and PTSD in the context of usual clinical practice rather than as a direct comparison of their ability to diagnose PTSD. Second, to examine whether community clinicians increase their PTSD diagnosis rate over time, we re-examined the clinical chart approximately a year after the intake to determine whether there had been a change in the identification of PTSD diagnoses. We hypothesized that increased familiarity with the patient over the course of clinical treatment, the provision to clinicians of clinical information from the research assessment, and clinic-required quarterly case reviews, and clinical treatment planning group meetings, would contribute to community clinicians revising their diagnostic formulations and result in increased PTSD identification over time. Finally, we compared clinician-rated child functioning, parent-rated emotional/behavioral problems, and child-reported PTSD symptom severity for children with and without study clinician identified trauma exposure and with and without a PTSD diagnosis. We hypothesized that study clinician-identified trauma exposure and PTSD would be associated with lower clinician ratings of child functioning, higher parent ratings of child emotional/behavioral problems, and higher self-reported PTSD symptom severity, supporting the clinical importance of trauma and PTSD identification.

Method

Participants

Participants were recruited from three community mental health clinics operated by a large mental health and social service provider in New York City. Participating clinics were chosen because they served the largest volume of child and adolescent patients in that outpatient clinic network, and because of the diversity of their service population. English-speaking inner-city children ages 8 to 17 presenting for a clinical intake were targeted for

recruitment into this study. A total of 215 families were approached for potential recruitment. Eighteen families were ineligible to participate due to language ($n=14$), or because involvement with child welfare precluded normal consent procedures ($n=4$). Of the 197 eligible families, 157 provided consent and assent (79.7% of eligible families) and participated in this study. The final sample comprised youth with a mean age of 12.2 ($SD=2.8$) and included 58% males. The sample was ethnically diverse, with 27% Caucasian, 37% Hispanic, 18% African American, and 18% identifying “other” racial/ethnic origins.

Diagnostic Assessors

Community clinicians: Nearly all 32 community clinicians (66% female) who performed intake assessments were Master’s-level social workers (one was a Ph.D.-level psychologist). They had worked in the organization for an average of 6 years. Training records (available for 75% of clinicians) showed that participating clinicians received a mean of 106 hours of in-service clinical training while employed with the organization. Eighty-eight percent of these clinicians had also received specific training about psychological trauma and PTSD (averaging 15 hours of trauma-related training). However, it should be noted that, to our knowledge, none of this trauma-focused education incorporated training specifically focused on structured assessment procedures or on evidence-based treatment.

Study clinicians: The 13 clinicians who performed study assessments included 10 Master’s-level social workers or psychologists and two doctoral-level clinical psychologists. Most assessments (89.8%) were conducted by the master’s-level study clinicians. All study clinicians received two days of training in the administration of study instruments. Follow-up training included performing initial assessment interviews with a more senior clinician (a social worker) in attendance, and regular supervision. Study clinicians received approximately 12 hours of training on trauma and PTSD, and approximately 12 hours on the use of the assessment instruments used in this study.

Measures

Community Clinic Intake Assessment

Trauma Exposure and PTSD: Community clinicians followed the standard intake computer-supported format used across agency clinics. The intake is recorded in an electronic medical record. It includes queries that the clinician is required to complete, as well as optional queries that are used to guide the intake interview. Questions about exposure to physical abuse, sexual abuse, and domestic violence *were required to be completed*. In addition, a question about whether the child had experienced any “other trauma” was asked. The intake included an optional general query about whether exposure to any trauma was part of the precipitating event that led the child/family to present for services. Reflecting a major agency commitment to improving its psychological trauma services, the intake interview template included a list of all the symptoms that comprise the diagnostic criteria for PTSD. Although the intake clinician was not required to ask about all of the PTSD symptoms, the interview template provided similar prompts and ample opportunity to gather the same information obtained by study clinicians. The final intake diagnosis was

determined by a team, including supervisory clinicians, which reviewed each intake with the clinician conducting the assessment.

