CC BY NC ND

Review article

All the faces of dissociation - evolutionary and developmental need, symptom, defense mechanism, or disorder?

Barbara Ivković Cikač
MA.Ed., Art Therapy intern, University of Osijek
barbarai.zadar@gmail.com

Abstract

The concept of dissociation was first mentioned by P. Janet in the 19th century, stimulating numerous discussions and research in the field of dissociative disorders that continue today. Dissociation is a complex and often misunderstood phenomenon that has significant implications for mental health and well-being.

The definition of dissociation is not simple, and its occurrence and causes vary from psychological defense mechanisms to pathology. Dissociation is therefore important to consider from different perspectives, and the literature describes it as a psychological defense mechanism, symptom, disorder and potentially as an evolutionary and developmental need. Contemporary research seeks to shed light on the factors that influence the relationship between dissociation and trauma, as well as to investigate the origin of dissociation.

In addition to the well-known and strong correlation with trauma, part of the research focuses on factors of attachment, ability to regulate, and early trauma as significant influences in the development of dissociative symptoms and disorders. Genetic predisposition and individual differences in coping mechanisms may also contribute to the development of these disorders. Neurobiological perspectives suggest that dissociation may be related to changes in brain function and structure. This psychological phenomenon is characterized by a sense of disconnection between thought, identity, consciousness, and memory. In this context, art therapy has proven to be a suitable modality that facilitates self-exploration and integration of fragmented aspects of the personality, thereby encouraging the healing and recovery process. The article provides an overview of the definitions of dissociation and dissociative disorders, considers the etiology of these disorders, especially the complex relationship between

trauma and dissociation, and focuses on specific techniques and applications of art therapy in working with people suffering from dissociative disorders through a review of relevant research.

Keywords*: dissociation, dissociative disorders, trauma, art therapy, disorganized attachment*

"Out of sight is not out of mind."
Hertzan-Lati

Introduction

Dissociation refers to a disturbance in the continuity of identity, consciousness, memory, and perception. People suffering from dissociative disorders may experience symptoms such as anxiety, depression, mood swings, suicidal thoughts (Coons, Bowman, and Milstein, 1988), suffer from sleep disorders, panic attacks, phobias, and addictions (Norton, Ross, and Novotny, 1990), psychotic symptoms and eating disorders (Ross, 1996). Episodes of dissociation can last from several hours to several weeks (APA, 2013). Despite the belief that dissociation is a rare phenomenon, the frequency of dissociative disorders varies widely and ranges from about 1% to 20%. Underlying the dissociation is the influence of a complex combination of genetic, environmental, and psychological factors. Trauma, especially childhood abuse and neglect, has been identified as a significant risk factor for the development of dissociative disorders.

In addition to the established role of trauma, other factors can contribute to the development of dissociation. Some longitudinal and prospective studies have revealed a link between the lack of early childhood care (Putnam, 1996; Schore, 2002; Lyons-Ruth, Dutra, Schuder, & Bianchi, 2006), while some other theories and findings include attachment disorders (Main, Solomon, 1990; Barach, 1991; Ogawa, 1997; Liotti, 2004, 2006; Hesse, Main, 2006), family trauma, and the impact of neurobiological vulnerability (Silberg, 1998; Hebert, Langevin, & Charest, 2020; Whitmer, 2001; Blizard, 2001, 2003).

Trauma and Dissociation

According to the American Psychological Association (APA), trauma is “any distressing experience that causes feelings

of intense fear, helplessness, dissociation, confusion, or other unpleasant feelings that, due to their intensity, have a long-term negative effect on aspects of the entire functioning of a person."

Such an experience can be caused by human behavior (abuse, war, industrial accidents) as well as natural disasters (floods, earthquakes) and can often shake the sense of security, justice, own values and therefore cause doubts about one's own identity and the way a person sees himself. As a result of a traumatic experience, the body and mind are flooded with intense and extremely unpleasant emotions. Defense mechanisms are included: fight, flight, freeze, and additional responses: fawn, collapse-submit, and attach-cry for help. These act as natural, primal survival reactions of our nervous system that prepare the body to face a threat.

Defenses work automatically and unconsciously. Freezing occurs when fight-or-flight options are not possible. In the event that the freeze response is unbearable for the person's ego strength, dissociation occurs - the ability of the brain to protect itself in an overwhelming moment by separating thoughts, feelings, actions, and the experience of being in one's body from the environment. In this process of concealing a traumatic event and separating parts of the self from that event, a person unconsciously separates himself from reality as well (Engle, 1997).

Brenner (2009) argues that dissociation arises from an instinct common to mammals and most other animals, serving as a "primitive, adaptive response of the ego" to overwhelming experience or external trauma. Some believe that if dissociation occurs as an adaptive response to trauma, it can be considered a form of "freeze" reaction (MTIEC, 2023), because dissociation provides a psychological escape from danger when physical escape is not possible (Lanius, 2015).

Pleasing (fawn) in response to trauma (Walker, 2013) involves people-pleasing to the point where the individual detaches from their own feelings, sensations, and needs, withholding them to avoid potential conflict or abuse. Freezing and complying are responses of a dissociative nature, which leads to conclusion that half of people's biological reactions to a traumatic experience are actually dissociative defenses (Öztürk, Erdogan, Derin, 2021)..

"The phenomenon of dissociation varies in forms from healthy, adaptive to pathological defenses." (Guez, Hertzanu-Lati, Lev-Wiesel, Rabin, 2015, p. 49). Occasional dissociation is a useful mechanism that disconnects us from a state of being overwhelmed by stimuli or overwhelmed by stress which then enables a return to mental and emotional balance. Examples of adaptive dissociation in which it is possible to temporarily become unconscious of oneself, the environment, time, and space can be

found in everyday life, such as enjoying a good movie or play, reading a book, doing art or daydreaming. In addition to these activities, the practice of art, which Dell (2009) calls creative automatism, is particularly important. Such moments are essential for human growth and development, according to Hertzanu-Lati (2015), which bear the possibility of the coexistence of contradictory truths, without the need to determine which one is real, and which is imaginary.

Literature Review

The act of dissociating may be useful or crucial in the moment of survival, but the consequences of "concealment" and separation continue to operate even after the danger has passed. The damage increases when dissociation becomes the only and primary method of dealing with situations that remind the individual of the traumatic event itself by some aspect of it on a conscious or unconscious level (MTIEC, 2023). If we think of dissociation as a continuum, at one end mild dissociative experiences are common to most people, followed by a point on the continuum where dissociation serves as a defense in stressful situations (MacCutcheon, 2015). At the other end is chronic, complex dissociation that can result in serious impairment of functioning (Lev-Wiesel, 2005).

