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The Role of Environmental Stressors Experienced During Childhood in the Development of Dissociative Identity Disorder

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ABSTRACT

The purpose of this research was to determine how environmental stressors that occur during the early childhood years can lead to the development of Dissociative Identity Disorder (DID) and diagnosis in the adult years. Over the years, childhood trauma has become increasingly prevalent worldwide and despite this increase, continues to remain a significantly unaddressed public health issue (Beilharz et al., 2020). The trauma experienced can include physical, sexual, emotional, and either physical or emotional neglect from a caregiver (Beilharz et al., 2020).

Over the years, DID has been the center of controversy in the field of psychology. There have been many theories postulated to explain the etiology, manifestation, and presentation of DID. Despite the growing research related to not only DID but other dissociation disorders, there has still been some speculation as to if DID is a true condition. Regardless of the differences, there have been some consistencies amongst the various theories and research, with the main one being some form of trauma experienced in the early childhood/adolescent years.

In order to gather information on DID and childhood trauma, many different review articles, journal articles, and psychology books were utilized. While research about DID is still ongoing, there is still much unknown about this condition, especially as it relates to children.

Despite the many different theories for the development of DID, there is still not much known about the disorder as it presents in the childhood years, making it challenging for early diagnosis and treatment. However, since DID has been shown to be

exacerbated through trauma, future research should begin to evaluate how COVID and the associated traumas that could stem as a result of COVID, could exacerbate the symptoms of DID in young children. In the future, a clear diagnosis at an earlier age could result in treatment prior to the adolescent or adult years.

INTRODUCTION

The primary goal of this literature review was to explore the connection between early childhood trauma exposure and the development of DID symptoms. These findings will help practicing clinicians better identify these symptoms in children, which could lead to early diagnosis and treatment. Due to the limited amount of research exploring the early dissociative symptoms that are present in young children and adolescents who have been subjected to some form of trauma, DID diagnosis typically does not take place until the adult years. The early detection of DID in children and young adults has the potential for the development of specific treatment plans geared towards this age population and decrease the relevance of DID amongst adults. Diagnosis typically does not take place until the adult years, however, the focus of this literature review will be on young children and adolescents in relation to DID and diagnosis.

BACKGROUND

Childhood Trauma

Childhood trauma is a growing public health concern both nationally and internationally. In the fields of psychiatry, psychoanalysis, and mental health childhood trauma is a novel disorder (Terr, 2013). It was not until 1976 when 26 children were kidnapped from a bus and buried alive, that childhood trauma was even recognized and studied as a condition. As a result of this event, research began to exactly identify childhood trauma and to identify the lasting effects of this condition (Terr, 2013).

Childhood trauma has been postulated to be associated with more intense reactions to daily life stressors in adulthood **(**Beilharz et al., 2020). Adults with a history of childhood trauma tend to have more intense negative emotions to minor stressors as well as increased levels of perceived stress (Beilharz et al., 2020). Through previous research, it has been speculated that these long-term effects of childhood abuse are the result of neurobiological changes in the stress response systems including the hypothalamic-pituitary-adrenal axis as well as the sympathetic and parasympathetic nervous systems (Beilharz et al., 2020).

Trauma in children and adolescents tends to be more complicated than that of a single event effect because they are prone to repeated assaults, acts of sexual abuse, neglect, and mistreatment (Terr, 2013). Repeated events bring about traumatic complexities that manifest into ongoing issues seen in the subsequent years such as depression, emotional dissociation, character changes, and aggressive/ destructive

behaviors (Terr, 2013). In addition to these ongoing issues, childhood trauma has also been seen to have deleterious effects on the biological stress systems, cognitive development, and brain development of the victim (Stowkowy et al., 2020).

Research has suggested that early trauma exposure can be linked to a series of disorders and psychological symptoms such as borderline personality disorder, and post-traumatic stress disorder (PTSD) (Stowkowy et al., 2020). Through research, it has been suggested that individuals with psychosis are likely to have experienced some form of childhood trauma (Stowkowy et al., 2020). Physical and sexual abuse as well as some form of neglect in the childhood years, specifically, have been linked to the development of mood and anxiety disorders while emotional abuse has been linked to the development of personality disorders and schizophrenia (Stowkowy et al., 2020).