Overall Functioning: Community clinicians rated child functioning using the Global Assessment of Functioning Scale (GAF; American Psychiatric Association, 1994). GAF scores range from 1 to 100 and reflect the clinician's assessment of the child's overall level of functioning. The GAF rating scale provides anchor point descriptions of behavioral functioning across different life situations for each 10-point increment. The GAF scale is widely-used and has demonstrated satisfactory reliability in children (Gold, Shera, & Clarkson, 1993; Schorre & Vandvik, 2004).

Study Clinician Assessment

Trauma Exposure and PTSD: Trauma exposure and PTSD were assessed using the PTSD module of the Schedule for Affective Disorders and Schizophrenia for School-Age Children–Present and Lifetime Version (K-SADS-PL; Kaufman et al., 1997), a semi-structured, DSM-IV based, clinician administered diagnostic interview. The K-SADS-PL has good inter-rater reliability for current and lifetime diagnosis of PTSD (Ambrosini, 2000). The K-SADS-PL PTSD module draws on both parent and child as informants. The interview module begins with a checklist for exposure to ten specific traumatic events and also asks whether respondents experienced any “other” traumatic events. For the current study, we also added additional items to assess whether the child's life was threatened, whether serious injury occurred, whether there was a threat to physical integrity, or whether intense fear, helplessness, or horror were experienced by the child, thus assessing all DSM-IV PTSD criteria.

PTSD diagnosis using the K-SADS can be determined based on the child's responses, the parent's responses, or the clinician's global rating regarding the presence or absence of each symptom-rated after interviewing both child and parent. In the current study, we focused on identifying exposure to physical abuse, sexual abuse, and witnessed domestic violence, as this allows for direct comparison with rates of identification by community clinicians. Although parents were also interviewed, in the current study we report on diagnosis of PTSD based on child interview only because youth tend to be better informants when reporting on internalizing symptoms (Jensen et al., 1999) and because this yielded the most conservative (lowest) rate of PTSD.

Study clinicians were audio taped. A randomly chosen subset of tapes ($n=23$; 15%) was independently coded by a second rater. The PTSD diagnostic inter-rater reliability in this subsample was good ($\kappa=.74$).

Clinician-Rated Overall Functioning: The study assessment also included the Children's Global Assessment Scale (CGAS; Shaffer et al., 1983), a clinician-rated measurement of overall level of functioning. The CGAS is a child version (ages 4–16) of the GAF. Like the GAF, the CGAS has a range from 1 to 100 and provides anchor point descriptions of behavioral functioning across different life situations. The CGAS has demonstrated adequate inter-rater reliability ($ICC=.84$) and test-retest stability ($ICC=.85$).

Parent-Rated Emotional and Behavioral Problems: The Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2001), a widely-used measure of children's emotional and behavioral problems, was also included in the study assessment. Parents are asked to rate their child on 113 child behavior problems, scoring them as "not true", "somewhat true", or "often true". Scores are summed to yield a Total Problems score and two broad-band scores reflecting Internalizing and Externalizing problems. The CBCL has good psychometric properties and *T*-scores based on a nationally representative normative sample can be calculated (Achenbach, 1991).

Child-Reported PTSD Symptoms: A subsample of 115 children (73.2% of the total sample) also completed the entire UCLA PTSD Reaction Index for DSM-IV (UCLA PTSD RI; Steinberg, Brymer, Decker, & Pynoos, 2004), the most widely-used PTSD symptom rating scale. Children who did not endorse any exposure on the trauma history section of the UCLA PTSD RI were not asked to complete the PTSD symptom severity part of the measure, and thus were not included in this subsample. Youth completed the 20-item version of the measure, which assesses symptoms consistent with DSM-IV PTSD. For each item, youth rate how often they experience a symptom using a Likert scale ranging from 0 ("none") to 4 ("most of the time"). The UCLA PTSD RI has demonstrated good convergent validity (.70), test-retest reliability (.84), and internal consistency reliability (.90; Steinberg et al., 2004). PTSD symptom severity was assessed utilizing the total score.

Procedure

All families first completed the standard community intake assessment described above. Following this standard intake for services, the community clinician introduced the parent and child to the study clinician. The study clinician then explained the purpose of the present study and obtained informed consent/assent. Families agreeing to participate in this study then completed the study assessment described above. Participating families received compensation to defray transportation costs. Although there was some variation across cases, the standard community intake took approximately one to one and a half hours to complete while the study assessment took an additional hour to one and a half hours to complete.