Janet was among the first to study dissociation as a psychological process and defense against overwhelming traumatic experience, and as a lack of integration between two or more different "systems of ideas and functions that make up the personality" (Janet, 1889; 1907, 1911; 1983, as cited in Van Der Kolk and Van Der Hart, 1989).

According to the latest edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-V; APA, 2013, p. 291), "dissociative disorders are characterized by a disruption of continuity in the normal integration of consciousness, memory, identity, emotion, perception, body representation, motor control, and behavior", whereby the functioning of all the mentioned areas can be impaired (Hertzanu-Lati, 2015).

Dissociative Disorders

Dissociation can manifest itself in the form of depersonalization and derealization disorders, such as dissociative amnesia, identity change, and dissociative identity disorder (DID).

DSM-V, F.48.1. Depersonalization/ Derealization

Depersonalization is "a clinically significant persistent or recurrent experience of detachment or alienation from one's mind, emotions, body, and self" (APA, 2013, p. 291). In this experience of separation, individuals often feel as if

their actions and thoughts do not belong to them, feel as if they are outside their body, may have a distorted sense of time, and reduced sensitivity to emotional or physical stimuli (APA, 2013). While in the state of depersonalization, the person perceives himself as unreal, the state of derealization marks the experience of separation in which the person perceives other people and the environment as "in a fog, bubble or dream, through a veil, through glass", lifeless or even visually distorted (APA, 2013, p. 301, 302).

DSM-V, F44.0. Dissociative Amnesia

Sometimes dissociation is manifested by partial or complete loss of memory of parts of one's own life. Dissociative amnesia is described in the literature as a clinical symptom or phenomenon of lack of memory of data from one's own life, especially those related to the experience of trauma or great stress (Hertzanu-Lati, 2015). Dissociated information can still influence a person's behavior because the memory exists, even though it is inaccessible. Individuals with more severe illnesses, despite recovered memories, may still have very confusing, disjointed autobiographical memories (Spiegel et al., 2011), and sufferers are at high risk of developing PTSD (APA, 2013). In many cases, the diagnosis was made only after the inaccessible, or "delayed memories of the traumatic experience" returned to the person (Hertzanu-Lati, 2015).

DSM-V, F44.81. Dissociative Identity Disorder

Formerly known as multiple personality disorder, dissociative identity disorder (DID) is defined in the DSM-V as the appearance of two or more different personalities accompanied by an interruption of consciousness, a distorted view of oneself and the environment, sudden changes in mood and behavior, and forgetting everyday and general personal information in the form of recurrent episodes of dissociative amnesia (which are not the result of taking opiates or another medical condition). An individual with DID experiences sudden emotional changes, intense and impulsive actions over which he mostly has no control, as well as over his own body. The person often seems unaware of his actions.

The environment may notice oscillations in behavior and speech (changes in voice from childish, soft, or deep or variations in tone, color, and manner of addressing) or atypical changes in personal attitudes and choices (such as diet or clothing). Phenomenologically, the division of personality is manifested through various dissociative symptoms such as loss of voice, loss of pain sensation, paralysis (negative somatoform symptoms), amnesia, loss of affect and will (psychoform symptoms) and identity fragmentation, flashbacks, and experiencing voices as unwanted intrusions into consciousness and behavior (positive symptoms). These symptoms do not necessarily apply to all

dissociated parts in an individual (Janet, 1911; 1983, according to Nijenhuis and Van Der Hart, 2011).

DSM-V, F44.9. Dissociative (conversion) Disorder, Unspecified.

In addition to the aforementioned, in the DSM-V manual, there is also a category of unspecified, "other dissociative disorders", which have certain similar manifestations, symptoms, and other features of DID disorders, but due to their duration, appearance and accompanying symptoms, they do not meet the diagnostic criteria of dissociative identity disorder.

Etiology

The vast majority of individuals who develop a form of dissociative disorder, and in the case of DID as many as 90% of them (APA, 2013), have a documented history of repetitive, often life-threatening, traumatic experience and neglect which they experienced in a very sensitive developmental stage of childhood, until 9 years of age (Draijer & Langeland, 1999; Zurbriggen and Freyd, 2004, according to Lev-Wiesel, 2005; APA, 2013). An increased risk of developing dissociative disorders is associated with physical and sexual abuse (Kluft 1984; Putnam 1989; C. Ross 1989; D. R. Ross and Loewenstein 1992; APA, 2013). Öztürk, Erdogan, and Derin (2021) believe that the phenomenon of dissociation cannot be considered separately from trauma and that the treatment of more severe dissociative disorders requires a trauma-based approach, as well as long-term psychotherapy and pharmacotherapy.

The division of personality in dissociation can be partially conditioned by genetics and the ability of the individual to integrate, that is, by its lack or limitation (Xie et al., 2009, according to Nijenhuis and Van Der Hart, 2011). Putnam (1996) explains that apart from the role of trauma, relatively little is known about the etiology and development of dissociation. Briere (2006) also examines the actual relationship between trauma and dissociation, paying attention to early trauma, emotional neglect, and attachment (Ogawa et al., 1997; Shapiro and Levendosky, 1999; Simeon et al., 2003). Others advocate attachment theory and its key role in understanding the development of the dissociative structure of the psyche (Barach, 1991; Blizard, 2001; Howell, 2002a; Liotti, 1992, 1999a, 1999b; Lyons-Ruth, 1999, 2001a, 2001b).

Among the first theorists to connect the theory of first attachment and dissociation, Barach (1991), writes about multiple personality disorder (then known as DID), as a variant of "attachment disorder". Liotti (2004) emphasizes the role of early attachment experiences in shaping an individual's emotional regulation and the development of dissociative symptoms. The results of a longitudinal study that supports Liotti's thesis (Ogawa

et al. 1997) emphasize communication errors, confusing roles in upbringing, and sexualized communication of parents (in the original "mother") as a stronger influence than expressed hostile or disoriented behavior.

