DISSOCIATIVE IDENTITY DISORDER

by

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Introduction

When you hear the word “Multiple Personality Disorder”, you automatically think about a person experiencing more than one personality. You probably think they are “crazy” and start to second guess if they are actually experiencing these other personalities. People may doubt these individuals because their experience of their own personality does not correlate with having multiple selves/personalities. The diagnosis of ‘Multiple Personality Disorder’ has been changed to ‘Dissociative Identity Disorder’ because this phenomenon is not only about a person having split, multiple personalities, but also about what they are experiencing in terms of the dissociation between their multiple identities. Dissociation is the disconnection and/or separation of one psychological process from another. The dissociation that characterizes this disorder is how the identities are entirely separate from each other, and how the person switches from one personality to another (Barlow & Durand, 2015).

Kluft (1996) explained personality as having a sense of one’s own identity and ideation, and the capacity for initiating thought processes and actions. The disorder itself is how these personalities are entirely different from each other, so different that the individual experiences distinct behaviors, traits, memories, likes and dislikes in each personality. This disorder is based on the defense mechanisms of dissociation or splitting up into various identities. Defense mechanisms are self-protective strategies that people use to regulate distressing emotion (DSM-IV-TR, 2000). In DID, the defense of dissociation is especially used when the person believes they are in danger or experiencing threat. Some of the identities serve the function of defending or protecting other, more vulnerable identities. In DID, the person has coped with horrendous, repeated trauma by literally splitting themselves up - psychologically dividing themselves - into

multiple identities to cope. These different identities are literally 'helping' the person cope with past trauma, which they created in order to escape the trauma.

In this article, I will review relevant, recent literature on DID. The purpose of this article is to enlighten readers on DID, a commonly misunderstood disorder. I will do so in three parts: phenomenology, etiology, and treatment.

PART I: PHENOMENOLOGY

DID is an extremely rare disorder, with a prevalence rate so low that is unknown. The ratio of women to men with the disorder is 9:1. The reason the gender ratio is so high is that women are more likely to experience traumas, especially sexual trauma, at an early age. According to Kluft's empirical report 'Dissociative Identity Disorder' (1996), the vast majority of the identified patients with DID are females: Bliss (1980), 100% Putnam et al. (1986), 92%; Coons et al. (1988) 92%; Schultz et al. (1989), 90%; and Ross et al. (1989b), 87.7%. According to the DSM-5 (2013), the diagnostic criteria for DID are:

A. Disruption of identity characterized by two or more distinct personality states, which may be described in some cultures as an experience of possession. The disruption in identity involves marked discontinuity in sense of self and sense of agency, accompanied by related alterations in affect, behavior, consciousness, memory, perception, cognition, and/or sensory-motor functioning. These signs and symptoms may be observed by others or reported by the individual.
B. Recurrent gaps in the recall of everyday events, important personal information, and/ or traumatic events that are inconsistent with ordinary forgetting.
C. The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

D. The disturbance is not a normal part of a broadly accepted cultural or religious practice. Note: In children, the symptoms are not better explained by imaginary playmates or other fantasy play.

E. The symptoms are not attributable to the physiological effects of a substance (e.g., blackouts or chaotic behavior during alcohol intoxication) or another medical condition (e.g., complex partial seizures).

As I will develop below, the reason I am listing the DSM-V criteria above is because research shows that these criteria fail to adequately describe the dissociative-related phenomena that show frequently in individuals with DID.

Dell (2002) examined the dissociative phenomenology of DID 34 patients with DID, 23 patients with Dissociative Disorder not otherwise specified (DDNOS), 52 patients with mixed psychiatric disorders, and 58 normal participants were presented with the Multidimensional Inventory of Dissociation (MID). The MID is a complex, clinician administered, self-report measure used for clinical research and diagnostic assessment of patients who show a combination of dissociative, post-traumatic, and borderline symptoms. The MID is used to measure 11 dimensions of dissociation: memory problems, depersonalization, derealization, flashbacks, somatoform dissociation, trance identity confusion, voices, passive influence, self-alteration, and amnesia (Dell, 2000, 2001a). Dell (2002) also had the participants complete the Dissociative Experiences Scale (DES), a 28-item self-report questionnaire that is used to quantify dissociative experiences (Bernstein and Putnam, 1986).

