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# Trauma and Mental Health: The Development, Treatment, and Future of

John Anthony Wheeler  
*Portland State University*

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Trauma and Mental Health: The Development, Treatment, and Future of

by

John Anthony Wheeler

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Jonny Giebar

Portland State University

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*Abstract*

Trauma seems to be an integral part of any given society. When most people think of psychological trauma, soldiers who were engaged in battle during wartime are most often what comes to mind. However, most trauma occurs in before an individual reaches adulthood. Research has shown that dysfunction results from exposure to trauma at any given point across the lifespan. Children who suffer from trauma often grow up to be adults with psychological dysfunction, passing on this dysfunction to the next generation. The objective of this paper is to identify some of these other areas of traumatic exposure and understand how these influential factors can result in mental health disorders. This will be followed by an exploration of these disorders and various treatment interventions. We will then conclude with a personal analysis in regard to the direction we seem to be headed as a society, and where we could be headed.

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### Introduction

Trauma is one of the largest correlating factors with mental health disorders (Digitale, 2011). Trauma is connected to post-traumatic stress disorder, chemical dependency, and many other mental health conditions. The complexity and integration, with regard to the relationship between trauma and mental health, leaves a gaping hole that professionals and academics are rapidly working to fill. Therefore, it is extremely important that anyone desiring to enter the mental health field become educated on how trauma affects mental health. This paper hopes to identify some of the most common factors associated with the development of trauma and look at how we can address those concerns in the most effective manner. There are still many factors, and interactions, that have yet to be addressed and explored. The job of academics is to explore the current trends and find areas that will most benefit from further research.

### Methods

A comprehensive literature review was constructed in order to address the relationship between trauma and mental health disorders. Each area was specifically targeted in order to obtain information explicit to those areas. We looked at the different types of trauma to identify how each influences different mental health conditions. This was followed by analysis of literature from articles that explored these mental health disorders, their relationship with trauma, and the methods of treatment that showed the most effective results. We drew from all works that were included in the review to form a personal analysis of the direction we are headed in as a society, and where we could possibly be headed. This included a brief examination of areas that future studies might choose for treatment options with limited research completed. The

intent is to understand the development of trauma, explore how it is related to mental health disorders, recognize some of the most beneficial treatment options, and identify reasons why this area of concern should be important to all of us. This author believes that the scope of current research has yet to uncover methods for treatment that are only recently an area of focus, and have yet to demonstrate their full potential.

### *Trans-generational Trauma*

In the late 1800's psychoanalysts first discovered that neuroticism could be transferred from a parent to the child. In 1961, William Neiderland coined the term "Survivor Syndrome" in reference to the effects of the trauma suffered by holocaust victims. In 1968, Max Rakoff, and a group of his colleagues, explored the intergenerational effects on the descendants of holocaust victims. It was not until the year 2000 that empirical data on trans-generational trauma began to be taken seriously (Portney, 2003).

Trans-generational trauma affects millions of individuals who may not even be aware of conditions influencing their thinking patterns and behaviors. According to Harper (2005) certain environmental stimuli will allow transcription of specific DNA segments which are then carried along to offspring. Some of these genetic segments are triggered by traumatic events. The trauma suffered by an individual will then be carried on to future descendants, who could be unaware of the original trauma that was suffered by the ancestor (Harper, 2005). Descendants of slavery, holocaust victims, and Native Americans whose ancestors were submitted to colonization are just a few examples of individuals who suffer from trans-generational trauma (Fonagy, 1999; Myhra, 2011; Weingarten, 2004).

A recent discussion with a small group of Native Americans revealed that, among those questioned, there were none who were willing to explore the possibility that some of their current circumstances were due to trans-generational trauma that their ancestors had suffered during colonization of the Americas. This raises the question of how to address a condition whose onset is influenced by factors that individuals are unwilling to recognize. It is apparent that a push for education is necessary to inform society about the effects of trans-generational trauma.