Dissociative Identity Disorder

According to the Diagnostic and Statistical Manual (DSM-IV-TR), dissociation is "a disruption in the usually integrated functions of consciousness, memory, identity, or perception" (McLewin & Muller, 2006). Dissociation can manifest into a variety of disorders such as Dissociative Amnesia and Depersonalization Disorder to DID (McLewin & Muller, 2006). Individuals with these disorders exhibit behaviors that are associated with lapses in psychological and cognitive processing (McLewin & Muller, 2006).

The Structured Clinical Interview for DSM-Dissociative Disorders (SCID-D), focuses on five primary types of dissociative symptoms (Gleaves et al., 2001). Depersonalization occurs when one has a feeling of detachment from the body and

experiences the self as strange or unreal (Gleaves et al., 2001). Another symptom is derealization which is having unfamiliarity with one's own body or one's physical/interpersonal environment (Gleaves et al., 2001). Amnesia, another symptom, is when there are lapses in time where one cannot remember what occurred or even remember personal information that cannot simply be explained by normal forgetfulness (Gleaves et al., 2001). Identity confusion is experienced when there is conflict over one's actual personal identity and the last symptom is identity alteration (Gleaves et al., 2001). Identity alteration describes the behaviors that indicate the assumption of alternate identities (Gleaves et al., 2001).

5 Primary Types of Dissociative Symptoms				
Depersonalization	Derealization	Amnesia	Identity confusion	Identity alteration
Not required for formal DID diagnosis		**Required for formal DID diagnosis**		

Table 1. List of the five primary dissociative symptoms associated with DID. Out of the five listed, only Amnesia, Identity confusion, and identity alteration are required for diagnosis.

Although over the years the diagnostic criteria for DID have changed, it has been said that the five primary symptoms identified by the SCID-D are present in at least a moderate to a severe degree in patients with this disorder (Gleaves et al., 2001). However, only identity confusion, identity alteration, and amnesia are required to make a formal diagnosis of DID (Gleaves et al., 2001). Depersonalization and derealization can

be present in the individual with a DID diagnosis but they are not required symptoms for diagnosis. (Gleaves et al., 2001).

Research has postulated that DID is a response to another disorder called Complex traumatic stress disorder (CTSD) (Ducharme, 2017). CTSD develops as a result of exposure to severe stressors that are repetitive and prolonged, involve harm or abandonment by caregivers, and occur during vulnerable times in the victim's life such as the childhood/adolescent years (Ducharme, 2017). CTSD was initially described as a syndrome experienced by survivors of sexual abuse but due to growing research, can be applied to those who have experienced sexual abuse, physical trauma, and victims of domestic violence (Ducharme, 2017).

The Trauma Model (TM) of DID postulated that DID was the result of chronic neglect and/or abuse that was experienced during the childhood years (Vissia et al., 2016). In a study that compared the TM to that of the fantasy model, DID was proposed to be the result of trauma and the severity of DID was influenced by the severity, intensity, and age of onset of the traumatic experience (Vissia et al., 2016). However, the fantasy model can also account for some of the symptoms related to DID (Vissia et al., 2016).

Individuals that are traumatized can use fantasy to cope with the aftermath of trauma. By using this fantasy model, they inadvertently generate and maintain dissociative personality states (Vissia et al., 2016). Traumatized children will often create a fantasy life and rely on this life to forget the abuse they are currently experiencing (Vissia et al., 2016).

Dissociative Identity Disorder and Childhood trauma

DID has been thought to develop in response to traumatic experiences encountered during early childhood, however, often is not identified and therefore not treated until the adult years (McLewin & Muller, 2006). In children, DID is difficult to identify during normal development. Children exhibit more dissociative behaviors than adults, specifically with their fantasy formation (McLewin & Muller, 2006). Additionally, DID does not present in children the same way it would in adults as the personality switches are more subtle in children than in adults with DID (McLewin & Muller, 2006).

Research has suggested that there are potentially early markers that can predict the development of DID with one being the development of imaginary characters as a coping mechanism for stressful experiences (McLewin & Muller, 2006). According to Svedson, “an imaginary companion (IC) is an invisible character that is named and referred to in conversation with another persona. They are played with directly for at least several months, having an air of reality for the child but no apparent object basis" (McLewin & Muller, 2006).

