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History of Maltreatment and Psychiatric Impairment in Children in Outpatient Psychiatric Treatment

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Abstract

There is increasing evidence that childhood victimization and attachment disruptions impact a child's development. In this study, children and adolescents from an outpatient psychiatric clinic were assessed, measuring history of trauma, history of out-of-home placement, initial diagnoses, and CBCL internalizing and externalizing problem scores. Multiple regression analyses showed that both violent abuse trauma (physical/sexual abuse) and victim trauma (physical abuse/sexual abuse/witnessing domestic violence/witnessing community violence) are prevalent among patients with externalizing severity problems; concluding that diagnosis alone may not account for a history of victimization, but externalizing problem severity does. Overall, the study is consistent with past literature that it is important to acknowledge a child's history of maltreatment and out-of-home placement when understanding their psychiatric development and diagnosis.

Introduction

Childhood victimization, attachment disruption, or a combination of both impact a child's emotional and behavioral functioning, cognitive functioning, social competence, school achievement, psychopathology, and their general health (Ford, Connor, & Hawke, in submission; Margolin & Gordis, 2000; Margolin & Vickerman, 2007; Tolan, Gorman-Smith, & Henry, 2006; Wolfe, Cook, McIntyre-Smith, & Jaffe, 2003). Therefore, it is important to acknowledge a child's history of maltreatment and out-of-home placement when understanding their psychiatric development and diagnosis.

History of Maltreatment

Statistically, the U.S. Department of Health and Human Services, Administration of Children, Youth and Families (2008) found that there were a total of 885,245 victims of maltreatment in the U.S. in 2006. Of that total, 64.1% were victims of neglect, 16% were victims of physical abuse, and 8.8% were victims of sexual abuse (U.S. Department of Health and Human Services, 2006). These numbers are only approximate due to the variations in definition, measurement, methods, sampling, and reports across studies (Tolan et al., 2006). However, this number does expose the heightened issue of child maltreatment in the United States and its relevance to children's psychiatric development.

Abuse and a complex trauma history place a child at risk for internalizing (i.e. anxiety) and externalizing (i.e. depression) disorders (Ford et al., in submission). Complex trauma encompasses child abuse (both physical and sexual abuse) and exposure to domestic and community violence. Complex traumas are defined as experiences of multiple, chronic, and prolonged, developmentally adverse traumatic events, most often of an interpersonal nature (i.e. sexual or physical abuse, war, community violence) (Kolk, 2005) and of an early life onset

(Margolin & Vickerman, 2007). Family violence, which entails abuse and witnessing domestic violence (Margolin & Vickerman, 2007), is a type of complex trauma and is the most prevalent form of violence in the country (Tolan et al., 2006).

Multiple studies have shown that violence (both as a victim and as a witness) impact the psychological well-being of a child (Margolin & Gordis, 2000; Margolin & Vickerman, 2007; Tolan et al., 2006; Wolfe et al., 2003). Violence results in primary effects of anxiety, depression, and Post Traumatic Stress Disorder (PTSD) symptoms, which then cause secondary reactions due to disruptions in the child's development (Margolin & Gordis, 2000). Specifically, family violence was found to cause anxiety disorders, depression, antisocial personality disorder, alcohol and drug dependency (Tolan et al., 2006), and PTSD (Margolin & Vickerman, 2007). PTSD symptoms were heightened: when a person, rather than an act of nature, causes the traumatic event; when the person is a trusted individual; and when the victim is a loved one (Margolin & Vickerman, 2007). Under these circumstances, family violence would increase the likelihood of PTSD symptoms. It was also found that both child observers of domestic violence and victims of physical abuse had increased aggression and behavioral problems (Margolin & Gordis, 2000). In addition, abuse and exposure to violence, both at home and in the community, may affect children's ability to react appropriately to stress (Margolin & Gordis, 2000).

It has then been suggested that not only does the child have to be a victim of the abuse, but also witnessing violence has a detrimental effect on a child's development and functioning (Margolin & Gordis, 2000; Wolfe et al., 2003; Tolan et al., 2006). Exposure to domestic violence is related to both emotional and behavioral problems (Wolfe et al., 2003). Violence between family members creates a paradox to the child; harm is being inflicted by those who are supposed to care for and depend on one another (Tolan et al., 2006). Family has always been

defined as a dependable and safe support system (Tolan et al., 2006); however during acts of

violence, it becomes the most threatening. Particularly domestic violence places children at a

heightened risk for abuse (Margolin & Gordis, 2000). In addition, children who have witnessed

violence between their parents increase their chances of domestic violence in their own

relationships because they observe and directly model the violence (Margolin & Gordis, 2000;

Tolan et al., 2006). As mentioned before, child victims of abuse are unable to respond

appropriately to stress and therefore have difficulties in coping with the exposure to violence

within their home and community (Margolin & Gordis, 2000). A child forms "internal working

models," which are internalizations of the affective and cognitive characteristics of their primary

relationships (i.e. caregiver) (Kolk, 2005). Children then form insecure attachments due to the

traumatic stress from the abuse and witnessed violence, and as a result are unable to regulate

their emotional states (Kolk, 2005).