### Prenatal Trauma

Studies have consistently shown that prenatal stimulation has an effect on neonatal development (Gonzalez-Gonzalez et al, 2006; Hepper, 1996; Kolata, 1984; Van Heteren et al, 2000). This demonstrates that memories that develop in the womb can influence development of infants through to adulthood. When these stimuli are traumatic it can result in significant impairment of development over the lifespan. It has been found that prenatal fetuses who are exposed to trauma are more likely to develop trauma related disorders, such as PTSD, as adolescents or young adults (“*About Early Trauma*”, n.d.; Perry, 1999; Schore, 2001). These factors raise additional concerns for pregnant women living in stressful and/or abusive situations.

The development of children, from the fetal stage through young adulthood, is vital to a pro-social, functional, healthy life for all individuals. There is never any guarantee that any child will turn out to be a psychologically stable adult, but the more factors we can address, and the earlier we can address those factors, the more we increase the probability of success over the lifespan of the individual (Creedy, Shochet, & Horsfall, 2000). Reducing and/or intervening with regard to trauma is a huge step in reducing risk factors for children while they are still developing cognitively.

A.C.E.'s (Adverse Childhood Experiences)

A study completed in 1998 took a deep look at how dysfunction in the home of a young child affects their development. The study, The Adverse Childhood Experiences Study (A.C.E.), took into account a range of factors that appeared to have a negative influence on development and adult behavior patterns (Felliti et al, 1998). In 2007, a team of experts narrowed the results of this study, using specific criteria to examine the long-term consequences of A.C.E.'s on development of children into adulthood, and how they affect physical and mental health (Springer, Sheridan, Kuo, & Carnes, 2007). They interviewed victims of reported childhood trauma to discover what outcomes resulted up to 40 years later. Although the study reviewed physical effects as well, for the purposes of this paper we will limit our aspects to psychological impacts.

The first category was physical abuse. They underscored types of physical abuse and rated the severity, on a scale from 0 (None) to 3 (A lot), by personal evaluation. They also looked at the mental health status of subjects. Three main areas were considered: Depression, anxiety, and anger. Under the category of family background Springer and colleagues (2007) looked at six influential factors: "Six indicators of family background were used: mother's education (years), father's education (years), parental income (log transformed), father's occupational standing (occupational education scores [Hauser & Warren, 1997]), number of siblings, and farm background." This helps define the socio-economic status (SES) of the household the child is/was raised in. In order to identify the impact of adverse experiences, Springer and colleagues (2007) also explored parental drinking patterns, marital problems, parental violence, and whether the child grew up with both parents until age 16 or in a broken home. The results demonstrated that long term, negative effects significantly increase for



individuals who suffered from even one of these categories when compared to the control group. When multiple factors were introduced the severity and occurrence rose significantly. Springer and his team were able to identify very clear relationships between A.C.E.'s and adult mental health issues (Springer, Sheridan, Kuo, & Carnes, 2007).

### *Child & Adolescent Trauma 1: Violence*

History tells us that violence creates many psychological dysfunctions that can lead to disorders. The pattern appears to be repetitive and generational (Cohen, 1998). This outcome results, mainly, from exposure to violence in the home for most adolescents (Herrenkohl, Tajima, Herrenkohl, & Moylan, 2008). Domestic violence and child abuse are directly correlated with many mental health disorders such as; Post Traumatic Stress Disorder (PTSD), Acute Stress Disorder (ASD), Anxiety Disorder, Panic Disorder, and Anti-Social Personality Disorder. Children and adolescents who are exposed to violent surroundings in the home often display early precursors to these disorders (Cohen, 1998; Herrenkohl, Tajima, Herrenkohl, & Moylan, 2008; Levendosky, Huth-Bocks, & Semel, 2002). Given the proper education and training, professional clinicians can identify some of these precursors and limit their impact prior to adulthood when they can mature into more severe outcomes. Mental health professionals should be prepared for both scenarios and able to provide the most effective treatment for the individuals they work with (Baingana, Al'Absi, Becker, & Pringle, 2015).