It has been suggested that the ICs created by the child may be internalized as alters and Pica developed a three-stage model to describe the development of DID starting in early childhood (McLewin & Muller, 2006). It was proposed that children who are predisposed to creating ICs can develop DID if they are repeatedly exposed to trauma during a developmental window during their early childhood (McLewin & Muller, 2006). In the first stage, the child will deflect aspects of the trauma they experienced during their

developmental window, onto the IC (McLewin & Muller, 2006). With the second stage, the ICs that were created will begin to "fill in" for the child during situations that are threatening or anxiety-provoking (McLewin & Muller, 2006). During the adolescent years is when the third stage occurs. This is the time where those “fill-ins” from childhood now are transformed into distinct personality states each with their autonomy and separateness, now referred to as alter personalities (McLewin & Muller, 2006).

One of the prominent functions of the imaginary character created by the child is to help them deal with inner conflicts and negative emotions (McLewin & Muller, 2006). Previous research has even indicated that the child may create this imaginary character to represent the good and bad parts of themselves so that they can indirectly project any difficult feelings that they may be dealing with onto the imaginary characters (McLewin & Muller, 2006). A comparison was performed including children with a diagnosis of DID and with children without a DID diagnosis to determine the function of the imaginary character. The results between the two groups indicated that they varied significantly (McLewin & Muller, 2006). An imaginary character being perceived as the “protector” often came as the result of bearing pain or abuse and the protectors were always strong, powerful characters (McLewin & Muller, 2006). Of the children where there was a DID diagnosis, the imaginary characters were perceived to be more real and the individuals were able to adopt the personality of the imaginary character, exhibiting amnesia for periods of time while in the personality state of the imaginary character (McLewin & Muller, 2006).

One theory of the development of DID focuses on the attachment of children in abusive families (McLewin & Muller, 2006). When a child is experiencing some type of abuse from their caregiver, they are faced with the dilemma of coping with the abuse and protecting themselves while also trying to maintain a relationship with their caregiver (McLewin & Muller, 2006). This then leads to the development of "good" and "bad" working models of the child's self in addition to the "nurturing" and "abusive" models of the caregiver (McLewin & Muller, 2006). With these multiple models now being utilized for the child to cope with the current environment, the models can become dissociated and interfere with the integrative functions of memory, consciousness, and identity (McLewin & Muller, 2006). As time progresses and these models are being frequently utilized, they can manifest into multiple self-states or alter personalities (McLewin & Muller, 2006).

Research has suggested that the Schneiderian symptoms that are present in DID are considerably associated with early childhood trauma such as neglect and abuse (Dorahy et al.,2009). Schneiderian symptoms include "made or unwilled actions, delusional perceptions, thought withdrawal, thought insertion, and thought broadcasting" (Dorahy et al.,2009). Auditory hallucinations are a common feature of DID and are sometimes perceived to be from inside the individual's head (Dorahy et al.,2009). Studies involving adolescents with PTSD or some form of psychotic illness exhibited both external and internal auditory hallucinations (Dorahy et al.,2009). It is postulated that the hallucinations experienced during DID are the result of dissociative re-experiencing of introjected objects or events from one personality that may interfere with the personality that is currently in conscious awareness (Dorahy et al.,2009).

Neurobiology and DID

As stated previously, DID is still a very novel controversial topic in the field of psychology. To provide more physical evidence of the presence of the disorder, there has been research performed to identify the neurobiological basis for DID (Blihar et al., 2015). It has been observed that individuals who do have DID, have smaller cortical and subcortical volumes in the hippocampus, amygdala, parietal structures involved in perception and personal awareness, and the frontal structures that are involved in movement execution and fear learning (Blihar et al., 2015). These neuroanatomical changes appear to have some association with the symptoms that are present in individuals with DID diagnoses (Blihar et al., 2015).