Some research suggest that early interactional or dyadic processes are the basis of the pathogenesis of dissociative phenomena (Main and Solomon, 1990; Lev-Wiesel, 2005; Howell, 2005). When a parent is unable to respond to their child's needs, disturbed forms of communication arise, which during development can trigger dissociative symptoms and defenses (Lyons-Ruth et al., 2006). Stern (1985) speaks of a strong connection between psychological development and adult dissociation. The research of Lyons-Ruth et al., (2006) indicates as significant predictors of dissociative symptoms both the lack of engagement of the mother with the child at home at the age of 12 months and the disturbed affective communication of the mother in the laboratory at the age of 18 months. Early in life, parent-child dialogue fundamentally involves the exchange of primarily sensory and affective signals. Blizard (2003) points out that sometimes less noticeable, inexplicable, but recurring or everyday situations in attachment relationships, such as the emotional unavailability of parents and contradictory communication, can result in disorganized attachment and lead to fragmentation of the self. Repeated minor traumas that have a negative effect on a person's integrity and disrupt close, formative relationships can trigger multiple areas of hidden, dissociated experience (Frankel, 2002, as cited in Blizard, 2003). Longitudinal and prospective studies have found a link between the lack of early childhood care and dissociative symptoms (Diseth, 2006; Dutra, Bureau, Holmes, Lyubchik, & Lyons-Ruth, 2009; Ogawai et al., 1997; Nijenhuis & Van der Hart, 2011).

Whitmer (2001) believes that an individual cannot truly "know" his own experience until another sees and recognizes it, which is why dissociated experiences can be "unthinkable" because key attachment actors have not recognized them. The fact that LBT (English "low betrayal trauma") contributes to the development of dissociation and psychosis (Li et al., 2022) shows how much the lack of support from the environment and those closest to you, and failure to recognize experience, has a negative impact on the individual, especially at an early, sensitive age. Several sources have written about the unfavorable impact of the lack of social and family support on the development of dissociative disorders (Benjamin, 2004; Briere, 2006; Korol, 2008; Nijenhuis and Van Der Hart, 2011; APA, 2013; Carlson and Ehlers, 2017). Disturbed dyadic communication patterns are usually imperceptibly present from a very early age and, therefore, may be difficult for the person to verbali-

ze until healthier forms emerge in the therapeutic relationship, according to Lyons-Ruth et al. (2006).

Art Therapy and Dissociative Disorders

Cardena (1994) believes that in dissociation, different layers of the psyche are separated from each other and psychic knowledge becomes "unthought known" as Bollas (1987) calls it, which means that it is a content that has not been translated into thought or words, but exists as an important belief in the psyche. This opinion is followed by Van der Kolk, one of the current leading psychiatrists specializing in trauma, according to whom trauma is not only a psychological phenomenon, but also a physical one because trauma can be psychologically concealed, which makes its recognition impossible, but it really registers in the body (Van der Kolk, 2006; 2014).

Lyons-Ruth et al. (2006), relying on previous research, emphasize the importance of "hearing" people who have survived trauma in their recovery process. Gordon (2013) pursues the idea of a recovery process based on a person's ability to tell the untold story of trauma.

> *The opposite of dissociation is coherence, which leads to the assumption that it is the path of healing, and that it is necessary to assemble emotions and a story from the background of the trauma through articulation (Gordon, 2013, p. 22).*

The course of recovery facilitates the therapist's empathic approach to the experiences of the dissociated person, Brenner (2009) believes, and several authors point out that it is important for the therapist to accept all the split personalities of the client equally positively (Blizard, 2003). By creating a safe environment for therapy, the person is given the opportunity to rediscover herself as a key factor in recovery, which Gordon (2013) compares to early psychological development.

Dissociative personalities are often hermetically closed in a relationship with themselves, and it is very difficult for them to start and maintain a therapeutic alliance (Sagan, 2019). Even going to the therapist can "awaken" suppressed or dissociated patterns of attachment in the individual, which often bring feelings of helplessness, insecurity, and thus immature reactions and defenses (Blizard, 2003). Numerous experts have recognized the benefits of expressive therapies as an effective aid to individuals in processing and expressing traumatic experiences (Jacobson, 1994; Kluft, 1993; Murphy, 1994a, according to Engle, 1997).

Art therapy uses art expression as a means of communication and recovery,

which is especially helpful for people who have difficulties in expressing emotions verbally. Engle (1997) claims that "a work of art is one of the best ways to approach dissociated material". Other authors also suggest (Cox and Cohen, 1989; Sagan 2019) the creation of visual art for "the safe communication of DID clients, since their abusers often intimidated them into silence during early childhood" (Sagan, 2019). We mentioned that trauma is registered in the body (Van der Kolk, 2014), and the use of art materials and involvement in the creative process facilitates the release of energy through bodily action and movement (Lusebrink, 1990), which is another benefit of art therapy in working with dissociative disorders. One of the key advantages of art therapy is the ability to reveal unconscious material (Fowler and Ardon, 2002), which can influence our behavior, emotions, and thoughts.

Art and the Mind

Art therapy focuses predominantly on visual and somatosensory information; that is, on images and art expression as a reflection of emotional experience and the impact of that experience on thoughts and behavior (Lusebrink, 2004). Through the formation of internal images, sensory pathways are activated (Lusebrink and McGuigan, 1989).

The human mind associates visual information with emotional meaning. This connection is facilitated by neural circuits that link sensory data (visual) with emotional centers, such as the amygdala in the limbic and cognitive areas of the prefrontal cortex. For example, an individual interpretation of a visual representation (in art therapy, visual representation) can trigger an emotional reaction, indicating a two-way relationship between cognition and emotion. Investigating this correlation, Fuster (2003) concludes that visual associations in therapy can improve emotional regulation and cognitive function. The brain's ability to integrate these elements plays a key role in (adapting) behavior and decision-making.

Art therapy interventions are useful in promoting mental, emotional, and physical recovery (Kaplan, 2000; Malchiodi, 1999a, 1999b), and cognitive and emotional growth (Kaplan, 2000; Menzen, 2001; Rosal, 1992). For a long time, therapeutic practices focused on accessing the left hemisphere of the brain and its cognitive, verbal, and interpretive processing of information.

More recent research come to different conclusions. Traumatic images are stored primarily in the right hemisphere of the brain, which is considered responsible for emotions, creative and non-verbal expression (Murphy, 1994).

Schore (2009) claims that the experience of dissociation arises neurologically from

a reduced ability to process unconscious emotions and regulate affect within the right hemisphere. From this he concludes that it is possible to access stored non-verbal content and dissociative material in real time by activating the right hemisphere. "Right-brain (client) to right-brain (psychotherapist) communication" enhances the therapeutic relationship (Chapman, 2014; Chefetz and Bromberg, 2004, according to Whitesel, 2023) and can promote integration and healing (Whitesel, 2023).