### *Child & Adolescent Trauma 2: Sexual Abuse*

Sexual abuse has been around as long as mankind has been able to commit this horrendous crime. It was not until the last half of the 1900's that it began to be openly discussed and since then reported cases have been well documented. An average of 63,000 cases per year

have had substantiated claims since 2009 in the U.S. The consequences these victims suffer from continue throughout their lifetime and often create a generational pattern (Children and Teens: Statistics, n.d.; Perou et al, 2013; Barth, Bermetz, Heim, Trelle, & Tonia, 2013; Child Abuse and Neglect Statistics, n.d.).

When we look at some of the results of these cases we can see that the endured trauma can lead to suicide, depression, poor self-esteem, self-blaming, sexual misconduct, social isolation and poor relationship skills (Perou et al, 2013; Barth, Bermetz, Heim, Trelle, & Tonia, 2013; Fergusson, McLeod, & Horwood, 2013). It is difficult to overcome many of these obstacles and awareness is the first step to combatting this ongoing problem. Legislation has continued over the past half a century to consistently improve the ability for external intervention. Government programs have been established, such as Child Protective Services, to offer education to those who suffer, and to those who commit these crimes (Fergusson, McLeod, & Horwood, 2013; Children and Teens: Statistics, n.d.; Child Abuse and Neglect Statistics, n.d.). However, budget issues over the past decade have left many of these programs understaffed and with enormous caseloads. The 2017 federal budget has plans to supplement some of these programs, but our society may have to start prioritizing our government expenditures in order to effectively address this ongoing problem (President Fiscal Year 2017 Budget Request, 2016).

### Child & Adolescent Trauma 3: Bullying

Bullying has always been a problem that children and adolescents have had to contend with. It's only been the past several decades that this issue has been addressed on a societal level (Troy & Sroufe, 1987). We now know that bullying has severe psychological consequences for not only the victim, but the victimizer. Victims often have feelings of depression, poor self-esteem, and inferiority. The victimizers see their behavior as the societal norm for dominance

and have feelings of impulsivity and a lack of self-control (Björkqvist, Ekman, & Lagerspetz, 1982; Finkelhor & Browne, 1985). The former can lead to poor social skills as an adult, anxiety, depression, self-harm or suicidality (Björkqvist, Ekman, & Lagerspetz, 1982; Finkelhor & Browne, 1985; Lereya, Copeland, Costello, & Wolke, 2015). The latter can lead to a lack of empathy, antisocial personality disorder, a disregard for the consequences of one's actions, and criminal behavior (López-Pérez, Hanoch, Holt, & Gummerum, 2015; Klomek, Sourander, & Elonheimo, 2015). This demonstrates that the effects of bullying can result in maladaptive behavior cycles that leave society the price tag of having to repair psychological, and financial, burdens that could be alleviated with early intervention/education. This again comes back to where we place our priorities as a society.

One facet of bullying has only recently come to light. Cyberbullying has risen with the advent of social media, blogs, and other internet resources (Hinduja & Patchin, 1998; Sternberg & Lubart, 1992; Topping & Whiteley, 1993). The factor of not facing the victim face-to-face allows individuals who may not otherwise engage in bullying behavior, to disengage themselves from the empathy that would prevent these attacks under other circumstances. The freedom from negative reinforcement through observation of the outcomes of one's actions, allows one to bully another individual while never exposing one's self to the effects it has on other people (Smith et al, 2008; Patchin & Hinduja, 2006; Willard, 2007). A surge in cyberbullying occurred when social media software applications, such as Facebook®, were presented on the internet. Not only did the occurrence of bullying increase, but the severity of the bullying augmented, and the counter-bullying, elevated as well. There has not been sufficient longitudinal studies completed to identify the long-term effects from cyberbullying, but we can surmise that they

would most likely follow the trends of other types of bullying (Whittaker & Kowalski, 2015; DeHue, Bolman, & Völlink, 2008; Bastiaensens et al, 2015).

