A Review of Trauma-Informed Interventions among Adjudicated Youth Experiencing PTSD Symptomology

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Abstract

The rate of trauma-impacted juveniles entering the juvenile justice system has risen and continues to rise, impacting over 90% of adjudicated youths. Multiple victimizations and poly-victimization is typical for these adolescents, which increases the risk of compounding mental health concerns. The recent revision of the DSM-V expanded the criteria for stress and trauma-related disorders has expanded, and posttraumatic stress disorder (PTSD) in adolescence is now more commonly recognized and diagnosed. This paper examines the diagnosis and physiological changes associated with PTSD, and evaluates four of the current trauma-informed interventions being used in the juvenile justice system. Implications for further research and expansion of the programs are also discussed.

*Keywords:* PTSD, posttraumatic stress disorder, juvenile, therapeutic

Trauma and PTSD in Juvenile Justice Populations

In the last decade, doctors and researchers have begun to comprehend the scope of how trauma affects the human brain and behavior. Trauma is, as defined by the current DSM-V, “exposure to actual or threatened death, actual or threatened serious injury, or actual or threatened sexual violence” (American Psychiatric Association, 2013). More than ninety percent of the youth in urban juvenile detention facilities have exposure to at least one traumatic event, and over half have experienced multiple traumas. The average juvenile offender has endured six unique and separate traumatic experiences before being adjudicated into the criminal justice system (Abram et al., 2004; Ford, Hartman, Hawke, & Chapman, 2008). The revision of the DSM-V in 2013 expanded the criteria for PTSD and placed stress and trauma-related disorders along a spectrum. While PTSD falls into the more severe portion of the spectrum, research makes it clear that trauma-related symptomology is also prevalent in the juvenile justice population. Addressing the entire range of stress and trauma-related disorders has the potential to reduce the comorbidity of other mental illnesses and substance abuse.

Trauma is a precursor of PTSD, but there are specific criteria for being given a diagnosis. The individual must persistently re-experience the traumatic event, avoid trauma-related stimuli, have negative thoughts and feelings that become worse after the incident, and experience related arousal and activity. A person may become aggressive or self-destructive, engage in reckless behavior, unfairly blame themselves, and have persistent negative beliefs about themselves and the world. They are left feeling alienated from society and have a diminished interest in life. All these symptoms must be present for at least a month, and significantly affect the life of the patient, interfering with their ability to live a typical life (American Psychiatric Association, 2013). For juveniles adjudicated into the criminal justice system, evidence of both trauma and posttraumatic stress disorder have reached an all-time high, leaving children feeling broken - as if their lives were already worthless.

Trauma exposure and PTSD rates for juvenile offenders are staggering. While a typical community has a PTSD rate of 3.5%, the juvenile justice’s population’s rate is between 11 and 48%. (Abram et al., 2004; Patricia K. Kerig, Vanderzee, Becker, & Ward, 2012b). The criteria for a PTSD diagnosis has changed over multiple DSMs and the juvenile justice system is now screening for mental health related issues, so it is unclear whether more adolescents have been traumatized or whether doctors are more adept at recognizing it. Since over 90% of adjudicated juveniles have experienced trauma, it has become a massive issue. Trauma can disrupt brain development and processing speeds, which can cause dysregulated affect (Hazen, Connelly, Roesch, Hough, & Landsverk, 2008; Holmes & Sammel, 2005; Kilpatrick et al., 2003), lowered levels of impulse control (Ford et al., 2008; Swahn et al., 2008; Waldrop et al., 2007), inability to process information (Bradshaw, Rodgers, Ghandour, & Garbarino, 2009; Dodge, Pettit, Bates, & Valente, 1995), and lead to problematic peer relationships (Ford, Elhai, Connor, & Frueh, 2010). Trauma is also positively correlated with psychiatric disorders, including depression, anxiety disorders, and disruptive behavioral disorders. The features of PTSD can lead to substance use problems, including the use of alcohol, street drugs, and prescription medications (Jacobsen et al., 2001; Triffleman, 1995). While trauma exposure alone is not sufficient to lead to SUD, PTSD can result in SUD (or may co-occur with SUD because of other factors, e.g., impulsivity, social isolation) (Breslau, 2003). Multiple studies show mental disorders in 70 to 90% of detained juvenile offenders (Colins, Vermeiren, Schuyten, & Broekaert, 2009; Fazel, Doll, & Långström, 2008; Patricia K. Kerig et al., 2012b). In addition to psychiatric disorders, patients with PTSD are at higher risk for both substance use and substance use disorders, because of disordered thinking, reckless behavior, and a desire to self-medicate their symptoms (Chapman & Ford, 2008; Hawke, Ford, Kaminer, & Burke, 2009).