"Dissociative experiences in art are shaped as images - visual expressions of what Jung called complexes" (Whitesel, 2023, p. 4), which are inherently associative in nature. In its (non-verbal) nature, trauma requires expression (Engle, 1997), and it is precisely the expression of repressed, unwanted emotions that can contribute to the use of healthier defense mechanisms. As noted by Wagner and Linehan (1998), the recovery process can be very successful if the processing of the cognitive and emotional aspects of the trauma is supported and the strengthening of the ability to manage and regulate affects is encouraged (according to Briere, 2006).

Traumatic Memory and Art Therapy

When it comes to the therapeutic goals of the diagnosis of dissociative identity disorder (ISSTD, 2011), the key is the integration of traumatic memories (Fine, 1999; Kluft, 1999; Lazrove, and Fine, 1996; Maldonado et al., 2002) as well as parts within the person (Biswas , et al., 2013). Integration is an extensive, long-term process of working on dissociated mental processes during treatment (ISSTD, 2011) that leads to a more cohesive sense of self. Some take the opposite position, and instead of focusing on the integration of identities, they prioritize the acceptance of multiple identities that can appear within an individual (Harris, 2009, according to Whitesel, 2023). Integration, on the other hand, plays a central role in art therapy (King-West and Hass-Cohen, 2008) and creative therapies in general.

The creative process allows internal experiences to be externalized, which can facilitate the integration of separate parts. Artistic activity engages both hemispheres simultaneously and encourages communication/connection between them; creativity activates the right hemisphere, while planning or discussing works of art activates the left hemisphere.

When traumatized patients recall their traumatic experience, brain MRI scans show that the left frontal cortex, especially Broca's area, which is responsible for the activation of speech, remains inactive. At the same time, the right hemisphere and the area around the amygdala, which we associate with emotional and autonomic arousal, are activated (Rauch et al., 1994; Brenner et al., 1992,

according to ISSTD, 2013).

The verbal approach in therapy can sometimes be a limiting factor (Sagan, O. 2019), and therefore contributes to the additional separation of content as well as flatters the "verbal" or "false self" that tends to manipulate words, as described by Winnicott (1965). On the other hand, the non-verbal and experiential approach of art therapy seems to correspond to the visual and often "silent" nature of traumatic memories (Schouten et al., 2019). Nonverbal expression overcomes "the communication gap between separate parts of the self as well as between the inner world of patients and the external reality" (ISSTD, 2011, p. 161), especially between feelings and words (Pifalo, 2007). Non-verbal expression is mainly used when a child is in therapy, but also when the non-verbal self of an adult is present.

Dissociation combined with the child's limited ability to verbalize feelings can make cognitive access to the traumatic memory complex. However, art therapy and the artistic process have the potential to achieve or restore psychological balance (Golub, 1985; Van der Kolk and Greenberg, 1987, according to Pifalo, 2007). Art therapy provides methods for communication with the non-verbal mind (Tinnin, 1990a) and access to non-verbal memory, and besides bypassing psychological defenses, it opens the way for defenses that were not there before, creating new ways of dealing with problems (Gantt and Tinnin, 2009). If during dissociation, as an immediate reaction after trauma, the traumatic event has been separated into a non-verbal area, art therapy helps to reconnect experience and words by focusing on creating images about the trauma itself (Gantt and Tinnin, 2009). For a person who has survived trauma and is dealing with the consequences of dissociation, creative creation means the possibility of expressing thoughts, experiences, and oneself and one's parts in perspective, in addition to being a cognitive need (Cohen & Mills, 1999).

Art Process in Art Therapy with Dissociative Persons

In her study, Sagan (2019) observes the role of the art process in working with a client diagnosed with dissociative disorder. Client Henri, as the author called her, talks about her experience in which she was able to recognize dissociative parts of her personality through works of art. In her apartment, Henri came across works of art from "other" parts in addition to her paintings. Over time, she began to notice differences in styles, use of art materials, color palette and artistic development stages in the paintings. In this way, she followed the appearance of her "other" personalities, which left behind a visual trace. Some parts were neat, some were

messy and left paint everywhere, some parts were visibly younger and non-verbal, and "painting served as their voice." Client Henri identified as many as seven different parts of herself through the resulting images (2019).

The second case study testifies to the challenges of working with a dissociative client who experienced a childhood trauma. In his article, Whitesel (2023) considers transference as a relationship that is subject to dissociation, and on several occasions, he writes about the "brain (dissociative) fog" he experiences when working with a dissociative client. He describes this state as moments of emptiness and separation from one's thoughts, emotions, even from experience and knowledge, in which one cannot trust one's senses or intuition. She describes the manifestation of dissociation during the session: "Physically, it manifested during the session as a complete calmness or frozenness (of the client). Her eyes would open wide, but without actually looking. Often in those moments I felt invisible to her, and at the same time, I felt as if I could not move my own limbs or breathe" (Whitesel, 2023, p. 9). The author emphasizes that during therapy with dissociative clients, more than usual, it is essential to pay attention to one's own changes in consciousness, one's sensations, and feelings, and to question them, as well as to be open to new ideas in one's work. Indispensable tools to help the therapist in this case are supervision and self-reflection.

The author came up with an interesting approach in working with the client. Although she felt ashamed at the beginning, Whitesel gradually became aware of the confusion she experienced through the influence of dissociation and did not try to hide it but shared her "borrowed" experiences with the client with statements like "I feel that I have no focus - what can you notice? How do you feel?". Such an approach helped the therapist to normalize her awareness of her own dissociative experience as well as that of the client, and to avoid identifying her experience with the client's, which, as she states, was sometimes quite challenging.

On one occasion, the therapist pointed out to the client a baroque painter who had experienced a trauma with which she felt her client could identify. The act of observing and reflecting on the proposed painter's work helped give form to the client's unspoken experience as well as to her anger and helped her to stand up for herself (Whitesel 2023). Although her client did not draw in the sessions, she brought her works that she made at home independently of the therapy. Those works acted as an orientation in communication and grounding in the session, placed between the therapist and the client on the table or placed in a space so that both can observe the work from a distance. The author emphasizes how

crucial it was in her work not to impose her own ideas and experiences on the drawings brought by the client.

Finally, according to the therapist's suggestion, the drawings that the client brought to the sessions were collected and organized according to the date and importance determined by the client. Creating a timeline is a process that gives a sense of control to the client and the opportunity to narrate their experience connected in time and space. Trauma narrative organization has been shown to be useful for integrating dissociative material, as noted in a case study by Whitesel (2023) and mentioned in other literature (Pifalo, 2007; Gannt & Tinnin, 2009; Rothschild, 2010). In addition to organizing the narrative, the fundamental part of recovery includes detailed reconstruction, which is the process of desensitization by facing and adapting to all forms of the lived experience so as to reduce the person's emotional sensitivity to the event (Pifalo, 2007).