The results showed that patients with DID scored substantially higher than the other three groups on 27 dissociation-related variables. The DDNOS participants had substantially higher scores than normal individuals and mixed psychiatric patients on 17 and 15 dissociation-related

variables, respectively. Prominent examples of the 27 dissociation-related variables were: memory problems, depersonalization, derealization, flashbacks, somatoform, trance, identity confusion, voices, self-alteration, child voices, persecutory voices, dissociated speech, dissociative emotions, dissociative actions, dissociative knowledge, self-puzzlement, and time loss. These distinguishing symptoms represent two themes: dissociated identities, and the experience of severe childhood trauma. DID patients are different from other dissociative patients because these patients have experienced such traumatizing events during their childhood that have conditioned them to experience discrete symptoms.

The dissociation-related phenomena that show frequently in individuals with DID are absent from the DSM-V criteria of DID (Bliss, 1986; Boon and Draijer, 1991, 1993a, 1993b; Coons et al., 1988; Ellason and Ross, 1995; Kluft, 1985, 1987; Nijenhuis, 1999; Nijenhuis et al., 1996; Putnam et al., 1986; Ross et al., 1989, 1990a, 1990b, 1992; Sar et al., 1996; Schultz, Braun and Kluft, 1989; Steinberg et al., 1990). Dell (2003) reported that the empirical literature has provided evidence of at least 21 dissociation-related symptoms in DID patients, and out of these symptoms, 10 received no mention in DSM-IV-TR: depersonalization, derealization, trance, identity confusion, “made” feelings, “made” thoughts, “made” impulses, influences playing on the body, thought insertion, and thought withdrawal. In other words, the DSM-V is not an accurate measure of DID according to the latest systematic research. More than 10 dissociation-related symptoms in DID identified by Dell and other researchers are not acknowledged in the DSM-V, and this can be very misleading when diagnosing a patient. The researchers interpreted these results to mean that dissociative disorders are an independent group that have different aspects than other psychiatric disorders. The results show that DID patients are different than other people

with dissociative disorders because they exhibit symptoms related to having dissociated identities that appear to stem from severe trauma.

Dell (2006) presented three contrasting models of DID: the DSM-V, Dell's own subjective/phenomenological model, and the socio-cognitive model. The DSM-V criteria portrays a classic symptomatic description of DID which consists of multiple personalities, switching from alter to alter, and dissociative amnesia of alters. The subjective/phenomenological model of DID provides a general criterion of dissociative symptoms, evidence of partially dissociated intrusions of another self-state and evidence of fully dissociated intrusions of another self-state. Dissociative intrusions are symptoms that occur outside of one's control or choice. "Dissociative intrusions can affect one's conscious awareness and one's experience of one's body, world, self, mind, agency, intentionality, thinking, believing, knowing, recognizing, remembering, feeling, wanting, speaking, acting, seeing, hearing, smelling, tasting, and touching" (p. 8). The subjective/phenomenological model of DID specifically describes the various dissociative symptoms of DID, unlike the DSM-V and the socio-cognitive model of DID. This model of DID delves into the core of dissociative symptomatic experiences, which is what distinguishes the DID model. The socio-cognitive model of DID argues that DID is not a real identity disorder. Rather, it is caused by a combination of social and cultural forces that make the person believe they have multiple personalities, so they start acting like they do. These social influences include media influences such as movies and television shows about DID and from a therapist suggestively questioning possible alters that the patient has.

Dell (2006) presented data from 220 participants who were diagnosed with DID and compared that existing data to the three different models of DID. The Multidimensional Inventory of Dissociation was used to measure a wide range of dissociative symptoms in participants. The Structured Clinical Interview for DSM-IV Dissociative Disorders-Revised (SCID-D-R) was performed on 41 participants. This is a 277-item interview that measures five clusters of dissociative symptoms, which are amnesia, depersonalization, derealization, identity confusion, and identity alteration. The SCID-D-R identifies the five, DSM-IV dissociative disorders which include dissociative amnesia, dissociative fugue, dissociative identity disorder, depersonalization disorder, and dissociative disorder not otherwise specified.