### Rat Park: Social Isolation

B.F. Skinner completed a series of experiments from 1938-1966 where rats were given the choice of pushing a lever to self-administer morphine directly to or push another lever to obtain food. The self-administration of the drug elevated while the food choice was slowly self-titrated. This is due to the activation of the reward center of the brain when the drugs were taken outweighing the reward of the food. Skinner maintained that this demonstrated the subject's increased reward pathway led to its addiction (McLeod, 2007).

In 2010 a study was completed to identify the effects of long term isolation on rats. The study, titled "Addiction: The view from Rat Park", was completed by Bruce K. Alexander, an emeritus professor at Simon Fraser University in British Columbia. The study examined the behavior of rats both in isolation, and in social groups, and their desire for drugs vs. food when given a choice between the two. Much like Skinner's results, the rats in captivity preferred the self-administration of morphine to the food. However, the rats who were maintained in a social environment did not exhibit the same behavior. They appeared to prefer significantly lower amounts of the drug to the food and even kept themselves from developing addictive behavior patterns. Alexander's claim was that social interaction promotes more pro-social behaviors while social isolation has a correlation with maladaptive behaviors (Alexander, 2010)

When we look at these two studies combined we can see that social isolation seems to play a role in maladaptive behavior patterns. Skinner's experiment showed that rats preferred to self-administer the drug rather than obtain food. The one thing Skinner overlooked was that all

of his rats were kept in standard “Skinner Boxes” which keep the subjects isolated. Alexander accounted for this confounding factor by using a control group that was kept in a social environment. There is still controversy regarding Alexander’s study as the results have not been able to be replicated by an outside source. We hope to see future studies that will clarify this aspect and discover what seems to be influencing the results.

### *Trauma Related Disorders: PTSD*

Among trauma related disorders, PTSD appears to be the most common. There is arguments made that misdiagnosis may account for a portion of the statistics and could skew the results (Zoladz & Diamond, 2016). For the purposes of this paper we will accept the current outcomes and refer to PTSD as the leading trauma related disorder.

PTSD results from many forms of trauma. Exposure to violence, sexual abuse, physical abuse, emotional abuse and even visual stimuli exhibiting these situations, have all been shown to have a direct relationship with diagnoses of PTSD, although these do not cover all predictors for the disorder. Any exposure to a traumatic event can trigger an onset of PTSD and the measure is very individualized. What one person sees as traumatic may mean nothing to another individual (Breslau, Chilcoat, Kessler, & Davis, 1999; Hinton & Good, 2015).

For those suffering from PTSD, life can be very difficult to manage. Repeated episodes of reliving the traumatic experience can be triggered by smells, sounds, words, or the actions of another individual with no ill intentions. This creates a barrier to relationships, difficulties with employment and feelings of self-doubt and low self-worth. Often times the individual never seeks treatment for the disorder for reasons such as; self-blame, fear of exposing themselves, and doubt that there are effective treatment options(Lightstone, Bailey, & Voros, 2015; Kim & Yu,

2015; Scheiderer et al, 2016; Gazarini, et al, 2015). Some of the treatment options include music therapy (Lightstone, Bailey, & Voros, 2015), physical therapy (Kim & Yu, 2015), dialectical behavioral therapy (DBT) (Scheiderer et al, 2016), and pharmacological interventions (Gazarini, et al, 2015).