Other research has further examined cortical volumes, looking at the cortical thickness and surface area in individuals with DID. In this particular study, there were 32 female patients with DID diagnoses who were compared against 43 healthy controls, looking at the differences in cortical thickness and surface area (Reinders et al., 2018). After performing whole-brain correlation analyses between the measures of cortical anatomy, dissociative symptoms, and traumatization, it was seen that the individuals with DID did differ from the controls in cortical volume and thickness, and surface area (Reinders et al., 2018). This study showed that DID can be associated with significant abnormal cortical volume, cortical thickness, and cortical surface area (Reinders et al., 2018). Cortical thickness and cortical surface area have distinct genetic and developmental origins and different neurobiological mechanisms and environmental factors, such as childhood trauma, can impact the brain differently in individuals with

DID (Reinders et al., 2018). A limitation of this research was that there were only female participants who volunteered (Reinders et al., 2018).

There have also been studies that examined the differences in hippocampal morphology between individuals with DID and PTSD to individuals with neither DID or PTSD. It has been reported that individuals with PTSD and DID have smaller hippocampal volumes than individuals not suffering from these disorders (Chalavi et al., 2015). In one study, 33 patients with DID and PTSD who were victims of childhood trauma, were compared to 28 healthy controls by using an MRI to identify hippocampal global and subfield volumes as well as shape measurements (Chalavi et al., 2015). Smaller global and subfield hippocampal volumes significantly correlated with higher severities of childhood trauma and dissociative symptoms, supporting a childhood-trauma etiology for abnormal hippocampal morphology in both PTSD and DID individuals (Chalavi et al., 2015).

Treatment

Due to the development of severe psychiatric symptoms, individuals with DID often require extensive and specialized treatment (Myrick et al., 2017). Specialized phasic and dissociation-focused treatments are often used when treating patients suffering from dissociative disorders (Myrick et al., 2017). The severity and chronicity of the symptoms are factors that contribute to the effectiveness of treatment (Myrick et al., 2017).

Treatment of DID begins with the accurate diagnosis of the disorder, including ruling out other causes of the presenting symptoms, addressing any associated

comorbidities, and identification of predisposed trauma and personality factors (Subramanyam et al., 2020). The primary goal of therapy for individuals with DID is the alleviation of the symptoms, minimization of dissociation, and integration of the mind (Subramanyam et al., 2020). Exploratory Insight oriented therapy is indicated for patients who are suffering from chronic symptoms associated with DID and for those who do not have associated psychosis (Subramanyam et al., 2020). If the patient does have associated psychosis, this form of therapy should be avoided as this can result in worsening of symptoms and DID (Subramanyam et al., 2020).

For patients suffering from a dissociative disorder, inpatient and outpatient treatments can be utilized, with specific emphasis on trauma-focused treatment (Myrick et al., 2017). Inpatient treatment uses specialized treatment programs that have the goal of minimizing post-traumatic, dissociative, interpersonal, and general psychiatric issues in patients with dissociative disorders (Myrick et al., 2017). Outpatient treatment is focused on the gains that occur over time including the decrease in dissociative, depressive, post-traumatic, and self-destructive behaviors with an increase in adaptive functioning (Myrick et al., 2017).

Psychoeducation is one of the therapeutic interventions that are very important in the management of DID (Subramanyam et al., 2020). This specific intervention focuses on normalizing and acknowledging the patient's symptoms so that they can better relate them with dysfunction in their daily life (Subramanyam et al., 2020). Psychoeducation also helps shift the focus away from the patient identifying as a victim and instead focusing on the biological and neural basis of the disorder (Subramanyam et al., 2020).

By explaining to the patient what is actually wrong with them and what their disorder means, the patient can put some meaning to the symptoms ultimately helping them feel safe and under control (Subramanyam et al., 2020).

Grounding skills are also another important part of treatment (Subramanyam et al., 2020). When the patient is able to ground themselves, they can detach from the emotional pain they are feeling to regain focus from those intense emotions (Subramanyam et al., 2020). The symptoms that are often experienced by patients with DID are in response to their past trauma and because they are unable to effectively manage the emotion, they dissociate (Subramanyam et al., 2020). With grounding techniques, they can shift their focus from the negative emotions and their internal world to the external world, anchoring them in the present (Subramanyam et al., 2020). Examples of grounding coping skills are hand washing, describing the external environment around them, etc (Subramanyam et al., 2020). Ultimately the grounding skills will provide them with ways to manage their anxieties and limit panic (Subramanyam et al., 2020).