The critical needs for trauma-informed interventions within the juvenile justice system stem from the high rate of comorbidity of trauma exposure, psychiatric illness, and substance use. Seventy-four percent of adolescents, both male and female, in a national study had a combination of these three factors (Kilpatrick, 2003). The implications of trauma on the biological, psychological, and social functioning of adolescents requires consideration for various treatments. PTSD manifests differently across types of trauma and groups of people, and treatment cannot be a one-size fits all solution. Sexual and physical abuse, which are interpersonal violence, emerged as a strong predictor of comorbidity in a 2008 national study (J. D. Ford, Hartman, Hawke, & Chapman, 2008). Treatment focused on the type(s) of trauma can reduce the severity of concurrently occurring mental illness, lessen the amount of substance use, and decrease the likelihood of recidivism. When determining treatments, one must also consider the iatrogenic effects of detention. The number of arrests also increases the likelihood of gaining a diagnosis of PTSD, even for juvenile offenders already in a high-risk category (Becker & Kerig, 2011). Treatment is more cost effective, reduces recidivism, and teaches adolescents skills necessary for success.

Correlates and Etiology of PTSD in Youth

The most common traumas include witnessing violence or hearing of violence occurring to a close friend or relative (Abram et al., 2004). Exposure to community violence is a significant source of trauma, particularly for urban, minority youth. In high-risk communities, children observe events such as domestic violence, shootings, stabbings, interpersonal physical and verbal assaults, gang activities, and robberies (Collins, Koeske, Russell, & Michalopoulos, 2013). This same exposure to trauma can lead adults to act in dysregulated ways and increase the level of child maltreatment and emotional abuse. Direct trauma, such as being the victim of a crime or childhood maltreatment, is a significant problem for juvenile offenders (Aebi et al., 2015). Researchers typically classify child abuse into five groups: physical abuse, sexual abuse, emotional abuse, physical neglect, and emotional neglect. Maltreated children often experience multiple types of abuse, with one study finding nearly 20% of youth involved with public mental health or social service systems had experienced multiple types of maltreatment (Hazen et al., 2008). Kerig, Ward, Vanderzee, and Moeddel (2009) tested associations of symptoms of PTSD with regards to varying interpersonal traumatic events, particularly sexual abuse, and found that exposure to traumatic events predicted the onset of PTSD and other psychiatric problems. Their study also found PTSD mediated associations between trauma exposure and mental health, with PTSD occurring as the first mental health issue before the diagnosis of other comorbid illnesses. It is important to note that poly-victimization - a type of chronic exposure to multiple traumatic events - is positively correlated with more severe symptoms than repeated victimizations of the same kind. (Finkelhor, Shattuck, Turner, Ormrod, & Hamby, 2011). Current research supports the theory that one event or repeated exposure to the same type of trauma does not typically cause PTSD in children, but rather poly-victimization that impacts the entirety of a child’s experience (Finkelhor et al., 2011; Hazen et al., 2008; Nurius, Russell, Herting, Hooven, & Thompson, 2009; Stimmel, Cruise, Ford, & Weiss, 2014; Voith, Gromoske, & Holmes, 2014).

The Biobehavioral Response and Psychosocial Manifestations of Trauma/PTSD among Youth