Music therapy is relatively new in the treatment of PTSD. Music is a personal experience and as such can be tailored to each individual. Music is also an easily accessible medium. Clapping of hands, tapping pencils, and various other methods can be used to produce a musical pattern that activates both hemispheres of the brain simultaneously. When both hemispheres of the brain are activated, it is extremely difficult for the individual to fail to be present in the moment. As PTSD creates a mental situation of reliving the original traumatic event, staying in the present alleviates a significant amount of the discomfort from the disorder. Repeated sessions, in a safe environment, has demonstrated successful outcomes for some individuals suffering from PTSD (Miller, & Teramoto, 2016; Lightstone, Bailey, & Voros, 2015)

Physical therapy has been widely used in the treatment of PTSD. By introducing physical stimuli, the body remains actively sending signals to the sensory motor cortex. This allows the individual to focus on the input they are receiving from their current environment, limiting the false stimuli produced from the past event. Much like music therapy, physical therapy keeps the person occupied with the “now” instead of the “then”. Research has provided empirical evidence to support its efficacy (Kim & Yu, 2015; Lobo, Harbourne, Dusing & McCoy, 2013).

DBT gets many of its concepts from eastern philosophies. These concepts focus on centering the mind and body. By using techniques and skills from meditation to breathing exercises, individuals learn to ground themselves in the present moment. Relaxation techniques

provide them with the tools to retain an emotional homeostasis that helps prevent irregularities caused by PTSD episodes. DBT has been found to have significant results with regulating the emotional state associated with many symptoms of PTSD (Scheiderer et al, 2016; Bohus et al, 2013).

Pharmacological interventions have remained at the forefront of treatments for PTSD. Many mental health professionals rely on those who are able to prescribe medications to form an integrated approach using both medication and other therapeutic approaches to treat individuals suffering from the disorder. Antidepressants, mood stabilizers and benzodiazepines are the most common medications prescribed for the treatment of PTSD. By using medications to assist with symptom regulation, combined with the aforementioned therapeutic interventions, the individual demonstrates an increase in daily functionality in order to normalize their lives (Gazarini, et al, 2015; Jonas et al, 2013).

#### *Trauma Related Disorders: Acute Stress Disorder (ASD)*

ASD is much the same as PTSD with the exception of duration. ASD appears only within the first month following the traumatic event. After the first month the patient would be reassessed for PTSD should symptoms persist or resurface (PTSD: National Center for PTSD, n.d.). Cognitive behavioral therapy (CBT) has shown to be an effective treatment for ASD and has also demonstrated a significant decrease in the development of PTSD from ASD in clinical trials (Shalev et al, 2012; Friedman, 2015). Pharmacological treatments have also demonstrated to be effective in the treatment of ASD (Sijbrandij et al, 2015; Friedman, 2015).

#### *Depression*

Clinical depression is not the same as just being depressed. An individual must exhibit symptoms that persist for at least two weeks and must also interfere with daily functioning in order to qualify for a clinical diagnosis for depression (Depression, n.d.; American Psychiatric Association, 2013). Although the exact role of trauma in depression is blurred, it is apparent that it has an influence. Insecure attachment appears to have an increased occurrence in trauma victims and also seems to correlate with an increase in the development of depression. When we look closer at the role of attachment the pattern seems to suggest that the exposure to trauma results in the insecure attachment which then leads to depression (Fowler, Allen, Oldham & Frueh, 2013; Hornung & Heim, 2015). Some of the most common treatments for depression include interpersonal neurobiology (IPNB), CBT, antidepressant medications, and in extreme cases electroconvulsive therapy may be used (Depression, n.d.; Robinson, 2013).

IPNB is a more recent approach and has demonstrated significant effectiveness in a large portion of individuals. Unfortunately, this approach has a shorter history and studies on its effectiveness are limited at this point in time (Seigel, n.d.; Ogden & Fisher, 2015).

The approach of using CBT as a psychotherapy has a longer history and, therefore, has more empirical data to support its effectiveness. Studies have shown that with long term treatment, CBT can have a substantial impact on combatting the symptoms of depression in trauma victims (French et al, 2016; Hundt, Mignogna, Underhill & Cully, 2013).