Internal meetings take into account the different self-states that are present (Subramanyam et al., 2020). This intervention is effective in minimizing internal conflict between the different self-states and also helps the individual identify internal ego, control switching, and internal communication (Subramanyam et al., 2020). Each self identifies themselves, specifically stating their wants and needs (Subramanyam et al., 2020). This strategy is also important for the patient's safety as this helps them identify the personalities that are suicidal and/or hopeless and set a plan in place if this self

becomes conflicted or places the individual in a harmful situation (Subramanyam et al., 2020). A challenge with this technique is that initially, all of the self-states or personalities may not cooperate (Subramanyam et al., 2020).

Distress tolerance is a technique that helps the individual tolerate these painful emotions and uncomfortable feelings by resorting to dissociation (Subramanyam et al., 2020). The goal of this intervention is not to solve the core issue but provide a skill that can be used to bear the painful emotion when the situation at hand cannot be immediately changed (Subramanyam et al., 2020). The patient is taught the role of emotion in their life, how to identify the emotions, and then how to handle emotions (Subramanyam et al., 2020). Skills such as self-soothing, containment imagery, and mindfulness are all used to help the individual tolerate difficult emotions. (Subramanyam et al., 2020).

There have been a series of guidelines put in place to provide the best treatment for individuals with dissociative identity disorder (Ducharme, 2017). One of the major roles the therapist has in the treatment of their patient is establishing clear boundaries that will prevent the patient from becoming overwhelmed during treatment or derailed from treatment (Ducharme, 2017). One common error is having the patients begin to work on traumatic memories before the patient has had the opportunity to develop proper skills to maintain their safety and self-management (Ducharme, 2017). Studies have indicated that treatment of trauma involves mastering skills for healing instead of time, which is why it is important to make sure the patient has the opportunity to develop these skills before dealing with the traumas from their past (Ducharme, 2017).

It is also important for the practitioner involved in the individual's treatment to remain aware of how the patient has coped with these difficult emotions in the past and how the patient has utilized dissociation (Ducharme, 2017). In many cases, dissociation results as a defense mechanism against some anxiety-provoking situation, therefore, it is important to understand and identify if there is a "helper alter" present as one of the patient's dissociations (Ducharme, 2017). It is important that the different alters are not ignored as they begin to present themselves externally during treatment and in children, the alters are even encouraged to be the dominating personalities as the focus for treatment (Ducharme, 2017).

According to the International Society for the Study of Trauma and Dissociation, there is a recommended three-phase approach to treatment (Ducharme, 2017). Phase one first establishes safety, stabilization, and symptom reduction in the individual. (Ducharme, 2017). Phase two is focused on confrontation, working through, and integration of the traumatic experiences of the individual (Ducharme, 2017). The final stage is where integration and rehabilitation take place (Ducharme, 2017).

Culture is another part of the patient's life that should be taken into consideration during treatment (Ducharme, 2017). Cultural backgrounds play important roles in the different life experiences of the individuals, shaping their DID symptoms as well as influencing their treatment (Ducharme, 2017). Many cultures view people with DID as being possessed and in some cases will result in seeking some form of exorcism instead of actual psychotherapy (Ducharme, 2017). Lack of understanding of the patient's

cultural background can prove to be difficult when developing an effective treatment plan (Ducharme, 2017).

Dissociative Identity Disorder Treatment	
Treatment Phases	**Treatment Focus**
Phase 1: safety, stabilization, symptom reduction	- Accurate DID diagnosis - Treatment plan development
Phase 2: confrontation, working through, integration of experiences	- Inpatient/ Outpatient Treatment - Insight Oriented therapy (not to be used in presence of psychosis) - Psychoeducation - Grounding Skills - Distress Tolerance - Internal Meetings
Phase 3: integration and rehabilitation	- Continuation of inpatient or outpatient treatment

Table 2. This is the list of the three phases of treatment for DID in conjunction with the different focal points of treatment during the three different phases.

This research aimed at determining the different environmental stressors that occur during the childhood years that lead to the development of DID and diagnosis in adulthood. Based on the data provided through my research, it was determined that trauma experienced during the childhood and adolescent years results in the formation of these "characters" to cope with the ongoing trauma they are experiencing. As the trauma

continues and the individual continues to age, these characters that were used during childhood, present as symptoms of dissociation, specifically alternate personalities, in the adult years leading to the eventual diagnosis of DID.