It is evident there are physical changes in brain structure caused by stress and trauma exposure, and the behavioral manifestations of those diagnosed with PTSD are consistent with these biological changes. The development of neuroimaging technology, particularly the MRI, has allowed doctors and scientists to witness these changes. Stress affects many brain regions and activates autonomic, endocrine, and behavioral responses (Lester, Wong, & Hendren, 2003). Stress begins in the hypothalamus pituitary adrenal (HPA) axis, which communicates with the kidneys to release stress hormones such as cortisol. Cortisol, a stress hormone, is associated with trauma exposure, PTSD, and suicide attempts in adolescence (Carpenter, Shattuck, Tyrka, Geracioti, & Price, 2011; Carrion et al., 2013; Young, 2010) Long term exposure to cortisol impacts the amygdala, which controls the fear response, and the hippocampus, which influences rational thinking and regulates stress response (Carrion et al., 2013; Karl et al., 2006). Cortisol shrinks the brain. The prefrontal cortex, center of rational decision making and impulse control, is smaller in children and adolescents with PTSD. The anterior cingulate cortex (ACC) plays a role in decision-making, other cognitive tasks, emotion, and fear responses. In PTSD patients, the ACC is hyperactive and contains less white matter, which transmits information throughout the brain. A meta-analysis conducted in 2013 revealed a positive correlation between a lack of white matter in the ACC and the severity of PTSD symptoms, suggesting a patient with PTSD is more likely to react emotionally and less liable to reason when upset (Daniels, Lamke, Gaebler, Walter, & Scheel, 2013; Radley, Morilak, Viau, & Campeau, 2015). While further research is needed, it is evident that the biological changes in the brain can cause the kind of problematic behavior seen by the juvenile justice system in juvenile offenders with PTSD.

Impaired cognitive development and processing lead to the symptoms displayed by patients diagnosed with PTSD, which can also lead to delinquent and criminal behavior. Long-term exposure to trauma damages the synaptic connections of the brain, leaving it unable to experience a typical fear reaction, which can cause a patient to display a level of callousness and lack of fear (Allwood, Bell, & Horan, 2011; P. K. Kerig, Bennett, Thompson, & Becker, 2012). This same damage to the brain can also increase aggression (Bradshaw et al., 2009; Evans & Burton, 2013; Shields & Cicchetti, 1998; Stimmel et al., 2014). When a trigger stimulates the “fight or flight” reaction, many will respond with heightened hostility. This behavior will appear as oppositional and defiant behavior (Carpenter et al., 2011; Ford, 2002), rather than a response to a traumatic memory or perceived threat. The damage to the prefrontal cortex is correlated with higher levels of impulsivity, causing more risk-taking and socially undesirable behavior, most notably anger (Contractor, Armour, Wang, Forbes, & Elhai, 2015). This type of behavior can easily involve a juvenile with the law, with charges for property crimes like shoplifting or burglary and violent crimes like aggravated battery or armed robbery. Emotional numbing and avoidance “may serve to dampen youths’ awareness of distressing emotions” (P. K. Kerig et al., 2012; Patricia K. Kerig, Bennett, Chaplo, Modrowski, & McGee, 2016), causing them to engage in risky behavior. Alcohol and other illegal substances may serve to self-medicate these emotions, further involving individuals in the system.

Currents Treatment Trends in Juvenile Corrective Settings

Therapeutic treatments to address trauma and PTSD within the juvenile justice system center around three primary goals: to process trauma, to be able to regulate emotions effectively, and to be able to maintain the progress made in treatment once placed back into the communities. Difficulty with emotional regulation – meaning lack of emotional awareness and clarity, difficulty controlling behavior, difficulty with goal directed behavior, nonacceptance of emotions, and limited access to emotion regulation strategies - are correlated with all PTSD symptoms (Bennett, Modrowski, Chaplo, & Kerig, 2016). Learning to regulate emotions is a critical component for recovering from PTSD (Chaplo, 2015; Contractor, 2015; Ford, 2012; Kerig, 2016; Lansing, 2017). Most of these therapeutic programs are relatively new, but a meta-analysis performed in 2016 indicated that the effect of treating trauma had a success rate more than double that of no treatment (Miller-Graff & Campion, 2016). By studying the success of these programs in detail, developing support for further improvement and customization is possible. The following programs have all been rated as effective by the Office of Juvenile Justice and Delinquency Prevention.