History of Maltreatment and Behavioral Disorders

In addition to witnessing violence, abuse has a damaging impact on a child's

development. The co-occurrence of child abuse and exposure to domestic violence increases the

level of emotional and behavioral problems, above that of exposure alone; demonstrating the

significance of victimization on the child's functioning (Wolfe et al., 2003). Studies focused on

physical abuse and sexual abuse found both similarities and variations in their impact towards a

child's development and functioning. Physically abused children versus non-maltreated children

were found to have elevations of depression and a feeling of hopelessness (Margolin & Gordis,

2000). This same link to depression was found in sexually abused children (Margolin & Gordis,

2000). Sexually abused children were also noted to have lower social competence scores based

on parents, teachers, and self-reports, and an increased teacher rating of social withdrawal and unpopularity (Margolin & Gordis, 2000).

In addition, physically abused children were found to have more externalizing problems than children without a history of maltreatment and exposure to family violence (Margolin & Gordis, 2000). Research has more specifically shown that traumatic physical and sexual maltreatment are more prevalent in children with Oppositional Defiant Disorder (ODD) or Attention Deficit Hyperactivity Disorder (ADHD) (Ford et al., 2000). Furthermore, children with ODD or comorbid ODD/ADHD were more likely to also have a PTSD diagnosis, compared to children with ADHD only or adjustment disorder diagnosis (Ford et al., 2000). Thus, demonstrating that children who have been exposed to traumatic events may be more at risk for other behavioral and psychological disorders, both internalizing (i.e. depression) and externalizing (i.e. ODD and ADHD).

It must be noted that in some studies it was hard to separate the two forms of victimization because usually sexual abuse is categorized under physical abuse. However, both types of victimizations have been noted to impact a child's functioning and enhance both externalizing and internalizing symptoms.

Out-of-home Placement

Out-of-home placement is any change in residential placement outside of the biological home. Unfortunately, out-of-home placement is not the best option for children; it has been shown that out-of-home placement is the most disruptive, invasive, and costly option for children who are no longer able to reside with their biological families (James, Landsverk, & Slymen, 2004). Children who experience multiple or extended out-of-home placements are vulnerable to relational disruptions, and as a consequence have difficulties in trust and capacity to seek and

sustain secure attachment relationships (Ford et al., in submission). In addition, there is a link between disruptive behaviors and placement instability, suggesting that an increase in externalizing behaviors is associated with out-of-home placements (James et al., 2004).

The specifics on out-of-home placement, and what kind of out-of-home placement(s) cause the most disruptive impact on the child's functioning is still up for debate. One study showed that it is not just the number of out-of-home placements that are disruptive to the child's functioning, but the timing (i.e. initial age) and type (i.e. family or non-family caregiver) of placements are significant (James et al., 2004). However, an additional study found that the key factor was multiple out-of-placements, rather than the timing and type of placement (Ford et al., in submission). Overall, the findings are in agreement that multiple out-of-home placements cause disruptions in a child's security, safety, and continuity, which lead to a development of both externalizing and internalizing problems (Ford et al., in submission; James et al., 2004).

Problems of Diagnosis

Research has shown that the present DSM-IV diagnoses may not account for the increased impairment that is associated with complex trauma histories (Ford et al., in submission). Children with a history of complex trauma were found to have significantly different levels of externalizing problems than children without complex trauma history (Ford et al., in submission). Furthermore, there is a concern with diagnosing children exposed to violence (Margolin & Vickerman, 2007). PTSD can be misdiagnosed during the assessment if made without knowledge of a history of victimization (Margolin & Vickerman, 2007). Specifically, repeated and ongoing family violence exposure can complicate a PTSD diagnosis; that kind of exposure can cause impairment in multiple domains of a child's functioning and therefore fulfill diagnostic criteria for more disorders then just PTSD (Margolin & Vickerman, 2007). PTSD is