The results of this study are related to the subjective/phenomenological model of DID. The 23 dissociative symptoms in the subjective/phenomenological model of DID that were measured by the MID had an average rate of 90% in the 220 patients with DID. Patients were found to have experienced dissociative intrusions. These dissociated intrusions are thoroughly explained in the empirical literature but are nowhere stated in the DSM-IV criteria of DID. Since the 23 subjective/phenomenological symptoms are repeatedly occurring in DID patients, this proves that the DSM-IV must inaccurately define the disorder because it portrays DID solely consisting of alters. The socio-cognitive model did not account for 15 of the 23 subjective dissociative symptoms. In the subjective/phenomenological model of DID, criteria A includes memory problems, depersonalization, post-traumatic flashbacks, somatoform symptoms, and trance. Trance was the only symptom the socio-cognitive model had discovered. Criteria B includes child voices, internal struggle, conversation or argument, persecutory voices that comment harshly, make threats, or command self-destructive acts, speech insertion, thought insertion or withdrawal, “made” or intrusive feelings and emotions, “made” or intrusive

impulses, “made” or intrusive actions, temporary loss of well-rehearsed knowledge or skills, disconcerting experiences of self-alteration, and self-puzzlement. Disconcerting experiences of self-alteration was the only symptom that the socio-cognitive model had identified. All of the other symptoms in criteria A and B are not clearly visible, and thus unknown to the public, unknown to the media, and unknown to the mental health field (Dell, 2006). These findings suggest that the Subjective/Phenomenological Model of Dissociative Identity Disorder is a much more accurate model of DID that should be a used for the diagnosis of this disorder. This specific model should be the go-to for mental health institutions to demonstrate DID in a patient.

Challenges to Research on DID

Dorahy, Brand, Dar, and Krüger, et al. (2014) provided an empirical overview on DID and described the contextual challenges to its research investigation. When the authors examined DID research studies for their research, one or more of these conditions were met: a sample of subjects with DID were methodically inspected; psychometrically sound measures were used to identify the participants; comparisons were made with other diagnostic samples; DID was viewed as distinctive from other disorders, including other dissociative disorders; irrelevant variables were controlled for; and the DID diagnosis was authenticated by psychiatric observation. The contextual challenges to research that the authors described were diagnostic concerns, cultural issues, post-traumatic avoidance, cost-benefit issues, and conceptual challenges. The diagnostic concerns were that DID is weakly represented in the 10th edition of the International Classification of Diseases (ICD-10), and as noted above the DSM-V is not sufficient. The ICD-10 is a globally used diagnostic for epidemiology, health management and clinical purposes. It is used to provide a view of diagnostic criteria for classifying diseases.

Because of the weakly represented diagnostic criteria of DID and having a lack of other dissociative disorders, DID is repeatedly under-researched (Dorahy, et al., 2014).

The cultural issues surrounding DID are that it "lacks uniformity between international diagnostic classifications (ICD and DSM), and the difficulty of assessing for (culturally) diverse modes of dissociative self-representation." In other words, the ICD and DSM is not an accurate diagnostic system for researchers to use (p.403); and it is challenging to assess the various ways the dissociative symptoms are expressed cross-culturally (p.403). Another contextual challenge to DID research is "the varying nature of identity across cultures, that 'identity' *per se* may not be unified, and that 'self' is constructed as more relational in some contexts and cultures than in others (Castillo, 1997). Whereas the 'Western' conception of self emphasizes autonomy, DID challenges the notion of identity as fixed, unitary, and autonomous." (p.403). In other words, DID is a disorder of identity, and identity varies a great deal across cultures – the self is constructed quite differently across cultures. In Western cultures, the self is viewed as autonomous, independent of others, and one relatively stable person/identity, whereas in other cultures, especially collectivistic cultures the self is viewed as multiple selves – the opposite of independence.