Trauma-focused cognitive behavioral therapy (TF-CBT) is designed to help juveniles and their parents mitigate the negative effects of traumatic life events, such as childhood sexual or physical abuse. TF–CBT aims to treat severe emotional problems such as posttraumatic stress, fear, anxiety, and depression by teaching children and their parent's new skills for processing thoughts and feelings resulting from traumatic events. Research has proven it is effective for various traumas, multiple cultures, and appropriate for juveniles of many ages and stages of development (Cary & McMillen, 2012; Cohen, Deblinger, & Mannarino, 2012; Cohen, Mannarino, & Murray, 2011). Its goal is to provide parents and children with skills to better manage and resolve upsetting thoughts, emotions, and reactions stemming from traumatic life events. By improving the sense of safety, comfort, trust, and growth in the child, and developing parenting skills and family communication, the child will be able to heal from the trauma (Cohen, Mannarino, & Murray, 2011; Murray et al., 2013). By understanding how and why the reaction occurs, a patient can consciously make different choices about how to react. The therapy is typically conducted in a structured setting for eight to twenty-five sessions and ideally involves a parental figure, which does increase the success rate of the therapy (Cohen, Deblinger, & Mannarino, 2012; Cohen et al., 2011). A trained therapist teaches the client a series of 8 components, pacing the treatment to the client's clinical readiness. There are eight steps to this treatment: psychoeducation and parenting skills (P), relaxation (R), affective expression and regulation (A), cognitive coping (C), trauma narrative development and processing (T), in vivo gradual exposure (I), conjoint parent/child sessions (C) and enhancing safety/future development (E) (Cary & McMillen, 2012). This is a specific “brand” of TF-CBT, developed by Cohen, Mannarino, and Deblinger, but multiple variations of the therapy exist, accommodating the needs, culture, and setting of the client.

Prolonged Exposure Therapy (PET) is an individual therapy course that helps clients process traumatic events and reduce the trauma-induced disturbances and symptoms. Its four components are imagined exposure, gradually approaching reminders of the trauma, psychoeducation, and breathing retraining. Inviting the client to revisit the traumatic events while in the safety of a therapist’s office creates an opportunity for the client to realize no actual harm is coming to them, even when they re-experience the event. When a client focuses on breathing techniques and coping skills, they can reduce their symptoms. Treatment typically lasts eight to twelve weeks, and meets once or twice a week. PET has been shown to lessen the severity of PTSD symptoms, as well as depression, anxiety, and trauma-related guilt. It also improved social functioning, built more positive peer relationships, and created a better understanding of the client’s emotional state to increase the recovery rate of PTSD (Bryant et al., 2008; Foa et al., 2005; Friedman, Keane, & Foa, 2000; Gilboa-Schechtman et al., 2010b).

Currently, the most impressive program used for juvenile justice is Trauma Adaptive Recovery Group Education and Therapy (TARGET), created by Julian Ford (J. D. Ford & Russo, 2006). TARGET uses a series of seven steps to enable juveniles and adults to both understand trauma-related reactions and gain control when triggered by the stress of daily life. The therapy explains the symptoms of PTSD as an ingrained biological change in the brain’s alarm and information processing systems. These changes are reversible, and the therapy teaches the client how to mediate their reaction and make better choices when stressed. While the principles for both juveniles and adults are the same, TARGET-A is specifically tailored to adolescents and their developing minds. There is impressive empirical support for this program, including a three-year randomized clinical trial study, funded by the Office of Juvenile Justice, found TARGET was over fifty percent more effective for delinquent teenage girls than a gender specific relational therapy program (J. D. Ford, Chapman, Connor, & Cruise, 2012). Another two-year study, in which both boys and girls in detention were treated with TARGET, had a twenty-two percent reduction in disciplinary incidents and less time in seclusion (J. D. Ford, Steinberg, Hawke, Levine, & Zhang, 2012). A study in Ohio with detained adolescents with comorbid mental illnesses found TARGET reduced the threats by youth and the use of seclusion by nearly fifty percent. The juveniles also reported improvements in their sense of hope and efficacy, a higher rate of mood regulation, a reduction in the symptoms of depression, anxiety, and PTSD, and satisfaction with the services provided (Marrow, Knudsen, Olafson, & Bucher, 2012).