As described above, community clinicians then arrived at a final intake diagnoses in consultation with supervisory clinicians. In order to avoid contamination, data from the study assessment were not made available to clinical staff until after the initial clinic intake diagnoses were documented. After the community clinician entered the final intake diagnosis in the medical record, the results of the study assessment were incorporated in the child's clinical record and were freely available to the community clinicians to review. One year after the initial intake interview, patient clinical charts were again reviewed to determine whether community clinicians had revised their diagnosis to include PTSD at any point during the course of their treatment. In this manner, we follow procedures used in studies of diagnostic agreement (e.g., Jensen & Weisz, 2002) by initially keeping the results of research assessments separate from the child's clinical record and thus comparing independent diagnoses derived by standard practice for the research study. Consistent with studies that examine how clinicians incorporate available information into their diagnostic

practices (e.g., Osterberg et al., 2009) we subsequently included the results of the study assessment in the child's clinical chart to examine how these data might be used in revising diagnoses over time.

The study was approved by the [Removed for Blinding] Institutional Review Board.

Statistical Analyses

To compare the proportion of youth identified as having been exposed to trauma and diagnosed with PTSD based on community and study clinician ratings, we used McNemar's test. McNemar's test is a non-parametric test that uses the binomial distribution to examine the significance of the difference between two correlated proportions (McNemar, 1947). We also calculated Cohen's Kappa to assess agreement between trauma and PTSD identified by community and study clinicians. To compare overall rates of trauma exposure (sexual abuse, physical abuse, and witnessed domestic violence) identified by study and community clinicians, we conducted Chi-square analyses. Lastly, to examine the validity of study clinician-identified trauma and PTSD, we conducted a series of *t*-tests to examine the hypotheses that children identified by study clinicians as having been exposed to trauma or diagnosed with PTSD would evidence higher parent-rated emotional/behavioral problems, poorer clinician-rated functioning, and higher self-reported PTSD symptom severity relative to those not exposed to trauma or diagnosed with PTSD. As these were directional hypotheses, one-tailed tests of significance were used.

Results

Identification of Trauma Exposure

As presented in Table 1, we compared identification of the three types of traumatic events specifically included in both interviews (i.e., physical abuse, sexual abuse, and witnessed domestic violence). Across these three types of traumatic events, community clinicians identified trauma exposure among 21.2% ($n=33$) of the children whereas study clinicians identified trauma exposure among 51.3% ($n=80$) of children, $\chi^2(1) = 12.67, p < .001$. When considering exposure to multiple types of abuse, community clinicians identified 3.8% ($n=6$) of children as being exposed to two or three types of trauma whereas study clinicians identified 19.7% ($n=31$) of children as being exposed to two or three trauma types, $p < .001$. For a history of physical abuse, the community clinicians identified 8.9% ($n=14$) as positive, compared to 24.2% ($n=38$) identified by study clinicians, $p < .001$. Of the 43 cases of physical abuse identified overall, 11.6% ($n=5$) were identified solely by the community clinician, 67.4% ($n=29$) were identified solely by the study clinician, and 20.9% ($n=9$) were identified by both the community and study clinician. For a history of sexual abuse, the community clinicians identified 5.7% ($n=9$) as positive, compared to 12.1% ($n=19$) identified by the study clinician, $p=.013$. Of the 21 cases of sexual abuse identified overall, 9.5% ($n=2$) were identified solely by the community clinician, 57.1% ($n=12$) were identified solely by the study clinician, and 33.3% ($n=7$) were identified by both clinicians. For a history of domestic violence, the community clinicians identified 11.5% ($n=18$) as positive, compared to a study clinician rate of 38.2% ($n=60, p < .001$). Of the 66 cases of witnessed domestic violence identified overall, 9.1% ($n=6$) were identified solely by the community

clinician, 72.7% ($n=48$) were identified solely by the study clinician, and 18.2% ($n=12$) were identified by both clinicians. As seen in Table 1, study clinicians identified significantly higher rates of trauma exposure relative to community clinicians. Overall agreement between community and study clinicians was low to moderate (κ ranging from .16 to .46).