Post-traumatic avoidance is another contextual challenge to DID research because DID patients also typically experience PTSD, and part of PTSD is consistently avoiding any reminders of traumas. Avoiding traumatic memories can lead to denial and shame that can tend to the patient in an interpersonal situation of being disbelieved by another person. Post-traumatic avoidance in DID is when the victim of horrendous and unspeakable traumatic events is confronted by their therapist, and they tend get into a mindset of defensive denial regarding that

specific event that occurred. Such actions can hinder the understanding and effective treatment that pertains to the traumatic experience they have had. Cost-benefit issues in research on DID are the high-priced treatments for such patients, the insufficiency of contribution for long-term treatment and the long-term research that is needed to study and examine treatment outcome. Because DID is not a research priority in national mental health, there is not much money funded to study the disorder. Conceptual challenges in research on DID include the risk of ideas of symptomatology and the disregarded lived experiences that patients actually experience as a form of evidence.

After exploring the challenges to DID research, Dorahy, et al. (2014) reported data about the accuracy and phenomenology of DID, its etiology and epidemiology, the neurobiological and cognitive similarities of the disorder, and its treatment. The researchers reported that DID is distinctive from other disorders. This disorder is caused by complicated developmental factors, which includes cruel childhood trauma. The prevalence rate of DID is much higher in psychiatric hospitals than in non-clinical populations, with 1% of the psychiatric population being diagnosed with DID. Psychobiological studies of the brain in humans are beginning to report data on DID that can be connected to different brain areas and cognitive functions. For example, researchers have reported that DID patients have smaller hippocampi and amygdala than normal controls (Vermetten et al., 2006). Phase-oriented treatments are coming together for DID, which helps patients develop adaptive mental and behavioral actions that can overcome their structural dissociation. The phase-oriented treatments are structured by three phases: "(1) establishing safety, stabilization, control of symptoms, and overall improvement in ego functioning; (2) confronting, working through, and integrating traumatic memories, and (3) continued integration, rehabilitation, and personal growth" (Chu, 2011). I will describe a phase-oriented treatment in

detail later in this paper. Overall, the data shows that DID is a complex, valid, and more common disorder than researchers used to believe, and related to developmental trauma, which will be developed below.

Interaction Between Different Alters

Patients with DID can manifest multiple of distinct identities and psychological realities. A "multiple reality disorder" (Kluft, 1991a,b, 1993) is developed to help people cope with the unbearable – horrifying experiences of extremely overwhelming trauma, and it is manifested within the alters to allow for the enactment of alternate approaches to difficult circumstances (Kluft, 1996, p. 344). Personality types can range from “childlike personalities (fearful and love-seeking), protectors, helpers-advisors, inner self-helpers, guardians of memories and secrets, inner prosecutors, anesthetic personalities (created to block out pain), expressers of forbidden impulses (pleasurable and otherwise, such as defiant, aggressive, or antisocial), avengers (which express anger over abuses endured and may wish to redress their grievances), defenders or apologists for the abusers…” (Kluft, 1996, p. 345). Child personas are the most common form of personality to develop because this is the alter who has witnessed and endured all of the traumatic experiences.

When a patient with DID has a distinct number of alters, there is no type of uniform sequence between their behaviors, nor their thought processes. The inner world of the personalities is much more complex and dangerous than people think. The alter that is in control, which is considered the host, is the personality who is usually present at treatment sessions and can tend to experience the thoughts/feelings of other alters. The alter who is in control may feel the impact of the others alters and can be influenced by their requests. The inner stimuli of alters can be so influential that the alter who is in control can be subjected to insults and threats, as well

as command hallucinations pushing self-harm or suicide (Kluft, 1996). The inner world of personalities shows how the alters can interact with each other while not being psychologically present in the moment.

PART II: ETIOLOGY

Developmental "Complex Trauma" In DID

In DID, patients have experienced repeated chronic trauma in the earliest relationships of their life in which a person is physically, and/or sexually abused by an adult in a position of power. The types of complex trauma a patient may go through may be a combination of repeated physical and sexual trauma, or they can experience one or the other. The difference between PTSD and complex trauma is that PTSD is caused by a specific traumatic event. Complex trauma is much more complicated and thus less understood – it involves the experience of repeated abuse, at the hands of an all-powerful other, so that trauma is actually the child's ongoing experience. Most of the intolerable traumatic experiences in DID cases occur in childhood, and this can be the lead way to developing dissociative defenses, resulting in multiple distinct personalities that can eventually affect memory (Kluft, 1996).