Pharmacological interventions include the use of selective serotonin reuptake inhibitors (SSRI's), serotonin and norepinephrine reuptake inhibitors (SNRI's), and tricyclic antidepressants (TCA's). Their effectiveness has been demonstrated to be significant, especially when combined with psychotherapeutic approaches (Fournier et al, 2015; Cuijpers et al, 2014).



ECT is a “last resort” intervention and techniques have improved greatly since the 1970’s where movie portrayals showed patients convulsing, strapped to a chair with paddles used on each temple. Subjects who demonstrate resistance, or no response, to other treatment methods may respond to modern methods of ECT with significant results (Perrin et al, 2012; Loo et al, 2014). It should be noted that, although empirical evidence is limited, transcranial magnetic stimulation (TMS) has recently been shown to have similar, or even more significant results than ECT and appears to be less intrusive (Sahlem et al, 2016).

### *Anxiety Disorders*

The relationship between trauma and anxiety disorders are more “fuzzy” than with previous conditions mentioned. However, it is still worth mentioning as this remains an area of concern for mental health patients and professionals. For the purposes of this paper we will limit our scope to anxiety disorders in general.

Anxiety is a common symptom with patients who suffer from trauma. However, anxiety disorders have a more specific set of criteria that is often blurred with trauma related disorders. More often than not, professionals will side with a diagnosis of a trauma related disorder and disregard anxiety disorders as redundant or not beneficial to the patient. From a clinical standpoint this makes the most sense, although it would be helpful to consider this area when coordinating treatment and exploring options. There are also instances where a diagnosis of a trauma related disorder would be inappropriate and the patient would benefit from a diagnosis of an anxiety disorder instead (Emotional and Psychological Trauma, n.d.; Beidel, Bulik, & Stanley, 2010).

Anxiety disorders can impair daily functionality for patients. An episode can affect work performance, relationships, or even the ability to perform daily tasks. Some of the treatments for anxiety disorders include CBT, DBT and pharmacological interventions (Anxiety Disorders, n.d.).

CBT treatment for anxiety disorders focuses on identifying the belief system, thought process, and emotional response, to events causing the episodes, and slowly exposing the individual to these stimuli in a safe environment. By incrementally desensitizing the individual to these stimuli, the impact lessens over time. The sessions mainly consist of having the patient discuss events that trigger episodes to a point where discomfort occurs. With each session the discomfort lessens and the individual is able to explore deeper into the triggering context. The individual is then able to replace maladaptive behaviors with adaptive ones (CBT for Anxiety and Depressive Disorders, n.d.; Otte, 2011).

Anxiety is exhibited through fear and avoidance. DBT is a treatment intervention that focuses on relaxation and centering. Using skills that refine the ability to maintain an equilibrium of emotional regulation, individuals become able to overcome their fears, remain calm, and cope with the presence of anxiety creating stimuli. DBT has demonstrated its effectiveness in dealing with these stressors for many individuals who suffer from anxiety disorders. These people are able to increase their daily functioning to a sustainable level (Baer, 2015; How Dialectical Behavior Therapy Works to Treat Anxiety and Depression, n.d.).

Pharmacological interventions have been proven to benefit patients when combined with psychotherapy and on their own. However, when used in concordance with psychotherapy models they have a greater effect for long term maintenance of the disorder. Effectiveness has significantly demonstrated a return to a functional daily state. By influencing brain activity of

specific neurotransmitters, the individual is able to cope with their fears and stressors in order to lead a productive life. Commonly prescribed medications are SSRI's, SNRI's, TCA's, and benzodiazepines (Medication, n.d.; Mayo-Wilson et al, 2014).

### *Chemical Dependency*

People who suffer from traumatic events often self-medicate. Self-medication is not regulated by a physician and dosage levels are not safely monitored. This can lead to chemical dependency. The individual usually finds themselves dependent on the substance after the fact and then requires professional assistance to return to, and maintain, a healthy lifestyle (The Use of Alcohol and Drugs to Self-Medicate Symptoms of Post-Traumatic Stress Disorder, n.d.; Sheerin et al, 2016). Common treatments for chemical dependency include detoxification, medication assistance, and psychotherapy.