Diagnosis of PTSD at Intake

As seen in Table 1, community clinicians diagnosed 1.9% ($n=3$) of the children with PTSD at intake. Study clinicians diagnosed PTSD in 19.1% ($n=30$) of the sample. Compared to study clinicians, community clinicians were significantly less likely to diagnose PTSD in the sample, $p < .0001$. Diagnostic agreement between study and community clinicians was poor ($\kappa = .09$).

To allow for the possibility that the community clinicians considered PTSD as a potential diagnosis, but made a clinical judgment that another disorder was more prominent in the child's clinical presentation, we examined other Axis I diagnoses reported for each child who met PTSD diagnostic criteria on the study assessment. Only 1 additional child was diagnosed with PTSD when examining additional Axis I diagnoses, and a second child was given a "rule out" diagnosis of PTSD. When considering primary, secondary, and rule out diagnoses, community clinicians therefore noted PTSD in a total of 4 out of 157 youth (2.5% of the sample).

Diagnosis of PTSD at 1-year Follow-up

Approximately one year after the intake, 43.3% ($n=68$) of the cases had been closed and the remainder ($n=89$) were still receiving treatment. A review of all clinical charts revealed that a new diagnosis of PTSD had not been given throughout the course of treatment (for those who had been discharged) or within one year following their intake (for those continuing in treatment). Additional clinical contacts had therefore not resulted in increased identification of PTSD.

General Functioning, Emotional/Behavioral Problems, and PTSD Symptom Severity

To examine the implications of trauma exposure identified by study clinicians, we compared ratings of general functioning, parent-rated emotional/behavioral problems, and child-reported PTSD symptom severity for children identified as having been exposed or not exposed to trauma by the study clinician's assessment. We hypothesized that children exposed to trauma would evidence more symptoms and poorer functioning, and thus conducted one-tailed t -tests to examine these hypotheses. As seen in Table 2, trauma-exposed children identified by study clinicians were rated as having more internalizing, externalizing, and total problems by their parents. Children identified as having been exposed to trauma were also rated as being more impaired by both community and study clinicians. There was no difference in child-rated PTSD symptom severity based on study clinician-identified trauma exposure.

To examine the validity of PTSD diagnoses identified by study clinicians, we compared ratings of general functioning, parent-rated emotional/behavioral problems, and child-reported PTSD symptom severity for children identified as having a diagnosis of PTSD

based on the study clinician's assessment. Comparisons between children identified as having or not having PTSD by study clinicians were also compared using one-tailed *t*-tests. As hypothesized, children diagnosed with PTSD by study clinicians self-reported greater levels of PTSD symptom severity and their parents rated them as having more internalizing and total problems compared to children without PTSD.

Discussion

The current study examined the identification of trauma exposure and PTSD among children and youth presenting for an intake in community mental health clinics within an agency interested in expanding its capacity to introduce trauma-informed best practices. There were three main findings. First, community clinicians reported much less trauma exposure and PTSD among help-seeking youths than did study clinicians who assessed the same children contemporaneously. The differences in detection of exposure to sexual abuse, physical abuse, and domestic violence were particularly surprising as state policy mandated assessment of these types of trauma exposure. Overall, community clinicians identified 21.2% of children as having been physically abused, sexually abused, or exposed to domestic violence compared to 51.3% of youth identified as trauma-exposed by study clinicians. Prior research suggests that the rate of documented maltreatment in youth receiving care in community mental health clinics is approximately 46% (Lau & Weisz, 2003).