Cognitive Behavioral Intervention for Trauma in Schools (CBITS) is not limited to educational settings but is also applicable to juvenile justice. It is designed for students ages ten to fifteen who have considerable exposure to violence and other traumatic events. The program is tailored to help reduce the symptoms of PTSD, build resilience to stress and trauma, and to increase support systems. CBITSs goal is to develop the skills needed to improve children’s ability to handle stress and trauma they may encounter in the future, incorporating the practices of CBT. Clients practice coping skills to diminish the reaction to anxiety-provoking stimuli, use relaxation and mindfulness techniques to reduce anxiety, and incorporate exposure therapy to process the negative experience(s) (Jaycox et al., 2010; Jaycox, Marshall, & Orlando, 2003; Morsette et al., 2009). CBITS extends over ten group sessions, which use writing, narrative, and imagination-based skills training with age-appropriate examples and games are used to teach new skills. Mental Health for Immigrants Program (MHIP), a variation on this program, involves parents and caregivers into the treatment. Increasing psycho-educational awareness and expertise for the family members allows the children to return to a more supportive environment and teach them the same skills to cope with their stressors (Kataoka et al., 2003; Ngo et al., 2008).

Juvenile Subpopulations and Increased Diagnosis of PTSD

There are some subpopulations of adjudicated juveniles that either experience trauma or PTSD at a higher rate than is typical - even than average youth involved in the criminal justice system. Females experience PTSD at a rate nearly double that of males. Research does not indicate female biology is uniquely susceptible to trauma, but interpersonal trauma and dissociation during the traumatic event lead to higher rates of diagnosis (Bennett, Modrowski, Kerig, & Chaplo, 2015; Carrion & Steiner, 1999; Chaplo, Kerig, Bennett, & Modrowski, 2015). Given the rate of sexual abuse and victimization in juvenile female populations, victimized girls with PTSD inundate the criminal justice system. Queer and gender non-conforming youths are also over-represented in juvenile facilities. A startling forty percent of adjudicated adolescents in female facilities identify as lesbian, bisexual, transgender, or nonbinary (J. Ford, Kerig, Desai, & Feierman, 2016; Graziano & Wagner, 2011). In every area of the criminal justice system, minorities are overrepresented. Based on statistics from 2013, African-American juveniles were four times more likely to be committed than white youths. Similarly, Native Americans were more than three times as likely, and Hispanics were more than sixty percent more likely. Between 2003 and 2013, the total number of arrests and youth in placement have fallen, but the percentage of minority youth involved in the system has risen dramatically (Rovner, 2016). Targeting treatments for these three groups, who have the highest risks and needs, would have the greatest impact on reducing the effects of PTSD and lessen their involvement with the criminal justice system.

Policy Implications

The impact of trauma on America’s adolescents is monumental and often pulls them into the criminal justice system. Researchers have made it clear that these effects can be mitigated and the brain can heal. By focusing our efforts on pre-detention diversion and customized therapeutic interventions, juveniles who might otherwise continue into the adult system can be deflected and become productive, healthy members of society. It is critical to modify policy and fund the necessary mental health treatment for these adolescents.

One of the most effective ways to treat the common comorbidity of mental illness, substance use, and trauma is to treat them comorbidly. By combining treatment, professionals can address all the issues simultaneously affecting the child. The more severe the PTSD symptoms of a patient, the more likely they are to have engaged in substance use, and the fewer interventions specifically for PTSD are to succeed (J. D. Ford, Hawke, Alessi, Ledgerwood, & Petry, 2007; Hawke, Ford, Kaminer, & Burke, 2009). Since PTSD mediates the connection between trauma and mental illness (Kerig, Ward, Vanderzee, & Moeddel, 2009), attempting to treat them separately will result in a lower success rate and higher cost, due to the length of the program and time involved with juvenile justice. Combining psychotropic medications with a therapeutic program has shown promising results. From neuroimaging scans, researchers have discovered medications like SSRIs help the prefrontal cortex regain capacity until it is nearly indistinguishable from a neurotypical brain (Apple, Fonseca, & Kokovay, 2017). SSRIs, which include Zoloft, Prozac, and Paxil, are some of the most widely-studied psychotropic medications available. The projected side effects are minor compared to their relative benefit, and their ability to treat co-occurring disorders such as depression makes them valuable resources within the juvenile justice system. Far from medicating children into compliance, the use of SSRIs promotes healthy brain growth and recovery. When used alongside therapy teaching coping skills and emotional regulation, the adolescent is more likely to retain and use these newfound abilities. With emotional control and the ability to manage stress, the chance of self-medication is reduced, leading to less substance use.