not the most common psychiatric diagnosis in children with a history of trauma; in one study of abused children, the most common diagnoses (in order of frequency) were separation anxiety disorder, ODD, phobic disorder, PTSD, and ADHD (Kolk, 2005). In addition, children are more often given a comorbid diagnosis that tries to capture the entire spectrum of problems associated with the traumatized child, rather than a diagnosis of PTSD (Kolk, 2005). The classification of PTSD itself does not adequately portray the effect of trauma exposure on the child, and therefore needs to be defined more broadly (Kolk, 2005). Misdiagnosis of PTSD runs the risk of mistreating the child, and furthermore causing the application of treatment methods that do not get at the underlying issue that is a result of the trauma exposure. Therefore, it is critical to acknowledge a history of maltreatment and any type of out-of-home placement that may cause attachment disruptions. There needs to be a full understanding of the scope of the problem to implement successful treatment.

Current Study

Acts of child maltreatment (physical abuse, sexual abuse, witnessing domestic violence, and witnessing community violence) and a history of out-of-home placement have a detrimental impact on the child's psychological functioning and development (Ford et al., in submission; Margolin & Gordis, 2000; Margolin & Vickerman, 2007; Tolan et al., 2006); Wolfe et al., 2003). The current study intends to demonstrate how either a history of trauma exposure, out-of-home placement, or a combination of both, impact a child's psychiatric diagnosis compared to children without a history of victimization. In addition, the study intends to examine more broadly how a history of victimization and/or out-of-home placement contributes to internalizing and externalizing behavioral outcomes. As noted above with problems of diagnosis (Ford et al., in submission; Kolk, 2005; Margolin & Vickerman, 2007), the study plans to answer a more

complex question of whether a history of trauma exposure masks the real diagnosis of a child being treated at an outpatient psychiatric clinic.

Methods

Participants

Study data was collected at a Northeastern Child and Adolescent Outpatient Clinic. Patients who were once enrolled in the clinic and discharged prior to July 2008 were used in the study; patients currently enrolled in the outpatient clinic were omitted from study. These patients (N=140) ranged from 4 to 19 years old (*M* age = 18), and were brought to the clinic for an evaluation and then treatment (for the majority) for clinical behavioral disorders. The range of initial clinical diagnosis in the study included: Conduct Disorder and Oppositional Defiant Disorder (CD/ODD), ADHD, depression, PTSD, General Anxiety Disorder (GAD)/Separation Anxiety Disorder (SAD)/social phobia, panic, Obsessive Compulsive Disorder (OCD), and adjustment disorder.

Of the 140 participants, 63% were male and 37% were female, and primarily Caucasian (38% African American, Hispanic, Biracial, or other ethnicity) from both rural and urban communities. Furthermore, of the 140 participants, 12.1 % (N=17) had a history of out-of-home placement and 27.9% (N=39) had a (documented) history of trauma (physical abuse, sexual abuse, exposure to domestic violence, and exposure to community violence).

Procedure

Each participant fulfilled the minimal criteria for the study of: being discharged from the clinic prior to July 2008, completing an initial evaluation interview with a clinician, having an initial clinical diagnosis, and completing the Child Behavior Checklist (CBCL) by a primary caregiver. The psychiatric diagnoses and documented history of abuse and out-of-home

placement were determined during the clinical interview of the child and the primary caregiver. The CBCL had been filled out by the caregiver during the first visit to the clinic and then scored using the Assessment Data Manager (ADM).

Demographic Variable

Age, gender, and ethnicity of the patient were gathered in both a background questionnaire completed by the primary caregiver and the initial evaluation interview completed by the clinician. Age ranged from 4 to 19 years old, predominately in the 13-15 age groups. Ethnicity was dichotomized into two categories: White and Ethnic/racial Minorities, due to the small representation of non-Caucasian ethnicities (38% African American, Hispanic, and Biracial ethnicities).

Diagnostic Classification

Clinical diagnosis was determined during the initial evaluation by the clinician. The clinician followed DSM-IV criteria. Due to the small sample size (N=140) and variation in clinical diagnoses, clinical diagnoses were categorized into five groups: PTSD; CD/ODD; ADHD; any anxiety, depression, adjustment disorder; and any internal disorders not including PTSD. Any anxiety, depression, and adjustment disorder included PSTD (N=9), depression (N=27), adjustment disorder (N=23), GAD/SAD/Social Phobia (N=18), OCD (N=6), and panic (N=2). Internal disorders not including PTSD (N= 66) were all of the above minus PTSD. These separate categories were created to demonstrate the difference between PTSD and other internal disorders within the analyses.