Second, PTSD rates identified by community clinicians were significantly lower relative to study clinicians. In fact, community clinicians identified PTSD in only 1.9% of the sample. This is substantially lower than what has been found in clinical samples of children and adolescents presenting for care in community settings (13–28%; Mueser & Taub, 2008; Silva et al., 2000). Prior research on the identification of trauma exposure and PTSD was limited because it gathered data at only one point in time (e.g., Cusack, Frueh, & Brady, 2004; Frueh et al., 2002). Our design recognized that a PTSD diagnosis might be deferred until later in the course of treatment, or revised as new information became available. Consequently, we reviewed the clinical chart at intake and again one year later. The number of youth with a PTSD diagnosis was no different a year later than at intake. During this time, community clinicians had access to the results of the study clinician's assessment and conducted quarterly updates to treatment plans. This finding suggests that the low rates of PTSD diagnosis did not merely reflect competing demands on the clinician during the intake process. This finding is consistent with results from Garland and colleagues (2003), who provided clinicians with scored assessment profiles for clients and found that despite having access to the information, most providers reported not using the information for evaluation or treatment planning. Thus, it may be that the diagnosis documented in clinical records is unlikely to change over the course of treatment. One factor that may have contributed to this in the current setting was use of a relatively new electronic health record that had a cumbersome process for modifying diagnoses. Similarly, Osterberg and colleagues (2009) found poor agreement between self-report measures of trauma symptoms and clinician-assigned diagnoses. While it is clear that results from evidence-based screening instruments can prove effective in guiding treatment, additional research is needed to understand and overcome barriers to maximizing the utility of this information.

Third, in an attempt at validating the trauma and PTSD diagnoses identified by study clinicians, we found that children and adolescents identified as trauma-exposed by study clinicians were rated as having more emotional and behavioral problems and lower functioning, by community *and* study clinicians, as well as by their parents. The parent ratings provided evidence for convergent and divergent validity of PTSD diagnoses on ratings of internalizing and externalizing problems, respectively. These findings suggest that identifying trauma exposure has clinical value insofar as it is associated with heightened risk for child functional impairment and behavior problems. Child self-reported PTSD symptom severity was also higher in children identified as having PTSD by study clinicians, providing additional support to the validity of their diagnoses.

There are several possible reasons for the lower rate of detection of trauma and PTSD in intakes conducted by community mental health clinicians. The first is that diagnosis may not be the highest priority at intake. Assessing current psychosocial and functional problems and establishing a working alliance could reasonably be considered the most important intake tasks. Clinicians may also view intake assessments as having primarily a gate-keeping function that serves to initiate a therapeutic relationship and assess current level of risk while accomplishing a number of regulatory and administrative tasks required to initiate services for families (Mattaini & Kirk, 1991). Diagnosis, during this period of time, may have been seen as meeting regulatory requirements and providing a means to pay for services. However, it remains that the discrepancy in diagnosis was maintained as time elapsed and as the clinicians presumably got to know the child better. Moreover, exposure to domestic violence or to abuse is arguably an important component of clinical risk assessment, and it appears to have been under-identified.

Notable strengths of our study include the use of a reliable and valid structured interview and psychometrically sound measures to assess trauma and PTSD in children and adolescents by study clinicians, contemporaneous diagnostic assessments at intake by community and study clinicians, an examination of clinical records one year after the initial intake, and a comparison of PTSD cases versus non-PTSD cases on indices of functioning and symptoms completed by multiple respondents. The methodology used here addresses the question of trauma exposure and PTSD identification in community settings far more stringently than has been accomplished before.

Despite these strengths, the study has a number of limitations. First, we cannot be certain that clinicians did not consider trauma-related information as part of ongoing case-formulation despite not being reflected in the chart diagnosis. As mentioned in the introduction, children exposed to trauma may present with a range of diagnoses, high rates of comorbidity, and greater symptom complexity, particularly in cases of exposure to multiple traumas (Ackerman et al., 1998; Cloitre et al., 2009; D'Andrea et al., 2012). Furthermore, the electronic health record documentation and billing process emphasized identification of one priority diagnosis, not all diagnoses. Thus, it is possible that a trauma was considered by clinicians and that diagnoses beyond PTSD were used to capture trauma-related difficulties. These concerns are tempered, however, by the lower rates of identified trauma exposure and would not fully explain poor agreement in diagnosing PTSD, *per se*. Additionally, although the intake assessments were conducted in three large community

clinics of a highly regarded agency by over 30 clinicians, most of which had received introductory trauma-specific training, it is possible that the clinicians in these settings are not representative of the general population of providers of youth mental health services. Also, the study was not designed to address whether the apparent under-identification of PTSD diagnosis reflects a generalized problem of accurate diagnosis in community clinics or one specific to PTSD. Similarly, although our data indicated that no changes in diagnosis resulted from clinicians being provided research derived data about PTSD diagnosis for clients, we cannot be sure if this reflected inertia about the PTSD diagnosis, or more generally, a tendency towards conservatism in changing initial diagnostic findings. Lastly, although we utilized a non-parametric test (McNemar's test) to test for differences in the proportion of clinician and study assessment findings of trauma and PTSD, small cell sizes may nonetheless impact the accuracy and generalizability of these analyses. Overall, we relied on a relatively small sample size for this analyses and future research can benefit from relying on a larger sample that allows for more complete coverage across cells.