Detoxification is a straight-forward treatment option. The goal is to place the patient into a safe environment while they go through the withdrawals from the substance. This approach is commonly used to help people eliminate the substance from their body and usually only applies to opiates, alcohol, stimulants or prescription medications. Detoxification only deals with the immediate issue of dependency on the substance and on its own usually has a low success rate for long term abstinence. However, when used in conjunction with psychotherapy the success rate significantly increases (Virta & Tähtinen, 2014; Beidel, Bulik & Stanley, 2010).

Medically assisted drug treatment has a societal stigma associated with the approach. What is seen by society is the large numbers of participants who are not fully engaged with services. From a personal perspective, as a former alcohol and drug counselor in a medically assisted program, this is a direct result of corporations who own these facilities. Unfortunately

their focus appears to be on retention rates and profits rather than success for patients. This is not to say that all facilities are the same, however the vast majority have a high turnover of counselors who either get burned out, or they move on to positions in more prestigious facilities. When an educated counselor is present for their patients, success rates appear to significantly increase (Personal testimony).

Psychotherapy for chemical dependency is extremely diverse. Approaches include CBT, DBT, Person-Centered, Psychoanalytic, Humanistic, Motivational Interviewing, and many others. The main objective is to maintain a therapeutic relationship with the patient while developing intrinsic motivation to change. Once the client has developed intrinsic motivation the professional can introduce differing techniques to learn pro-social skills for everyday life. The treatment is extremely individualized and the clinician must adapt to the patient as progress is made, or setbacks occur. When the individual is successful at developing skills to maintain a substance free lifestyle, it is often suggested that they continue with a plan of maintenance that will have them keeping themselves accountable (Watson et al, 2015; Substance Abuse and Mental Health, n.d.).

### Conclusion

Trauma is a very important consideration with regard to mental health. If we are ever to change the succession of dysfunction resulting from generation after generation of trauma, we need to start addressing the issues with an aggressive plan. Transgenerational trauma sets individuals up for unseen challenges prior to conception. After conception some of these same individuals are exposed to prenatal trauma. Some of those will go on to experience trauma throughout their childhoods. Another group out of that population will experience trauma throughout their development to adulthood. Their children, being conceived with these same

influential factors, will be exposed to the resulting dysfunction and the cycle continues. The pattern would suggest that the effects would amplify with each new generation.

Some of the latest advances we have made show great promise. IPNB, TMS, integrated services, and many that were, and were not, mentioned in this paper. We only need to expand on the results we have seen and continue research into these areas in order to identify what factors contribute to the efficacy with specific treatment models. We know there are solutions out there, and we know we have only touched on the very edge of the knowledge we have to gain. We have solutions at our disposal, but the success rates, while significant, do not appear to be impeding the rapid growth of the occurrence of mental health disorders. A short blog cites seven articles that all draw the same conclusion that mental health disorders have increased significantly over the past 50 years in the U.S. (*Are Mental Health Issues On the Rise?*, n.d.). Any prudent stock broker will tell you that you will get a payout only from what you invest in. We, as a society, need to look at our priorities as to what we want to invest our resources into. If we continue to make weapons and prisons our major investment, we will get a payout of wars and criminals. We have seen this trend with our own eyes over the past decades and it validates this concept. If we truly want to increase the well-being of our country, and its citizens, we need to start making that our priority. It is each one of our responsibilities to leave this world a better place than how we entered it. We can only make that happen if we shift our current focus from punitive to encouragement. These individuals, suffering from mental health conditions they had no control over, have the ability to become pro-social, contributory members of our society. I, personally, believe they deserve the opportunity to reach their full potential.

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