How post traumatic stress affects child development

Post- traumatic stress is defined as, " a condition of persistent mental and emotional stress occurring as a result of injury or severe psychological shock, typically involving disturbance of sleep and constant vivid recall of the experience, with dulled responses to others and to the outside world," it occurs in 20-30% of children (Meentken, 2017). " More than two thirds of children reported at least 1 traumatic event by 16 years of age, with 13. 4% of those children developing some PTS symptoms" (Copeland, 2007). There are five main types of post -traumatic stress disorder. " Normal stress response; which occurs when exposed to a single discrete traumatic event which result in intense bad memories, emotional numbing, cut off from relationships, distress but recovers within a few weeks. Acute stress disorder is panic reactions, mental confusion, and severe insomnia, unable to manage basic self- care, work, and relationships. Uncomplicated PTSD is persistent re-experiencing of the traumatic event, emotional numbing, and increased arousal. Comorbid PTSD is comorbid with other psychiatric disorders. Is associated with at least one other major psychiatric disorder such as depression, alcohol abuse, panic, or anxiety disorder. Lastly, Complex PTSD can be calleddisorder of extreme stress" this is found in individuals who have been exposed to prolonged traumatic circumstances especially during childhood such as sexual abuse, or physical abuse". These individuals often are diagnosed with borderline or antisocial personality disorders such as impulsivity, aggression, acting out, eating disorders" (Grohol, 2016). Complex PTSD is most common in childhood and pertains to parts of the

brain, which in turn affect child development. This review will focus on complex PTSD.

A study was done on the correlation between complex PTSD from child abuse, and the effects it has on the brain. Kathleen Thomaes experiment was to show, “ Classic posttraumatic stress disorder (PTSD) is associated with smaller hippocampus, amygdala, and anterior cingulate cortex (ACC) volumes”. Before we get into the study there are two sides to the brain the left hemisphere and the right hemisphere, the left side of the brain has to do with math, logic, language, reasoning and science, the right side of the brain focuses on art, creativity, music, intuition but the right side of the brain controls the left side of the body and the left side of the brain controls the right side of the body. The hippocampus is located in the medial temporal lobe of the brain and is the centre for emotion, memory, autonomic nervous system, short and long-term memory (Cherry, 2017). Now that we know what the hippocampus does and where it is located in the brain we can examine into Kathleen Thomaes experiment with complex PTSD and child abuse. The objective was to prove complex PTSD is associated with smaller hippocampus and amygdala (set of neurons processing emotions). During this experience she found that not only did child abuse complex PTSD affect the hippocampus and amygdala but after the experiment between the children that were abused and the ones that weren’t she found the ones suffering complex PTSD also had higher anger. Since reviewing many different experiments and articles we can conclude that complex PTSD has negative affects on the brain resulting in affects in child development.

Memory

During childhood our memory should get better and be able to remember more things, more accurately. With complex PTSD children’s memory and

brain development can be affected. If research has shown in PTSD children the hippocampus is smaller which controls short and long term memory we can conclude that it will negatively affect a child's ability to recall or remember certain event, situations or things accurately. It is also crucial to recognize that if a child experienced physical abuse, sexual abuse or any traumatic event for that matter even divorce depending on the severity, which developed into PTSD. These children will try and forget the event or traumatic situation they were in. They can push that memory so far away that their brain may actually erase it or recall it differently then it actually happened. This happens because our brains, especially a child's brain are developed to tolerate a max threshold of stress. When a traumatic situation happens that stress level is more then the child can handle and will actually send them into fight, flight or freeze mode.

Getting into the fight, flight or freeze mode and how this impacts a child's brain and memory is astonishing. When the body gets put into this high level of

stress mode it has three options. During this time the body produces hormones that overwhelm the brain, cortisol, adrenaline, and norepinephrine (Harvard Medical School, 2018). These hormones are good in danger but in an event that causes trauma these hormones can remain in the body, which can negatively effect normal functioning. In children, they maybe irritable, unable to sleep, inattentive (Tull, 2018). One example, " Southwick et al. asked Desert Storm veterans at 1 month and 2 years after their return from service, whether certain events occurred during that service (e. g., experiencing sniper fire, sitting with a dying colleague). They found 88% of

veterans changed their response to at least one event and 61% changed more than one. Importantly, the majority of those changes were from “ no, that did not happen to me” to “ yes, that happened to me.” Not surprisingly, this ‘ over-remembering’ was associated with an increase in PTSD symptoms, (Lents, 2016) people tend to remember experiencing even more trauma than they actually did.