Implications for Agency Research and Practice

As noted above, this study was conducted as part of a larger collaboration. The purpose of the collaboration was to create a bridge between knowledge and practices used in academic laboratory research and typical practice in community settings. The model that guided our approach conceptualized research as a form of quality assurance. Thus, the agency leadership was courageous in shining a focused light on many processes that are not usually examined in community clinics, with the degree of rigor reported here. It should be noted that introduction of these procedures required a great deal of negotiation and cooperation. In that regard, most of the credit for success is due to our agency collaborators. They were willing to allow their processes to be examined because they were committed to improving agency clinical practices. Of note, beyond the collaborative work we refer to, the agency subsequently successfully competed to be part of the SAMSHA-funded National Child Traumatic Stress Network (NCTSN). Building on its prior work, the agency introduced a number of specific diagnostic and screening instruments (e.g., UCLA PTSD RI), and provided staff training in five evidence-based practices relevant for traumatic stress. Using evidence-based treatment is increasingly considered a required core competency of staff. Finally, with the introduction of a new electronic health record, trauma-related questions are routinely asked at intake and each quarterly treatment plan, and evidence-based trauma screening instruments are accessible from within the electronic record. In short, despite controversies marking "growing pains", the agency has been remarkable for its follow-up use of these, and other data, to improve its practices.

Implications for Clinical Practice

Identifying trauma in children may be especially important, because awareness of contemporaneous exposure to trauma would help ensure the child's protection. Similarly, the impact of past events would likely be more amenable to therapeutic intervention in children, given that it would be addressed closer to the time of traumatic exposure. Obtaining a trauma history is an essential step in assessing for and diagnosing PTSD, yet there are many factors that can impact the assessment process. For example, research with adult psychiatric outpatients has found that assessing for exposure to specific traumatic events on a structured

list results in greater endorsement of trauma relative to open-ended questions about exposure to “traumatic, life threatening, or extremely upsetting” events (Franklin, Sheeran, & Zimmerman, 2002). Many of the same barriers that prevent adults from spontaneously disclosing traumatic experiences to their clinicians may be relevant in children (e.g., the child’s lack of awareness of their relevance to current mental health symptoms).

Additionally, the disclosure of past or ongoing abuse may be experienced as shameful or frightening by children, as perpetrators may threaten them with worse repercussions than the abuse itself should they disclose what happened to them. Children are rarely self-referred for treatment, so referral for trauma-specific treatment would require that adults in the child’s life are aware of the child’s exposure to trauma and to the possible relation between trauma and the child’s symptoms. If these conditions are not met, if it is not safe for the child to reveal the past trauma due to the inability of a parent to hear this story, or if the child does not spontaneously report their trauma history, identification of trauma and PTSD depends entirely on the assessment process. Results from this study highlight the importance of obtaining a trauma history using a structured list of questions that ask about specific behavioral indicators and events, rather than only asking more generally whether abuse or neglect has occurred. The study also suggests a need to ask not only at intake but over the course of treatment.

In addition to individual patient characteristics, there may also be setting or clinician factors that impact the identification of trauma and PTSD. For example, discomfort over asking children and families direct questions about trauma exposure or concerns about upsetting traumatized children by obtaining a detailed trauma history may impact the extent to which clinicians obtain trauma histories. Furthermore, the use of structured or semi-structured assessments is associated with significant costs in terms of time and training required (Jensen Doss, 2005), and these costs represent significant barriers to implementation in community settings. Research has also found that when children present to community mental health clinics, they are more likely to receive one diagnosis relative to those completing a structured diagnostic interview, but clinicians are also less likely to assign no diagnoses (Jensen & Weisz, 2002). The authors note that demands of the clinical setting may increase the likelihood of assigning a diagnosis while decreasing the likelihood of identifying co-occurring diagnoses.