Externalizing and Internalizing Behavior Problem Scores

During the patient's first visit, participating caregivers completed the Child Behavior Checklist (CBCL) for ages 6-18. The CBCL provided the scores for overall severity of

externalizing and internalizing behavior problems used in the study. The CBCL is one of the most commonly used measures for child psychopathology (Achenbach, 1991). In addition, the CBCL instrument has test-retest reliability and content, construct, and criterion-related validity (Achenbach, 1991). Test-retest reliability was adequate based on a sample of boys and girls ages 4-11 (Cronbach's alpha value ranged for boys .62 to .92 and girls .66 to .92) (Achenbach 1991). Construct validity of the CBCL when correlated with the Conners (1973) *Parent Questionnaire* and with the Quay-Peterson (1983) *Revised Behavior Problem Checklist*, from a sample of 60 clinically referred children ages 6 to 11 years old, was adequate (Achenbach, 1991). The correlation between the CBCL and Conners scale ranged from .59 to .86, and similarly the correlation between the CBCL and the Quay-Peterson scale ranged from .59 to .88 (Achenbach, 1991).

The CBCL allows for the examination of eight syndrome scales (social withdrawal, somatic complaints, anxiety/depression, social problems, thought problems, attention problems, delinquent behavior, and aggressive behavior) and a more general measurement of internalizing problems and externalizing problems (Achenbach, 1991). Externalizing problems combines the delinquent behavior and aggressive behavior scales, while internalizing problems combines the social withdrawal, somatic complaints, and anxiety/depression scales (Achenbach, 1991). T-scores for externalizing and internalizing problems that are less than 60 are considered in the normal range, 60-63 are borderline, and greater than 63 are in the clinical range (Achenbach, 1991). In this study internalizing and externalizing T-scores were used as problem indicators.

History of Trauma Exposure and Out-of-Home Placement

Psychological trauma exposure was assessed during the initial clinical evaluation interview with the child and the primary caregiver. The assessment was based on self-report data.

Unfortunately, there were no other sources or documented confirmation to provide further trauma history. The initial evaluation provided information on physical abuse, sexual abuse, domestic violence, community violence, and other trauma exposure. Due to the small sample size, small percentage of trauma exposure, and uniqueness of trauma exposure, trauma was categorized into three different groups. The first group included all victim trauma exposure (N=39), which included physical abuse, sexual abuse, witnessing domestic violence, and witnessing community violence. Another group was made only including physical and sexual abuse, which was labeled as violent abuse trauma (N=18), to see if physical and sexual abuse had any unique affect on children and adolescents. The last trauma group, other trauma (N=35) included witnessing domestic or community violence and natural disasters. In addition to trauma exposure, patients were screened for number of out-of-home placements in their lifetime. Out-of-home placements were dichotomized into two groups of either yes (≥1) or no (0), with 12.1% (N=17) having a history of out-of-home placements.

Data Analysis

Independent Samples Test (T-test) was used to determine the (bivariate) relationship between initial clinical diagnoses, history of trauma exposure, and out-of-home placements to CBCL behavioral severity problems. Multiple regression analyses determined the contribution of a history of violent trauma exposure/victimization and diagnosis to CBCL behavioral severity problems (internalizing and externalizing problems).

<div align="center">Results</div>

(Important to note that for all analyses initial diagnoses and history of trauma were dichotomized as either 'yes' or 'no' (1=yes and 2=no). Therefore, correlations are based on a

lower number for initial diagnoses and trauma exposure being present and a higher number for them not.)

Descriptive Statistics

Descriptive characteristics, including means and standard deviations, of the study variables are presented in Table 1. Sample size of the diagnoses is greater than the overall sample size of the study (N=140) due to comorbidity of diagnoses for the majority of the patients (32.9%). The average CBCL externalizing problem score was in the clinical range (*M*=63.22) and CBCL internalizing problem score was borderline, reaching clinical (*M*=62.82). This is adequate for the amount of patients diagnosed with either behavioral problems (ADHD, CD/ODD) or internal disorders (anxiety, depression, adjustment, PTSD).

Independent Sample T-tests

Independent Sample T-tests were performed to demonstrate the relationship between CBCL internalizing and externalizing problem scores with demographics, trauma history, and diagnoses. These relationships explain if patients with certain documented trauma exposure or initial diagnoses are more apt to have higher CBCL internalizing or externalizing problem score as opposed to those who do not.