When we are in danger, our body turns off or weakens certain functions in order to better orient the organism for survival. One function that weakens is time orientation, which affects how we remember the sequence of events. Memory without time organization can be stored in non-verbal memory (Schore, 2002), and beyond the reach of the conscious (conscious memory). Thus, trauma-induced memories and emotions are not connected to the narrative sequence (Gantt and Tinnin, 2009), which supports data that individuals experiencing dissociation often report physical sensations unrelated to their emotional states, potentially due to a lack of awareness or connection between bodily sensations and emotional experiences (Lanius, 2015). In extreme cases of trauma, a distorted perception of time, known as detemporalization (Ozturk, Erdogan, & Derin, 2021) ultimately affects the integration of past experiences into a sense of self over time (Lanius, 2015).

Symbols and metaphors in art therapy and working with people with dissociation

Memories and emotions resulting from trauma are seldom formed as a verbal language (Gantt and Tinnin, 2009). A recent study (Sagi, 2021) proposes a theory about pre-reflective experiences that cannot be expressed in familiar language or silence but can find their expression in metaphors and images. In art therapy, clients translate their thoughts and perceptual experiences into a drawing, painting, or sculpture, encouraging interaction between perceptual and motor processes (Malhotra et al., 2024). Incorporating imagery into therapy can facilitate a multi-level transformation of consciousness for traumatized individu-

als with dissociative disorder. Images have the ability to make the invisible visible, and the visible known (Whitesel, 2023).

Using metaphors and images in trauma processing can provide distance from the traumatic event without excluding emotions, and include the listener (therapist) as a witness to the trauma (Lakoff and Johnson, 1980; Lefevre, 2004, as cited in Saga, 2021). The right and left hemispheres of the brain are connected through a structure known as the corpus callosum (Sagi, 2021), whose conductivity is weakened by trauma (Gantt and Tinnin, 2009), which is especially visible in women who experienced sexual abuse in childhood (Teicher, 2000, according to Saga 2021). Relying solely on verbal therapy can overlook the deeper meaning of metaphors, potentially leaving clients isolated with their trauma (Sagi, 2021).

Art therapy provides engagement and creative self-expression that connects non-verbal communication through visual narratives (Berberian et al., 2019, according to Malhotra et al., 2024).

Expression through artistic media can stimulate the renewal of components of symbols along with emotions that bind them to symbols at lower levels of the perceptual hierarchy and help to explore the meaning of symbolic images (Lusebrink, 1990). Researching symbols and their sensory aspects in all modalities can contribute to the personal growth of the individual and a better understanding of oneself and others (Lusenbrink, 2004).

How can art therapy help in organizing experiences and memory related to trauma? Practicing simple grounding techniques, such as deep breathing and bilateral scribbles, can serve as a starting point in the work (Harty, 2023; Hinz, 2024; Kehr and Haeyen, 2024, according to Haeyen and Dimaggio, 2024). McNamee (2005) describes the bilateral technique (simultaneous or alternating use of the left and right hand in the process of creating images) as a modality of art therapy, which has its own neurological basis and serves to connect the right and left hemispheres of the brain. Research shows that activities that require the coordination of both hands lead to an increase in neural activity in different regions of the brain, and can improve communication between the two hemispheres. Lusebrink suggests art therapy as part of the treatment plan for patients with dissociative disorders. He further believes that mindfulness techniques that encourage a person to be present in the moment, combined with art therapy, can reduce anxiety associated with dissociative symptoms. It also emphasizes the use of symbols in art therapy to help clients express the complex emotions associated with dissociation.

A recent examination of the effectiveness of art therapy in forensic mental health care follows 23 studies (Abbing et al., 2023, according to Haeyen and Dimaggio,

2024) on art therapy and mechanisms of change that include: interospection and exterospection, i.e. self-observation of one's thoughts, feelings and experiences, bodily signal and external environment; impulse control; cognitive regulation; social regulation; emotional regulation; dealing with stress; self-expression; self-control.

Research indicates that work on these regulatory processes in art therapy can contribute to strengthening healthy psychological defenses and greater psychosocial stability (Haeyen and Dimaggio, 2024).

Steele and Raider (2001) use a series of drawings to describe a traumatic event, while Rankin and Taucher (2003), among other things, suggest sensory associations. Gantt and Tinnin, (2007a, b; 2000; Tinnin et al., 2002) developed the procedure "ITR" ("Instinctual Trauma Response") as a template for a graphic (visual) narrative in which people express themselves about trauma in pictures. More recent theories of dissociation (Van der Hart et al., 2006) emphasize nonverbal instinctive survival patterns as a model for understanding dissociation (Nijenhuis, Spinhoven, & Vanderlinden, 1998, according to Gantt and Tinnin, 2009). In the ITR protocol, the therapist explains the stages of the instinctive response to trauma and instructs the client to create a graphic narrative of the trauma, using images as a representation of startle, fight-flight or freeze reactions, altered state of consciousness, automatic obedience and self-recovery (Gantt and Tinnin, 2007b). The procedure helps determine the chronology of traumatic events and translate the pictorial, sensory, and emotional content of the right hemisphere into the verbal, logical content of the left hemisphere. Awareness leads to mechanisms that help detect dissociation and deal with the levels it assumes. It helps reduce dissociation and alexithymia (Gantt and Tinnin, 2009).

For ITR, specifically in the case of traumatic dissociation (Gantt and Tinnin, 2007a), an external dialogue is used with the part of the self that remained frozen in the trauma, which can be represented in clay or drawing, through written text or speech, with the aim of encouraging the integration of the self. Gantt and Tinnin (2009) suggest that the emphasis of work in art therapy with people with traumatic dissociation should be on the expression of "unspoken" feelings, the organization of confusing experiences, and the sequence of events.

Art Therapy and Neuroscientific Research

The research was conducted on the importance of neurologically based art therapy and its role in stimulating the development and integration of brain structures (Shore, 2014) with particular

reference to the functions of the right hemisphere responsible for regulation, emotional reciprocity, and creativity. Art can act on emotion regulation by shaping neurocognitive processes. Accordingly, Hass-Cohen and Findlay (2015) believe that there is a connection between the limbic, somatosensory, and cerebral motor systems that are activated "during continuous voluntary movement and sensory stimulation with clay, but also with other tactile art materials." Hass-Cohen and Findlay (2019), a few years later, developed ATR-N (Art Therapy Research-Neuroscience), a therapeutic approach that integrates art therapy based on neuroscience. This method emphasizes the importance of understanding brain functioning in relation to emotional and psychological processes, particularly in therapeutic settings.