The timing and length of programming are another important consideration and varies from the client, the type of trauma, and their age. Therapists should plan therapy groups based upon the types of trauma and the poly-victimization status of the youths. Structuring groups around cultures and shared backgrounds would provide a cohesive understanding of the kinds of experiences these children have had. This would allow for more connection between the members of the group and assist the therapist in identifying issues that are effecting the majority. Knowing that minority, LGBT+, and female adolescents are overrepresented provides an opportunity to customize therapeutic treatments specifically for these groups. While most of the programs occur in weekly sessions lasting from two to six months, there is some evidence that a shorter program may be effective. A few studies comparing standard treatment to a shorter, more intensive treatment showed similar recovery results (Ehlers et al., 2014; Gilboa-Schechtman et al., 2010a). While the Ehlers study was limited to adults, the majority of whom did not have co-morbid diagnoses or substance use concerns; the Gilboa-Schectman study was specific to adolescence. The possibility of intensive programming for some individuals may prove an effective and cost-saving method for the state. On the other hand, complex PTSD, with more severe symptoms, is harder to address and typically responds less well to treatment (J. D. Ford, 2011; Guez, Hertzanu-Lati, Lev-Wiesel, & Rabin, 2015). Expanding the length of programming for these individuals, especially when they also have other psychiatric illnesses, would give the clients time to better establish a trusting, secure relationship with their therapist and group. By feeling emotionally supported and secure, these adolescents have a better chance to learn new skills and put them to use (Mulay, Kelly, & Cain, 2017).

When adolescents are incarcerated in a secure facility, they are exposed to a group of other offenders, in an unfamiliar place, with little freedom or choice about their daily actions. For a child with PTSD, this lack of control and constant exposure to triggering situations can be anxiety-provoking and worsen their symptoms. Community supervision, whenever possible, should be offered instead of incarceration, which is itself traumatizing. This cannot be a solution for all offenders but it should be the primary response to juvenile offending. Once incarcerated, little can be done to change the physical environment, but having continuity of the treatment principles allows adolescents to develop their skills and see their potential use. The staff is critical for this development. They must be invested in the culture of change, trauma-sensitivity, and compassion even when dealing with unruly and sometimes violent youth. Training, on-going education, and even exposure to the type of therapies can help the staff learn to communicate in a calm, non-threatening way. Unless the correctional staff demonstrates the kind of behavior taught in treatment programs, the adolescents will have a challenging time adhering to the treatment principles. The staff must also use coping skills and emotional regulation when dealing with the stress of their job. Many of these youths come from dysfunctional families and communities and have not had the benefit of watching healthy human interaction on a regular basis. The correctional staff can and should be a vital member of the therapeutic team.

For those youths with involved families, providing education and exposing them to the same therapeutic principles will further ingrain new habits into the adolescent. Treating the whole family raises success rates, and the attitudes of the primary caregiver directly impact how well the child recovers. Helping a family establish fair and consistent discipline, positive relationships with caregivers, and direction toward prosocial activities and peers can reduce their mental health needs and delinquent behaviors (Chamberlain, Leve, & DeGarmo, 2007, Chamberlain et al., 2011). For adolescents under community supervision, providing family therapy can raise the efficacy of treatment for PTSD. In detention facilities, involving the family by encouraging visitation and other communication, can provide support and motivation for the juvenile to invest in their therapy and utilize its principles. Unfortunately, many youths do not have supportive families. Communities groups and concerned stakeholders need to interact with correctional facilities and promote prosocial bonds with adjudicated youth. For children in state care, Trauma-Adapted Multidimensional Treatment Foster Care (TA-MTFC) offers an opportunity to place a child in a supportive environment capable of handling their unique behavioral and mental health needs (Leve, Fisher, & Chamberlain, 2009).

Trauma is underlying connection for most of the youths involved with the criminal justice system. Providing therapeutic interventions throughout the adjudication process has the potential to help them heal from their previous trauma and prevent future potentially traumatizing sanctions. An investment in the training of law enforcement, courts, correctional officers, and other staff that works with these children is an investment in the behavioral and mental health of the next generation. Stakeholders and policymakers must be willing to invest both time and money into these programs, creating even more effective trauma-based therapeutic interventions. When the entire criminal justice system thoroughly addresses trauma, youths and their families, public safety officials, and even entire communities can become safer and healthier.

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