Patients with a history of victim trauma (physical abuse, sexual abuse, domestic violence, and community violence) were significantly related to both CBCL internalizing and externalizing problem scores versus patients without a history of victim trauma. Patients with a history of victim trauma had a higher CBCL externalizing problem score $t(98) = 2.68$, $p= .01$, $M = 67.11$, $SD = 9.62$ vs. $M = 60.76$, $SD = 12.37$, and a higher CBCL internalizing problem score $t(98) = 2.05$, $p = .044$, $M = 66.00$, $SD = 8.58$ vs. $M = 61.51$, $SD = 11.62$. In addition, patients with a history of violent abuse trauma (physical or sexual abuse) were more likely to have a

higher CBCL externalizing problem score than patients without such a history; $t(98) = 2.13$, $p =$ .04, $M = 68.75$, $SD = 10.27$ vs. $M = 62.04$, $SD = 11.81$. Patients with a history of other trauma, including domestic violence, community violence, and natural disaster, were significantly more likely to score higher on the CBCL internalizing problem score, $t(97) = 2.21$, $p = .03$, $M = 66.69$, $SD = 8.51$ vs. $M = 61.63$, $SD = 11.50$. In addition, patients with a history of other trauma approached significance in scoring higher on CBCL externalizing problem score, than patients without a history of other trauma, $t(97) = 1.95$, $p = .05$, $M = 66.50$, $SD = 10.16$ vs. $M = 61.67$, $SD = 12.10$.

Patients initially diagnosed with any anxiety, depression, or adjustment disorder were significantly more likely to score higher on the CBCL internalizing problem score than children without this diagnosis, $t(111) = 2.15$, $p = .03$, $M = 64.84$, $SD = 9.39$ vs. $M = 60.55$, $SD = 11.69$. Patients initially diagnosed with an internal disorder, not including PTSD, were related to higher CBCL internalizing problem scores than children without an internal disorder diagnosis; $t(111) =$ 1.42, $p = .01$, $M = 64.35$, $SD = 9.10$ vs. $M = 61.47$, $SD = 11.79$. Patients initially diagnosed with ADHD were significantly more likely to score higher on the CBCL externalizing problem score than patients without ADHD; $t(111) = 2.65$, $p = .01$, $M = 66.69$, $SD = 11.11$ vs. $M = 61.06$, $SD =$ 11.04. Lastly, patients initially diagnosed with CD/ODD were also significantly related to CBCL externalizing problem scores than patients without CD/ODD as their initial diagnosis; $t(110) =$ 3.51, $p = .00$, $M = 69.13$, $SD = 8.39$ vs. $M = 61.07$, $SD = 11.66$.

In addition, in examining the correlation there was a significant negative correlation (-.26) between age at admission and CBCL externalizing problem score ($p=.01$).There was no significant bivariate relationship between out-of-home placement or PTSD and CBCL internalizing and externalizing problem scores.

Overall, patients with a history of victim trauma and other trauma, and initially diagnosed with any anxiety depression, or adjustment disorder and an internal disorder, not including PTSD, had a significantly greater chance of scoring higher on the CBCL internalizing problem scores than patients without. Furthermore, patients with a history of victim trauma, violent abuse trauma, and other trauma; initially diagnosed with ADHD and CD/ODD; and younger in age when first admitted to the clinic, were more likely to score higher on the CBCL externalizing problem score.

Multiple Regressions

Multiple regression analyses were performed to demonstrate relationships between CBCL internalizing and externalizing problem scores and demographic, trauma history, and diagnosis. Three different multiple regressions were used examining the different categories of trauma exposure and initial diagnoses. For all analyses, age at admission, gender, and ethnicity were all added in Step 1. In Step 2 and 4, initial diagnoses were added. For regressions with CBCL internalizing problem score as the dependent variables, external disorders (ADHD and CD/ODD) were added in Step 2, and internal disorders (any anxiety, depression, adjustment diagnoses and internal disorders, not including PTSD) were added in Step 4. Alternatively, for regressions with CBCL externalizing problem score as the dependent variable the internal disorders were added in Step 2 and external disorders in Step 4. This was done because it was assumed that internal disorders would be more predictive of CBCL internalizing problem score, and external disorders with CBCL externalizing problem score, and it was important to see other relationships in the earlier steps of the regression before such predictors were added. For all analyses, trauma history and out-of-home placement were added in Step 3. Two regression

analyses used other trauma and any victim trauma, and one used other trauma and any violent abuse trauma.