Both of these theories show evidence that complex PTSD can negatively impact the brains memory whether that is distortion, loss of memory, or decrease in hippocampus of the brain due to complex PTSD they all arrive at the same conclusion.

Social and Emotional

Complex PTSD can play a huge role in the developing brain of a child with regards to social and emotional development and learning. If a child has suffered a trauma in his or her life this is impacting social and emotional development, why? When put into a stressful situation adrenaline, cortisol fill the body, our bodies use food to burn energy and we also burn energy learning, but if the body is thrown into a stressful situation larger then the individual can handle those hormones consume the body and brain, in order to deal with the stressor the body now uses energy to help calm the body down to get back to homeostasis. Before this happens the heart starts racing, blood pressure rises. If the body is using energy to deal with this stressor the body is unable to use energy to learn or focus on other important things going on which in turn effects social and emotional development. Having PTSD after a trauma can make an individual uneasy,

isolated, not in the right mind-set to help others, have empathy or participate in relationship skills, self- awareness or self- management. Complex PTSD can make it very difficult for a child to carry on with normal routines, and participate socially. It can take a traumatic toll on their emotional state, which is why it is important for children to have extensive support and love during this time and thereafter.

Physical and verbal abuse is going to affect a child's social and emotional development greatly. If a child was physically or verbally abused and is suffering PTSD, they are going to be afraid, withdrawn in certain situations. Low self-esteem if they were being called stupid, dumb, and waste of space; words like this can destroy a person and for a child totally diminish their self-esteem. Lets define traumatic stressor and complex stress to understand deeper. " Traumatic stressor, any event that may cause or threaten death, serious injury, or sexual violence to an individual, a close family member, or a close friend, Complex Traumaan exposure to multiple traumatic events, often of an invasive, interpersonal nature, and the wide-ranging, long term impacts of the exposure" (American Psychiatric Association, 2013). In 2012 1, 640 children died from abuse or neglect, 80. 3% were from parents that children experienced PTSD (Mance, 2017). If 80. 3% of the reason for PTSD in children is parents, how are children going to feel close or trust adults? Children are going to fear adults and not have trust, which is going to impact both their social and emotional development, especially in regards to relationship building and trust.

Learning and Concentration

Children with PTSD can suffer from lack of concentration, some may be unable to pay attention thus unable to learn material and have trouble in school. Trauma that cause PTSD in children are; serious accidents, invasive medical procedures, dog bites (child may fear dogs), natural disasters, violent personal attacks, physical abuse, sexual assault, sexual emotional abuse, bullying, neglect (Packard, 2018). These are just some of the trauma’s that can cause PTSD in young children. When children experience trauma

like this the symptoms they face have a vast majority that pertain to the brain and learning and concentration. Children can have sleep disturbances, become depressed, become easily startled, lose interest in things they once enjoyed, become aggressive, irritable, avoid places or situations that bring back memories, difficultly concentration, worrying of dying, headaches, stomach pains (Packard, 2018). Symptoms such as sleep disturbances, and irratiblilty can cause huge concentration and learning problems for children. If there frontal lobe is always concentrating on the memory replaying it over and over and trying to avoid places or events that may remember it the brain is using so much of its energy on this stress. If children cannot sleep because of PTSD they are not going to be able to function and concentration at school. Children need an average of 10 hours of sleep each night to be able to function properly. Children may have problems forming secure attachment to teachers or others, avoiding asking questions or for help. Children with PTSD have a hard time concentrating and learning in school, the educators can help with this by building trust with these individual and being patient and understanding.

In conclusion reach and many different articles prove traumatic stress affects child development in many different ways including; difficulties with memory, harder time reaching social and emotional developing, regulating own emotions and lastly can take a toll on difficulty with concentrating and learning in school. There are many different kinds of PTSD, but children with complex PTSD went through a very traumatic event and thus in turn will affect some brain development.

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