RESEARCH STRATEGIES

Gathering information on DID in relation to childhood trauma did come with some challenges, as this is a relatively novel topic of research in the field of psychology. As stated earlier, some controversies are surrounding the theory of DID as it relates to its etiology and actual presentation as a mental health condition. Childhood trauma is also a growing issue with still much left to be researched about the lasting psychological effects, including the development of DID.

In order to obtain information on this topic of choice, keywords such as dissociative identity disorder, childhood trauma, treatment of dissociative identity disorder, and dissociative identity disorder and childhood trauma, were utilized. Search engines such as Google Scholar, Science Direct, National Center for Biotechnology Information (NCBI), Ebsco Host, and Wiley Online library were used. In comparison to DID, there appeared to be more information available on childhood trauma than there was DID. It was more difficult to find research on childhood trauma and the development of DID than it was to research the two topics separately.

The resources used were evaluated by the author based on relevance to the topic, the credibility of the source, and the recency of the research. Current research and resources were the main goals for the author, however, due to the limited amount of information that has actually been researched on this specific topic, the research ranges from the years 2020- the early 2000's. Earlier research was incorporated into this research because the initial study did serve as a foundation for the current and more recent research being performed, providing adequate background information for readers.

RECOMMENDATIONS FOR FUTURE STUDIES

Based on the information collected during this literature review, it was suggested that environmental stressors, specifically traumatic events, experienced during the childhood and adolescent years, can lead to the presentation of DID symptoms. One recommendation for future studies would be to look at how the COVID pandemic can serve as a potential environmental stressor for young children and adolescents, leading to DID presentation and eventual diagnosis. While the pandemic is still relatively new and there has not been much research done on the psychological aspect of the pandemic, it has been suggested that for some children, the pandemic can potentially increase the risk for adverse childhood experiences, including abuse (Bryant et al., 2020).

Due to the COVID pandemic, many businesses and institutions such as schools were forced to close to prevent the spread of the novel Coronavirus. The closing of schools meant that children now had to stay home as virtual learning replaced in-person teaching. For some children, school was the only escape from domestic violence at home, causing them to further be subjected to emotional, physical, or sexual abuse without the support of their school faculty (Bryant et al., 2020). Without mental health help from schools or learned coping skills the pandemic can be abiding in the accumulation of trauma which increases the risk for the development of mood and anxiety disorders which can also exacerbate DID symptoms (Phelps & Sherry, 2020). Typically, childhood abuse is executed by the children's parents, and because of the forced isolation, these children are now required to spend more time at home with the very people who are abusing them (Bryant et al.,2020). It is hypothesized that there will be an increase in childhood trauma

as a result of the restrictions from the COVID pandemic, which will serve as an environmental stressor that will increase the number of DID diagnoses' in the coming years.

Another future study recommendation would be for clinicians to explore the neuroanatomy findings associated with DID discussed previously, in adolescents. As stated earlier, one theory postulated that the adolescent years began when the personalities were more developed, and symptoms became more identifiable. Assessing to see if the findings seen in adults are also seen in adolescents could be a way for DID early detection in adolescents and definitive diagnosis. Since imaging can be used to identify the neuroanatomy, this may be a diagnostic option for adolescents who are showing more severe symptoms. The younger children may not be appropriate for this form of research since imaging may expose them to radiation exposure at an early age involved in this study.

CONCLUSION

In conclusion, childhood trauma is and continues to be a growing issue with lasting effects including DID diagnosis. DID is still currently being researched but future research should begin focusing on how DID can be detected in the childhood and adolescent years, aiding in the early detection of the symptoms associated with DID. This will also provide a pathway for the development of a treatment plan designed specifically for children and adolescents. Since the manifestation of symptoms is different than that of adults, a diagnostic criterion to specifically assess children and adolescents suspected of having DID could also be developed as a result of ongoing research. The COVID pandemic could potentially provide the basis for further research in the etiology and detection of DID in children due to the increased exposure to childhood trauma that can lead to the manifestation and development of DID in the upcoming years. Early detection can lead to early treatment which could potentially decrease the prevalence of DID amongst adults.

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