The first set of regression analyses, presented in Table 2, examined the influence of other trauma, victim trauma, and any anxiety, depression, or adjustment diagnosis (along with the common predictor variables of age, gender, ethnicity, ADHD, CD/ODD, and out-of-home placement) on CBCL internalizing and externalizing problem scores. The model in which CBCL internalizing scores were not predicted was not significant, indicating that there was no significant relationship between CBCL internalizing problem and the predictor variables. However, the model predicting CBCL externalizing scores was significant. In Step 1 of the regression analysis of CBCL externalizing problem score, younger age at admission was predictive of a high CBCL externalizing problem score ($\Delta R^2 = .07$, $p < .01$, $\beta = -.27$). In Step 2, a history of victim trauma (physical abuse, sexual abuse, witnessing domestic violence and/or community violence) was predictive of a high CBCL externalizing problem score ($\Delta R^2 = .08$, $p < .01$, $\beta = -.35$). CD/ODD was also significantly predictive of a high CBCL externalizing problem score in Step 4 ($\Delta R^2 = .10$, $p < .01$, $\beta = -.31$).

The second set of regression analyses was performed to see if there would be a significant relationship to CBCL internalizing or externalizing problem scores when internal disorders were separated from PTSD. There was no significant relationship between CBCL internalizing problem score and the study variables. There were significant relationships with CBCL externalizing problem score and the predictor variables; however most of them were the same as the first regression (i.e. CBCL externalizing problem was predicted by age at admission, victimization, and CD/ODD). The main difference was that in Step 2, internal disorders, not

including PTSD, was significantly predictive of a low CBCL externalizing problem scores (ΔR^2 = .05, p <.05, β = .24), as presented in Table 3.

The last regression, reported in Table 4, kept internal disorders and PTSD separate (due to the fact that there was no difference when they were categorized together), but examined violent abuse trauma instead of victim trauma. Again, there were only significant relationships with CBCL externalizing problem scores. Age at admission was significant in Step 1 (ΔR^2 = .07, p <.01, β = -.27). Violent abuse trauma approached significance in Step 3, but was a significant predictor of a high CBCL externalizing problem score in Step 4 (ΔR^2 = .10, p <.01, β = -.25). In addition, CD/ODD was significantly predictive of CBCL externalizing problem score in Step 4 (ΔR^2 = .10, p <.01, β = -.30).

In all regression analyses, out-of-home placement or PTSD was not a significant predictor of either CBCL internalizing or externalizing problem scores.

Discussion

The study examined how a history of victimization and out-of-home placement contribute to internalizing and externalizing behavioral problems, and more broadly, if a history of trauma exposure masks the real diagnosis of a child being treated at an outpatient psychiatric clinic. The findings indicate that not just any type of trauma, but both violent abuse trauma (physical or sexual abuse) and victim trauma (physical abuse, sexual abuse, witnessing domestic violence, and witnessing community violence) are prevalent among patients with externalizing severity problems in this population of children and adolescents in an outpatient clinic. Furthermore, the findings begin to demonstrate that the complexity of trauma exposure is not always captured in a child's initial diagnosis.

In the study there were many significant bivariate relationships between history of trauma, initial diagnosis, and CBCL internalizing and externalizing problem scores. As expected, ADHD and CD/ODD were significantly related to CBCL externalizing score, and any anxiety, depression, and adjustment disorder and internal disorders, not including PTSD, were related to CBCL internalizing score. Patients with a history of victim trauma and other trauma (witnessing domestic and/or community violence and natural disasters) were related to CBCL internalizing problem score. Furthermore, patients with a history of both victim trauma and violent abuse trauma were significantly more likely to score higher on the CBCL externalizing problem score.

This significant relationship between history of trauma and CBCL externalizing problem score was reemphasized in the multiple regressions analyses. Both victim trauma and violent abuse trauma were significant predictors of externalizing problem severity even when controlled for CD/ODD and ADHD; the two prominent behavioral disorders. These findings suggest that patients who score high on the CBCL externalizing problem measure are more likely to have a history of trauma than patients who score lower. More importantly, from the analyses using three different categories of trauma, it was demonstrated that there is something specific about victim trauma and violent abuse trauma that is predictive of a high CBCL externalizing problem score, above other trauma that incorporates only witnessing domestic and/or community violence and exposure to a natural disaster. Furthermore, when the trauma category was narrowed to only include a history of physical and sexual abuse (violent abuse trauma), rather than a combination of abuse and witnessing domestic and community violence, it remained a significant predictor of externalizing severity problems.