Scroppo, Drob, Eagle, and Weinberger (1998) conducted a study to determine whether DID patients have a specific set of clinical features, and perceptual, attentional, and cognitive processes. There were 21 female psychiatric patients diagnosed with DID and 21 female non-dissociative psychiatric patients in this study. All participants were given a battery of clinical assessments, including the Dissociative Disorders Interview Schedule (given by a clinician); the Dissociative Experience Scale, a questionnaire that measures a person's tendency to enter a variety of dissociative states; the Tellegen Absorption Scale, which assesses a person's tendency to become absorbed or "lose oneself" in sensory and perceptual experiences; the Childhood

Trauma Questionnaire, the Brief Symptom Inventory, and the Rorschach test, which assesses a person's ability to perceive reality accurately, and their tendency to lose their grip on reality. All these scales, interviews, questionnaires, and clinical assessments were given to the patients to identify a set of clinical characteristics that DID patients may share.

Scroppo et al (1998) found that DID patients reported and manifested several behaviors and symptoms significantly more than non-dissociative patients. DID patients reported earlier and more severe childhood sexual abuse, but not physical abuse. DID patients also reported more dissociative symptoms than the non-dissociative patients, including a history of trance states, which is a state of semi-consciousness in which a person is not self-aware. They also reported a greater inclination for altered states of consciousness, such as the various alters of DID. DID patients also exhibited increased projective and imaginative activity to a degree of internal absorption that perceptions of inkblot stimuli were not reality-based; they showed a tendency to depart from reality – perceptions of the stimuli marked by their own inner fantasy life. Finally, the DID patients showed a lessened capacity to coordinate or organize "mental contents" (i.e., different thoughts), a complex and driven cognitive style, and a highly idiosyncratic unconventional view of reality. This last finding shows a degree of driven, internal preoccupation indicative of dissociated states – of becoming internally absorbed by their own fantasy life – presumably the inner life of their alternative identities. These reported and assessed results show that DID patients have a large, distinctive set of specific clinical features suggesting that the mental processes and behaviors of DID patients are discrete, significant, and much more complicated than those who are not experiencing traumatized dissociation.

Lewis, Yeager, Swica, Pincus, et al (1997) conducted a study to show that there is a clear connection between dissociative symptoms and severe abuse in childhood in dissociative identity disorder. In this study, researchers identified 11 men and one woman who were diagnosed with dissociative identity disorder and had committed murder. The researchers reviewed data collected from clinical records from medical, psychiatric, social service, school, military, and prison records, and interviews with subjects' family members. Handwriting samples and signatures were also evaluated. Examples of the severe childhood trauma reported by these individuals are breathtaking. They included: severe beatings by mother and father; thrown into walls by father at the age of 14 months and 3 years old; set afire by parents; burned by grandparents; thumbs pulled out of sockets by stepmother; beaten while naked with belt, switches, and whips until bleeding.

Thus, evidence of severe abuse was obtained in 11 cases. In addition, the abused participants had amnesia (a lack of clear memory) for most of the abuse. In 10 cases, researchers found evidence of changes in writing and signatures in participants diaries and letters. This finding means that the different identities participants had manifested, had different signatures and handwritings. Finally, signs and symptoms of DID in childhood and adulthood were found in all 12 cases. It was also shown that subjects were not malingering being that these individuals did not know they were clinically diagnosed with DID. This study gives clear documentation that severe physical abuse is correlated with the development of dissociative identity disorder. It cannot be concluded, however, that severe abuse causes DID – only that severe childhood abuse is highly correlated with it. In order to show that severe abuse actually causes DID, children who are severely abused need to be identified and followed over time – into adulthood, in order to see if they develop DID, compared to kids' who did not suffer the same abuse.