The experience of connecting through the senses and visual stimuli at the perceptive level of the ETC can serve people with dissociation or psychosis in better orientation toward reality and greater awareness (Hinz, 2009. as cited in Griffith and Bingman, 2020).

Nightmares are a common symptom of trauma-related disorders (El-Solh, 2018; Waltman et al., 2018). Haeyen and Staal (2021) researched and recommended a framework for art therapy based on the IRT method (Imagery Rehearsal Therapy), which primarily refers to post-traumatic nightmares. Their research promotes the IR-AT (Imagery Rehearsal Art Therapy) protocol, which facilitates access to traumatic experiences and the ability to bear trauma-related emotions. Presentation and construction of events take place indirectly, experientially, and often playfully (Haeyen & Staal, 2021). A non-verbally stored traumatic memory, which is relived during a nightmare, can be examined and expressed in art materials, and these memories can be processed, while the negative thoughts and feelings that are a consequence of these memories, can be identified (McMillan et al., 2018, according to Haeyen and Dimaggio, 2024).

The IR-AT procedure involves drawing comics, and the person reveals scene by scene from nightmares. In this way, emotions come gradually and are easier to control. The therapist's role is to guide the patient, and by asking questions about the details of the nightmare, the therapist supports the client in creating vivid scenes (Kehr and Haeyen, 2024). Research conducted by Griffith and Bingman (2020) explores the complex relationship between artistic expression (especially in the form of drawings) and cognitive processes within the brain. The research offers an understanding of drawing as a therapeutic tool for individuals suffering from dissociative disorders. Drawing activates different areas of the brain associated with motor skills and emotion processing and requires focus and attention, which grounds a person and places them in the present moment (Griffith and Bingman, 2020).

Diagnostics of Art Therapy in Work with Dissociative Disorder

Therapists who are experienced in working with patients with dissociative personality disorder witness similarities in visual expressions such as multiple representations, fragmentation, or change of style within the same image. Fuhrman (1993) notes great differences in the approach and creation of artworks by persons who have dissociative personality disorder, as well as the appearance of different stages of art development within the works of one person (Engle, 1997).

Drawings often serve as one of the methods for the diagnosis of psychological difficulties, such as DDS (abbreviation in English: The Diagnostic Drawing Series), which was developed by Cohen and Lesowitz in 1982. In a Dutch study in which DDS was used in working with patients suffering from a more severe form of DID, two interesting things were discovered related to the graphic expression of the patients. The first interesting feature are the large, complex images full of color, and the second is the tendency to separate content (for example, separating content with lines, colors, materials, etc.), which the authors assume could reflect the processing of parallel and divided information in pathological dissociation (Li & Spiegel, 1992; Kluft, 1991a, as cited in Fowler and Ardon, 2002). Cohen and Cox have been working in the field of art therapy and dissociation since the end of the 1980s. They have developed a ten-category model with the aim of identifying the features of dissociation and have attached a guide for observing the artwork of people with dissociative personality disorder, which is described in their book "Telling Without Talking" (1995).

In the drawings of people with dissociative identity disorder, visible depictions of conflict, abuse, and externalization of anger are possible (Spring, 1986, according to Lev-Wiesel, 2005), while in the drawings of children and adolescents with the diagnosis, there is a significantly greater number of depictions of multiple body parts, twins or other image of multiplicity (Silberg, 1998). Kellogg (1978) proposed a division of the mandala whose circular shape serves as a container for the fragmented aspects of the ego. Following this idea, the research conducted by Lev-Wiesel (2005) studied the drawings of 18 people with a diagnosis of dissociative personality disorder who were also victims of childhood sexual abuse within their family. All participants shared representations of multiplicity (more than one face profile, two or more human figures within a body, a figure divided into two parts, multiple genders of figures, and shadows near or behind the main figure) that varied in representation.

According to the study's results, the drawing of the human figure could, apart from its therapeutic use, also serve as

an additional assessment tool. Showing multiplicity in the client's drawing can also enable the therapist to identify and name the parts and ultimately establish greater integration between those parts, concludes Lev-Wiesel (2005).

Measuring Instruments for the Assessment of Dissociative Disorders

Assessment of dissociative disorders involves the use of various measurement instruments to aid in diagnosis and assessment. ISSTD (2011) lists some of the main measurement instruments used for dissociative disorders: *The Dissociative Disorders Interview Schedule, DDIS* (Ross, 1997; Ross et al., 1989, 1990); *Strutured Clinical Interview for DSM–IV*, (SCID-D-R; Steinberg, 1994a, 1994b, 1995); *Multidimensional Inventory of Dissociation* (MID; Dell, 2006a);

The Dissociative Experiences Scale (DES; Bernstein and Putnam, 1986); *The Dissociation Questionnaire* (DIS-Q; Vanderlinden, Van Dyck, Vandereycken, Vertommen, & Verkes, 1993).

Among those mentioned is *The Diagnostic Drawing Series* (DDS), translated as "Diagnostic Drawing Series" by Cohen, Mills, and Kijak (1994), which is one of the standardized artistic assessments that are often used in establishing a precise diagnosis of DID. According to research conducted by Mills and Cohen in 1993, the DDS assessment indicated a DID diagnosis with a high level of accuracy. It was particularly effective in differentiating individuals with DID from those with other psychiatric disorders.

In addition to the above, the assessment of dissociative disorders includes a combination of measurement instruments, clinical interviews and diagnostic tools aimed at gathering comprehensive information about the individual's symptoms, experiences and functioning (ISSTD, 2011).

Conclusion

Research has shown that dissociation can be influenced by genetic, neurobiological and environmental factors. Early trauma and emotional neglect can influence the development of neurobiological hypersensitivity to stress (Van der Kolk, 2003) and deficits in emotion regulation (Pynoos et al., 1999 according to Briere, 2006; APA, 2013), and studies have shown a strong link between the lack of regulation and dissociation (Aksen et al., 2021, Powers et al., 2015, according to Lynn et al., 2022). Other factors, such as neurobiological disorders and opiate use, are not excluded either.

Child care plays a significant role in all forms of dissociation and it is a topic for additional research beyond trauma. However, an important finding is that the

pathways leading to dissociation begin in childhood and are based on aspects of parent-child interaction. (Lyons-Ruth, 2006).