These findings are consistent with past research where it was suggested that physically abused children had more externalizing problems than children without a history of maltreatment

(Margolin & Gordis, 2000). Children with ODD and ADHD, major behavioral disorders, are also more likely to have a history of traumatic physical and sexual maltreatment (Ford et al., 2000). In addition, these findings suggest that diagnosis alone may not account for a history of victimization (i.e. PTSD), but externalizing problem severity does. CBCL problem scores represent the patient's symptomatology, rather than a labeled diagnosis that masks the true internal or external problem. Therefore, clinicians could be diagnosing children with behavioral disorders without taking into account a history of victimization that could be an underlying variable to the disorder and crucial information for treatment.

It is also important to acknowledge the insignificant relationship between out-of-home placement and both CBCL internalizing and externalizing problem scores. These insignificant findings are inconsistent with past research on the impact of out-of-home placement and attachment disruptions on children's development. However, this can be attributed to the small sample size (N=17), and therefore a greater population of patients who have been displaced from their biological home may show results that are more in line with previous literature.

PTSD was also insignificant in the findings of the study. When internal disorders and PTSD were separated into two different categories, internal disorders, not including PSTD, was a significant predictor of a low CBCL externalizing problem score. However, when the primary behavioral disorders, CD/ODD and ADHD, were added as predictors in the fourth step, the internal disorders, not including PTSD, were far from significant. This effect could be due to the high percentage of comorbid diagnoses (32.9%), where behavioral problems are the primary diagnosis (based on the profile of the clinic) and internal disorders are secondary.

Additionally, there was no significant relationship between internal disorders, PTSD, and internalizing problem severity, which still leaves questions about the symptomatology and

overall diagnosis of PTSD. PTSD in children has been a large focus in current research (Ford et al., in submission; Kolk, 2005; Margolin & Vickerman, 2007). Its misdiagnosis in children is a reiterated problem that needs to be addressed, and should be further examined using a larger sample size.

Limitations

The main limitation of the current study was the small and limited sample size (N=140). The sample was restricted to only one child and adolescent psychiatric outpatient clinic; limiting in both size and diversity. In addition, the study did not include non-psychiatric and non-treatment-seeking controls. Therefore, the study does not generally represent the diversity of the child and adolescent population.

In addition to limitations in participants, the study was limited in the sources of information. The study had to rely on self-reports alone for trauma history. Further studies should use other sources and measures that confirm the child's history, or lack of, maltreatment. Specific trauma measurements, such as the Traumatic Events Screening Inventory (TESI), should be utilized. Unfortunately, the current study was limited by what information could be applied, and therefore was restricted to the initial evaluation interview and CBCL that was completed during the first visit. Moreover, all information had to come from the initial evaluation alone due to numerous patient drop outs.

As mentioned before, further studies should be conducted using a larger sample size for children and adolescents with a history of out-of-home placement and initial diagnosis of PTSD.

Mediating Factors of Violence for Further Study

In addition to the direct effect of violence and traumatic experiences on children's outcomes, a number of factors may moderate the influence of violence, impacting its

interpretation and how it affects the child. Margolin and Gordis (2000) suggested three categories of moderating factors: (a) child characteristics; (b) factors related to frequency, severity, and chronicity of the violence; and (c) quality of family and social relations and the level of disruption and chaos in a child's life. Specifically, with the first category, child characteristics, there are both emotional and cognitive characteristics of the child that impact how the violence affects the child's functioning. Shy and anxious children are more prone to internalizing their reactions, whereas children who act out more will react with increased externalizing behaviors. In addition, the family environment places a crucial role in the impact of violence on the child. If the family is a stable and supportive system, a supportive relationship from a parent or a caregiver, there are fewer symptoms caused by child victimization (Margolin & Gordis, 2000). Therefore, as explained before, family violence creates an even larger controversy for the child because they then lack a social support that is necessary to buffer the reactions to being victimized.

Further research should pursue this idea of moderating factors and their contributions to a child's reaction to trauma exposure, and more particularly how they affect a child's overall diagnosis. Clinicians should take all three moderating factors ((a) child characteristics; (b) factors related to frequency, severity, and chronicity of the violence; and (c) quality of family and social relations and the level of disruption and chaos in a child's life) into consideration when screening a child for a history of maltreatment and in the treatment plan. According to Margolin and Gordis (2000), children who act out more are more likely to demonstrate externalizing symptoms after trauma exposure, while a child who is shy will have more internalizing symptoms. Therefore, all types of behavioral severity symptoms (internalizing and externalizing) should be screened for a history of maltreatment and, as prior research has shown,

a history of out-of-home placement / attachment disruption. This current study and past research

suggests (Ford et al., 2000, Margolin & Gordis, 2000) that both prevention and treatment can be

enhanced by screening for maltreatment and other trauma.