The Neuropathophysiology of DID

There are many psychobiological differences in the brains of a people with DID compared to neurotypical, healthy people. People with DID have a different brain structure, and therefore their brains are visually distinctively rare. Sar, Unal, Kiziltan, and Kundakci, et al (2001) conducted a study to examine if there were characteristics patterns of regional cerebral blood flow, an indicator of brain processing, in DID. Researchers gathered 15 patients who were clinically diagnosed with DID and eight healthy non-traumatized volunteers to conduct the present study. There was a subgroup of dissociative patients, who had their rCBF examined in host and alter personality states. The regional cerebral blood flood was examined with a SPECT system with HMPAO as a tracer. HMPAO is a tracer chemical that enters one's blood flow to make images of the brain very clear. Researchers then compared brain SPECT images of dissociative identity disorders patients to the non-traumatized healthy volunteers.

Researchers found hypoperfusions areas in orbitofrontal brain regions bilaterally. Hypoperfusion is when blood flow has decreased within a structure. This was also found in the six DID patients who had their rCBF examined while in the alter personality states. The orbitofrontal region area of the brain evaluates visually important stimuli in the environment. These findings may show that DID patients are more likely to be internally involved inside their own minds, and thus are less attentive to the real world. Researchers also found increased perfusions or blood flow in the left lateral temporal regions in DID patients. The left lateral temporal regions of the brain are involved in language processing. Thus, increased blood flow to these regions mean that there is a lot of inner speech/interaction going on between the different alters. In this study, the diagnosis of other disorders in the participants were not related to the

observed changes in blood flow. Critically, these blood flow changes were specifically related to the diagnosis of DID. These results show that DID patients may be more preoccupied internally than externally, and that there is a clear correlational relationship between DID and blood flow abnormalities to orbitofrontal and left temporal brain regions.

Sar, Unal, and Ozturk (2007) also conducted a study to identify characteristics of regional cerebral blood flow, in DID. Researchers tested 21 drug-free patients with DID and nine healthy volunteers. Regional cerebral blood flow was tested with single photon emission computed tomography (SPECT). A SPECT scan is a type of medical imaging that uses radioactively tagged glucose to measure where the glucose is oxidized the most in the brain, and thus where blood is flowing the most. Like Sar et al (2001), these researchers found that the rCBF ratio was decreased among patients with DID in the orbitofrontal region, bilaterally. As noted above, the replicated finding of decreased blood flow to this region is important because it suggests that DID patients may be internally preoccupied in various identity states, and less focused externally on real life. Researchers also found an increase in rCBF to medial and superior frontal regions and occipital regions, bilaterally. The medial prefrontal and superior frontal cortex are brain areas that regulates self-consciousness. These results suggests that there may indeed be more self-regulation of consciousness in the DID patient's mind, which may be due to the multiple states of consciousness - more selves, or conscious identities, to regulate. The occipital cortex supports vision – both seeing the outside world and viewing mental images. There may be increased rCBF to the occipital cortex because of increased internal preoccupation – DID patients may be "seeing" and experiencing a lot in their minds. However, the reason for increased blood flow to the occipital cortex is not clear and awaits further research.

Vermetten, Schmahl, Linder, and Loewenstein, et al (2006) conducted a study to compare hippocampal and amygdala volumes in patients with DID versus healthy controls. In the brain, the hippocampus is vital for the encoding of memories of new experiences. The amygdala controls immediate emotional responses, influences moods, and its excessive activation is related to depression and anxiety. The amygdala and hippocampus are directly adjacent and form a larger structure – the amygdaloid-hippocampal complex. This structure enables the brain to encode emotional life events, like traumatic ones. Smaller hippocampal volume has been reported in several stress related disorders, which led the authors to conduct the present study. Researchers hypothesized that smaller hippocampal and amygdala volumes would be found in DID patients. The researchers used a magnetic resonance imaging (MRI) scan to measure the volumes of the hippocampus and amygdala. An MRI scan is a medical imaging scan that captures detailed images of the organs and tissues in the body based on their responses to electromagnetic waves. An MRI scan was used on 15 female patients with dissociative identity disorder and 23 female subjects without dissociative identity disorder.