This study highlights the importance of investigating the diagnostic accuracy of child trauma and child PTSD assessment as it is conducted in community mental health clinics. Failing to detect trauma exposure and PTSD may result in less than optimal clinical care. Identifying trauma exposure and accurately diagnosing PTSD when present are essential for providing effective, evidence-based interventions for youth. Prior research also suggests that agreement between community clinician-generated and structured interview-generated diagnoses predicts better engagement in therapy and greater reduction in internalizing symptoms (Jensen-Doss & Weisz, 2008), suggesting that diagnostic accuracy is central to successful treatment.

Our findings therefore suggest a quandary. Diagnosis-specific treatments are an important innovation in the field of child psychology and psychiatry (Cohen, 2005; Cohen, Mannarino, & Knudsen, 2005; Kazdin & Weisz, 2003). As a result, clinicians are increasingly expected

to follow treatment guidelines that ensure the use of evidence-based treatments for specific populations. However, accurate diagnosis is a prelude to effectively matching client and treatment. Yet, far less attention has been paid to the accuracy of diagnosis in community settings than to the more ostensible problem of disseminating evidence-based treatments. This study suggests that increasing attention to accurate diagnosis is needed as one component of increasing use of evidence-based child PTSD treatment. Efforts to address this challenge in our field can be addressed by increasing research on the implications of diagnostic accuracy for the delivery of evidence-based care, and by encouraging clinicians to view comprehensive and accurate diagnosis as a pre-requisite for the delivery of evidence-based interventions designed to treat specific diagnoses.

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Table 1

Child trauma exposure and PTSD identified by community and study clinicians

Variable	Identified by Community Clinician N(%)	Identified by Study Clinician N(%)	Identified by Both Clinicians N(%)	Kappa	McNemar p-value
Physical Abuse	14 (8.9)	38 (24.2)	9(5.8)	.25	<.0001
Sexual Abuse	9 (5.7)	19 (12.1)	7 (4.5)	.46	.013
Witnessed Domestic Violence	18 (11.5)	60 (38.2)	12(7.7)	.16	<.0001
PTSD Diagnosis	3(1.9)	30(19.1)	2(1.3)	.09	<.0001

Table 2

Child symptoms and impairment as a function of trauma history and PTSD diagnosis

Variable	No Trauma <i>n</i> =77 <i>M</i> (<i>SD</i>)	Trauma <i>n</i> =80 <i>M</i> (<i>SD</i>)	<i>t</i> (<i>df</i>)	No PTSD <i>n</i> =127 <i>M</i> (<i>SD</i>)	PTSD <i>n</i> =30 <i>M</i> (<i>SD</i>)	<i>t</i> (<i>df</i>)
CBCL Internalizing	57.47(11.16)	61.01(11.38)	-1.93(149)*	57.66(11.32)	65.67(9.27)	-3.59(149)***
CBCL Externalizing	59.09(11.17)	62.07(9.61)	-1.75(149)*	60.61(10.71)	60.50(9.70)	.05(149)
CBCL Total Problems	59.69(10.84)	62.67(9.56)	-1.79(149)*	60.43(10.79)	64.27(7.31)	-1.84(149)*
GAF	48.77(18.16)	42.46(21.54)	1.77(124)*	46.01(20.09)	43.30(20.71)	.58(124)
CGAS	61.33(11.51)	56.67(9.52)	2.66(143)**	59.59(11.22)	56.61(8.56)	1.32(143) [†]
PTSD Symptom Severity	20.15(14.82)	22.10(13.06)	-.75(113)	19.56(13.56)	27.00(13.18)	-2.51(113)**

* $p < .05$,** $p < .01$,*** $p < .001$,[†] $p < .10$ all p -values are one-tailed

Note: CBCL = Child Behavior Checklist, GAF = Global Assessment of Functioning, CGAS = Clinician's Global Assessment Scale. The UCLA PTSD Reaction Index was completed by 115/157 children so comparisons of PTSD symptoms severity above are based on this subsample.