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Table 1

Means and Standard Deviations for all Variables

Variables

	Mean	Standard Deviation
ADHD (N=53)	1.61	.49
CD/ODD (N=37)	1.73	.45
Any Anxiety, Depression, Adjustment Diagnosis (N=75)	1.45	.50
Internal Disorders, Not PTSD (N=66)	1.52	.50
PTSD (N=9)	1.93	.25
Any Out of Home Placement (N=17)	1.86	.34
Any Violent Abuse Trauma (physical or sexual abuse) (N=18)	1.85	.36
Any Victim Trauma (physical abuse, sexual abuse, community violence, domestic violence) (N=39)	1.68	.47
Other Trauma (domestic violence, community violence, natural disaster) (N=35)	1.71	.45
CBCL Internalizing Problem Score (N=114)	62.82	10.77
CBCL Externalizing Problem Score (N=114)	63.22	11.34

Table 2

Summary of Multiple Regression Analyses with CBCL Internalizing and Externalizing Problem Scores as Dependent Variable (Including Any Anxiety, Depression, Adjustment Diagnosis, Other Trauma, and Victim Trauma as predictors)

CBCL Internalizing Problem Score			CBCL Externalizing Problem Score		
	β	ΔR²		β	ΔR²
Step1		.02	Step1		.07
Age at Admission	-.05		Age at Admission	-.27**	
Gender	.11		Gender	.06	
Ethnicity	-.09		Ethnicity	.05	
Step 2		.02	Step 2		.04
ADHD	-.04		Any Anxiety, Depression, Adjustment Diagnosis	.20	
CD/ODD	.13				
Step 3		.05	Step 3		.08*
Other Trauma	-.14		Other Trauma	.04	
Any Victim Trauma	-.07		Any Victim Trauma	-.35**	
Out of Home Placement	-.07		Out of Home Placement	.08	
Step 4		.03	Step 4		.10**
Any Anxiety, Depression, Adjustment Diagnosis	-.22		ADHD	-.18	
			CD/ODD	-.31	

* *p* <.05, ** *p* <.01

Table 3

Summary of Multiple Regression Analyses with CBCL Internalizing and Externalizing Problem Scores as Dependent Variable (Including Internal Disorder, not including PTSD, PTSD, Other Trauma, and Any Victim Trauma as predictors)

	CBCL Internalizing Problem Score			CBCL Externalizing Problem Score	
	β	ΔR²		β	ΔR²
Step1		.02	Step1		.07
Age at Admission	-.05		Age at Admission	-.27**	
Gender	.11		Gender	.06	
Ethnicity	-.09		Ethnicity	.05	
Step 2		.02	Step 2		.05*
ADHD	-.04		Internal Dx, Not PTSD	.24*	
CD/ODD	.13				
Step 3		.05	Step 3		.07
Other Trauma	-.14		Other Trauma	.03	
Any Victim Trauma	-.07		Any Victim Trauma	-.31*	
Out of Home Placement	-.07		Out of Home Placement	.09	
Step 4		.03	Step 4		.10**
Internal Dx, Not PTSD	-.21		ADHD	-.18	
PTSD	-.16		CD/ODD	-.31**	
			PTSD	-.04	

$* p < .05, ** p < .01$

Table 4

Summary of Multiple Regression Analyses with CBCL Internalizing and Externalizing Problem Scores as Dependent Variable (Including Internal Disorder, not including PTSD, PTSD, Other Trauma, and Any Violent Abuse Trauma as predictors)

CBCL Internalizing Problem Score			CBCL Externalizing Problem Score		
	β	ΔR²		β	ΔR²
Step1		.02	Step1		.07
Age at Admission	-.05		Age at Admission	-.27**	
Gender	.11		Gender	.06	
Ethnicity	-.09		Ethnicity	.05	
Step 2		.02	Step 2		.05*
ADHD	-.04		Internal Dx, Not PTSD	.24*	
CD/ODD	.13				
Step 3		.06	Step 3		.06
Other Trauma	-.16		Other Trauma	.03	
Any Violent Abuse Trauma (physical or sexual abuse)	-.10		Any Violent Abuse Trauma (physical or sexual abuse)	-.18	
Out of Home Placement	-.07		Out of Home Placement	.08	
Step 4		.03	Step 4		.10**
Internal Dx, Not PTSD	-.21		ADHD	-.15	
PTSD	-.12		CD/ODD	-.30**	
			PTSD	-.05	
			Any Violent Abuse Trauma	-.25*	

* *p* <.05, ** *p* <.01