The researchers found that the hippocampal volume was 19.2% smaller in DID patients than in regular subjects and the amygdala volume was 31.6% smaller in DID patients than in regular subjects as well. These results suggest that patients with DID are likely to have these brain abnormalities because relevant brain structures are being affected. As a result, they may have trouble forming new memories and have trouble processing certain emotion expressions. Because this is a correlational study, however, it cannot be definitively concluded that DID is causing these much smaller structural volumes. However, that is very likely to be the case because we know that DID is caused by repeated, severe trauma, and that repeated, severe trauma affects the size of the hippocampus and the amygdala.

Reinders, Nijenhuis, Quack, and Korf, et al (2006), also conducted a study on the psychobiological characteristics of DID using a symptom provocation paradigm. Patients who were diagnosed with DID experienced two or more identities or dissociative identity states (DIS), which the researchers called neutral identity states (NIS) and traumatic identity states (TIS). NIS refrain access to traumatic memories so they can live their daily lives. TIS has access and reactions to these types of memories. A symptom provocation paradigm is designed to intentionally provoke a patient's symptoms in order to correlate the symptoms with patterns of brain activity. The symptom provocation paradigm used in the present study had neutral personal memories that both DIS experience, and personal memories of traumatizing events that TIS experienced. The purpose of this study was to test whether neutral identity states (NIS) and traumatic identity states (TIS) have different emotional reactions to trauma-related memory, including neurobiological, subjective and autonomic reactions. The researchers measured patterns of neural activity using a positron emission tomography (PET) scan.

Researchers tested 11 DID patients using a symptom provocation paradigm structured in a two-by-two factorial design. NIS and TIS were exposed to a neutral and a trauma-related memory script based on their personal memories. The three psychobiological measures that were tested were rated emotion (subjective arousal), heart flow/heart rate (autonomic arousal), and brain activity. Reinders et al hypothesized that while DID patients are listening to the trauma-related memory script, unlike the NIS, TIS will: (1) show regional cerebral blood flow patterns that patients with PTSD show while processing emotional/traumatic experiences; (2) show more emotional and sensory reactions, and (3) have higher heart rates and blood pressure and less heart rate variability. While listening to the trauma-related memory script, it was hypothesized that unlike the TIS, NIS will show different regional blood flows in brain areas that are related

with the hindrance of emotional responses to trauma-related information and with depersonalization. Lastly, it was hypothesized that NIS and TIS would have related psychobiological reactions to neutral personal memory scripts. The trauma-related script induced more arousal – subjectively and increased heart rate/blood pressure – no matter what state the patient was in, host or TIS. The TIS also showed more arousal, as assessed by both through self-report (subjectively) and physiologically (cardiovascular), than the NIS (host) during the trauma-related script. The PET data showed when in NIS and in TIS, different neural networks were induced by the trauma-related script and the neutral script, the same networks that were stated in the hypothesis above. These findings are important because it shows that the brain and the body respond differently when in alternate DID states, which shows that there is a neurobiological and physiological basis to DID.

Overall, these structural and functional brain imaging examinations indicate that DID is related to orbitofrontal and left temporal brain regions abnormalities, and hippocampal and amygdala abnormalities, which may be associated with internal preoccupation and internal, self-regulation of consciousness. Reduced blood flow in the orbitofrontal region of the brain is the result of indicative internal preoccupation. Indicative internal self-regulation is associated with the result of a bilateral increase in rCBF to the medial and superior frontal regions, as well as the occipital regions. Although an individual with DID may have many distinguishing traits, the consistency of these structural and functional brain imaging results suggest they are indicative of DID.

PART III: TREATMENT

DID is typically treated by either CBT or psychodynamic psychotherapy. These two forms of psychotherapy are different, in that CBT focuses on helping people with DID develop coping skills, whereas the goal of psychodynamic psychotherapy is to facilitate integration of the person's various alters. DID is not treated by psychoactive drugs nor medications.