While in modern psychology and psychiatry, the term dissociation can refer to symptoms, psychological defenses (Brenner, 2009), normal and pathological changes in consciousness, including hypnosis, in most empirical and clinical studies, the term remains undefined, and questions about the nature of dissociation remain controversial (Nijenhuis and Van Der Hart, 2011). Disagreements are present in the very definition of the phenomenon, which is criticized for extensive descriptions, and lack of clarity of definition, which also applies to the etiology of dissociation.

On the other hand, overly broad descriptions of dissociation are opposed by those who argue that overly narrow conceptualizations of dissociation exclude phenomena that were originally, and for good reasons, considered dissociative (Nijenhuis and Van Der Hart, 2011).

Despite different points of view, Brenner (2009) states that the problem is not that there is too much personality or identity, but not enough of one. Dissociative phenomena are mostly understood as a failure in the healthy self development (Liotti, 2009) and as a defense mechanism against pain (Ross et al., 2008, as cited in Sagan, 2019). Numerous studies strive to provide professionals with a framework for diagnosing and treating dissociative disorders, considering a wide range of factors that can influence their development and occurrence (Gordon, 2013). Some experts emphasize the need for a clearer definition of a traumatic event and an individual's negative response to that event (Lynn et al., 2022).

Treatment for dissociation often involves a combination of medication and specialized therapy, such as trauma-focused cognitive-behavioral therapy (TF-CBT), eye movement desensitization and reprocessing (EMDR), and dialectical behavior therapy (DBT). ISSTD (2011), among other things, suggests art therapy as a recommended treatment modality for people with dissociative personality disorder. Research on the influence of art therapy on the treatment of people with personality disorders confirmed the benefits of art therapy, such as a more direct approach to emotions, active improvement of self-regulation, and especially integration on the intrapsychic level, which can also be useful for people on the dissociative spectrum (Haeyen, Van Hooren and Hutschemaekers, 2015).

Of significant importance in future art therapy research is the inclusion of brain imaging (neuroimaging, for example, fMRI), which could examine changes in brain activation patterns during and after art therapy in people with dissociative identity disorder. More precise etiological models and longitudinal research on dissociation are critical to gaining a comprehensive understanding of its long-term effects.

References

American Psychiatric Association, D. S. M. T. F., & American Psychiatric Association, D. S. (2013). *Diagnostic and Statistical Manual of Mental Disorders: DSM-5 (Vol. 5, No. 5)*. Washington, DC: American psychiatric association.

APA Dictionary of Psychology. (n.d.). Retreived August 11, 2024, from https://dictionary.apa.org/dissociative-disorders

Barach, P. M. (1991). Multiple Personality Disorder as an Attachment Disorder. *Dissociation: Progress in the Dissociative Disorders, 4*(3), 117–123.

Blizard, R. A. (2001). Masochistic and Sadistic Ego States: Dissociative Solutions to the Dilemma of Attachment to an Abusive Caretaker. *Journal of Trauma & Dissociation, 2*(4), 37-58.

Blizard, R. A. (2003). Disorganized Attachment, Development of Dissociated Self States, and a Relational Approach to Treatment. *Journal of Trauma & Dissociation, 4*(3), 27-50.

Brenner, I. (2009). A New View from the Acropolis: Dissociative Identity Disorder. *The Psychoanalytic Quarterly, 78*(1), 57-105.

Briere, J. (2006). Dissociative Symptoms and Trauma Exposure: Specificity, Affect Dysregulation, and Posttraumatic Stress. *The Journal of Nervous and Mental Disease, 194*(2), 78-82.

Coons, P. M., Bowman, E. S., & Milstein, V. (1988). Multiple Personality Disorder: A Clinical Investigation of 50 Cases. *Journal of Nervous and Mental Disease, 176*(9), 519–527.

Nijenhuis, E. R. & Van der Hart, O. (2011). Dissociation in Trauma: A New Definition and Comparison with Previous Formulations. *Journal of Trauma & Dissociation, 12*(4), 416-445.

Engle, P. (1997). Art Therapy and Dissociative Disorders. *Art Therapy, 14*(4), 246-254.

Fowler, J. P. & Ardon, A. M. (2002). Diagnostic Drawing Series and Dissociative Disorders: A Dutch Study. *The Arts in Psychotherapy, 29*(4), 221-230.

Gantt, L. & Tinnin, L. W. (2009). Support for a Neurobiological View of Trauma with Implications for Art Therapy. *The Arts in Psychotherapy, 36*(3), 148-153.

Gordon, N. (2013). The Dissociative Bond. *Journal of Trauma & Dissociation, 14*(1), 11-24.

Griffith, F. J. & Bingman, V. P. (2020). Drawing on the Brain: An ALE Meta-analysis of Functional Brain Activation During Drawing. *The Arts in Psychotherapy, 71*,101690. https://doi.org/10.1016/j.aip.2020.101690

Guez, J., Hertzanu-Lati, M., Lev-Wiesel, R., & Rabin, S. (2015). Dissociative Reality and Dissociative Being in Therapy for Post traumatic Patients. *The Israel Journal of Psychiatry and Related Sciences, 52*. 47-53.

Haeyen, S., Van Hooren, S., & Hutschemaekers, G. (2015). Perceived Effects of Art Therapy in the Treatment of Personality Disorders, Cluster B/C: A Qualitative Study. *The Arts in Psychotherapy, 45*, 1-10.

Haeyen, S. & Staal, M. (2021). Imagery Rehearsal based Art Therapy: Treatment of Post-traumatic Nightmares in Art Therapy. *Frontiers in Psychology, 11*, https://doi.org/10.3389/fpsyg.2020.628717 .

Haeyen, S. & Dimaggio, G. (2024). Arts and Psychomotor Therapies in Personality Disorder Treatment: An Appropriate Therapeutic Entrance to Personal Development: A Commentary. *Journal of Clinical Psychology, 80*(11), 2303-2314. https://doi.org/10.1002/jclp.23730

Hebert, M., Langevin, R., & Charest, F. (2020). Disorganized Attachment and Emotion Dysregulation as Mediators of the Association Between Sexual Abuse and Dissociation in Preschoolers. *Journal of Affective Disorders, 267*, 220–228. Doi:10.1016/j.jad.2020.02.032

Hesse, E. & Main, M. (2006). Frightened, Threatening, and Dissociative Parental Behavior in Low-risk Samples: Description, Discussion, and Interpretations. *Development and Psychopathology, 18*(2), 309-343.

International Society for the Study of Trauma and Dissociation (2011): Guidelines for Treating Dissociative Identity Disorder in Adults, Third Revision. *Journal of Trauma & Dissociation, 12:2*, 115-187

Korol, S. (2008). Familial and Social Support as Protective Factors Against the Development of Dissociative Identity Disorder. *Journal of Trauma & Dissociation, 9*(2), 249-267.

Lanius, R. A. (2015). Trauma-related Dissociation and Altered States of Consciousness: a Call for Clinical, Treatment, and Neuroscience Research. *European Journal of Psychotraumatology, 6*(1), 27905.

Lev-Wiesel, R. (2005). Dissociative Identity Disorder as Reflected in Drawings of Sexually Abused Survivors. *The Arts in Psychotherapy, 32*(5), 372-381.

Li, D. J., Hsieh, Y. C., Chiu, C. D., Lin, C. H., & Chou, L. S. (2022). The Moderation of Maternal Parenting on the Association of Trauma, Dissociation, and Psychosis in Depressive Inpatients. *European Journal of Psychotraumatology, 13*(1), 2024974.

Liotti, G. (1992). Dissociation, Traumatic Memory, and the Self: A Cognitive-developmental Approach to the Psychopathology of Traumatic Stress. *Psychological Review, 99*(3), 455-474.

Liotti, G. (2004). Trauma, Dissociation, and Disorganized Attachment: Three Strands of a Single Braid. *Psychotherapy: Theory, Research, Practice, Training 41*(4), 472-486. https://doi.org/10.1037/0033-3204.41.4.472

Liotti, G. (2006). A model of Dissociation Based on Attachment Theory and Research. *Journal of Trauma & Dissociation, 7*(4), 55-73.

Liotti, G. (2009). Attachment and Dissociation. In P. F. Dell & J. A. O'Neil (Eds.), *Dissociation and the dissociative disorders: DSM-V and beyon*d. 53–65.

Lusebrink, V. B. (1996). Telling Without Talking: Art as a Window into the World of Multiple Personality. *Art Therapy: Journal of the American Art Therapy Association, 13:3*, 211-213.

Lynn, S. J., Polizzi, C., Merckelbach, H., Chiu, C. D., Maxwell, R., van Heugten, D., & Lilienfeld, S. O. (2022). Dissociation and Dissociative Disorders Reconsidered: Beyond Sociocognitive and Trauma Models Toward a Transtheoretical Framework. *Annual Review of Clinical Psychology, 18*, 259-289.

Lyons-Ruth, K., Dutra, L., Schuder, M. R., & Bianchi, I. (2006). From Infant Attachment Disorganization to Adult Dissociation: Relational Adaptations or Traumatic Experiences? *Psychiatric Clinics, 29*(1), 63-86.

Dutra, L., Bureau, J. F., Holmes, B., Lyubchik, A., & Lyons-Ruth, K. (2009). Quality of Early Care and Childhood Trauma: A Prospective Study of Developmental Pathways to Dissociation. *The Journal of Nervous and Mental Disease, 197*(6), 383-390.

MacCutcheon, M. (2015, December 3). *Understanding Dissociation and When It Becomes Problematic.* Retreived June 15, 2024, from https://www.goodtherapy.org/blog/understanding-dissociation-when-it-becomes-problematic-1203155

Main, M. & Solomon, J. (1990). Procedures for Identifying Infants as Disorganized/Disoriented During the Ainsworth Strange Situation. *Attachment in the Preschool Years: Theory, Research, and Intervention, 1*, 121-160.

The Manitoba Trauma Information and Education Centre (MTIEC). (2023, March 2). *Trauma Informed Care*. Retreived August 1, 2024, from https://trauma-informed.ca/recovery/continuum-of-trauma/dissociation/

Malhotra, B., Jones, L. C., Spooner, H., Levy, C., Kaimal, G., & Williamson, J. B. (2024). A Conceptual Framework for a Neurophysiological Basis of Art Therapy for PTSD. *Frontiers in Human Neuroscience, 18*. https://doi.org/10.3389/fnhum.2024.1351757

Murphy, P. S. (1994). The Contribution of Art Therapy to the Dissociative Disorders. *Art Therapy, 11*(1), 43-47.

Ozturk, E., Erdogan, B., & Derin, G. (2021). Psychotraumatology and Dissociation: a Theoretical and Clinical Approach. *Med-Sci, 10*, 246-54.

Pifalo, T. (2007). Jogging the Cogs: Trauma-focused Art Therapy and Cognitive Behavioral Therapy with Sexually Abused Children. *Art Therapy, 24*(4), 170-175.

Putnam, F. M. (1989). *Diagnosis and Treatment of Multiple Personality Disorder*. Guilford Press.

Putnam, F. W. (1996). *Dissociation in Children and Adolescents: A Developmental Perspective*. New York: Guilford Press.

Sagan, O. (2019). Art-making and its Interface with Dissociative Identity Disorder: No Words that Didn't Fit. *Journal of Creativity in Mental Health, 14*(1), 23-36.

Sagi, B. (2021). "Only When it's Written Here": personal writing as testimony in the aftermath of childhood sexual abuse. *Journal of Poetry Therapy, 34*(3), 150-163.

Schore, A. N. (2002). The Neurobiology of Attachment and Early Personality Organization. *Journal of Prenatal and Perinatal Psychology and Health, 16*, 249-264.

Schore, A. N. (2009). Attachment Trauma and the Developing Right Brain: Origins of Pathological Dissociation. In P. F. Dell & A. O'Neil (Eds.), *Dissociation and the Dissociative Disorders: DSM-V and beyond*, 107-141.

Schouten, K. A., van Hooren, S., Knipscheer, J. W., Kleber, R. J., & Hutschemaekers, G. J. (2019). Trauma-focused Art Therapy in the Treatment of Posttraumatic Stress Disorder: A pilot study. *Journal of Trauma & Dissociation, 20*(1), 114-130.

Silberg, J. L. (1998). Dissociative Symptomatology in Children and Adolescents as Displayed on Psychological Testing. *Journal of Personality Assessment, 71*(3), 421-439.

Spiegel, D., Loewenstein, R. J., Lewis-Fernández, R., Sar, V., Simeon, D., Vermetten, E., & Dell, P. F. (2011). Dissociative Disorders in DSM-5. Depression and Anxiety, 28(12), E17-E45. https://doi.org/10.1002/da.20923

Van Der Kolk, B. A. & Van Der Hart, O. (1989). Pierre Janet and the Breakdown of Adaptation in Psychological Trauma. A*merican Journal of Psychiatry, 146*(12), 1530–1540. https://doi.org/10.1176/ajp.146.12.1530

Whitmer, G. (2001). On the Nature of Dissociation. *The Psychoanalytic Quarterly, 70*(4), 807-837.