Cognitive Behavioral Therapy

Cognitive behavioral therapy is a popular type of therapy that has been used by a wide range of therapists for various disorders. CBT is a goal-oriented treatment that has two goals: changing irrational thinking and changing maladaptive behavior, specifically to replace maladaptive coping behaviors with adaptive ones. The therapist is like a coach who teaches the patient specific cognitive and behavioral skills to cope with their disorder. CBT assists the patient in becoming aware of faulty and/or negative thinking so that they can better understand and respond to challenging situations (van Minnen & Tibben, 2021). CBT can be helpful in treating a variety of mental health disorders such as post-traumatic stress disorder (PTSD), depression, anxiety, addiction, and even physical health problems (Arnberg, A., & Öst, L. G. (2014); van der Gaag, M. (2014); Anuradha, M., & Singh, P. (2018); DiMauro, J., Domingues, J., Fernandez, G., & Tolin, D. F. (2013)). Patients who engage in CBT receive assistance in reducing stress, coping with difficult relationships, dealing with sorrow, and a variety of other adjustment issues.

Patients with complex or severe PTSD and/or DID who seek CBT may go through trauma-focused treatments, and possibly a session for saying farewell to certain identities. The intensive trauma-focused treatments are aiming to counter avoidance behavior and challenge maladaptive beliefs about dissociation. Avoidance behaviors are referred to as symptoms of dissociation, such as depersonalization, somatoform, amnestic, and identity fragmentation. These

behaviors occur when the patient starts to dissociate or avoid painful traumatic memories by blocking out traumatic memories by assuming an alternative state of consciousness, like switching to an alter in DID. Patients experience maladaptive beliefs when one starts to believe that they cannot remember specific traumatic memories, or when they believe their memories will be too overwhelming for them to remember and will make them go crazy (van Minnen & Tibben, 2021).

Case Study of Cognitive Behavioral Therapy

van Minnen and Tibben (2021) reported a CBT case study of Mary, a 36-year-old married mother of three children. She used to be a teacher, but she is unable to work owing to her PTSD symptoms. Mary was referred to treatment because she was suffering from severe PTSD symptoms, including intrusive recollections of her father's sexual abuse. She was not referred to the current therapy specifically for DID. That was a prior diagnosis, which the current CBT therapist thought needed to be a focus of treatment. Mary suffered nightmares every night and flashbacks when she was exposed to trauma-related stimuli, such as the scent of her father's aftershave and scotch. She avoided men, public settings, television shows, and newspaper articles concerning sexual abuse, and she avoided thinking about or talking about horrific situations. Mary was also hypervigilant, had trouble concentrating, and had trouble sleeping. She was diagnosed with PTSD, DID, remission from Alcohol Abuse Disorder, remission from Anorexia Nervosa, and remission from Depression. Her previous therapist diagnosed her with DID, which was validated using the Dissociative Disorders Interview Schedule.

Mary’s PTSD had developed after experiencing sexual abuse by her father and uncle during childhood (age 4-11). During the sexual abuse, she dissociated and experienced

depersonalization and derealization, such as out-of-body experiences, feelings of being in a fog, and felt paralyzed. To gain control in adolescence, she stopped eating and developed Anorexia Nervosa. Mary reports that she never felt alone since childhood, and always felt the presence of others inside of her. She reports having four alters: two young girls, one boy and one adolescent. After her first sexual abuse experience at the age of four, Mary's first alter developed: Meg. Meg was a nice little girl who was four years old, happy, and loved Hello Kitty. At the age of six, Sophie was developed. Sophie was playful and loved french fries. Both alters functions were to feel light-hearted and joyful, and to be able to feel like a child again and forget the traumas. However, when both alters took control of Mary's life, Mary had no control over her own life and started to live as these two young alters. At the age of 10, Jim developed. Jim was a boy, who loved tractors and found Meg and Sophie annoying. His function was to be cool, to protect Mary, but he also criticized Mary and was always upset at her. Juliette, who was the fourth alter was a 15-year-old girl, who was depressed, very angry and eccentric. Juliette compelled Mary to engage in self injury and suicidal behavior to escape from emotional pain. Mary had reported times in her daily life experiencing amnesia and hearing voices. Due to the four identities and voices in her head, she described that life inside her head was always chaotic, and that she was constantly busy negotiating with all the identities.

Mary had received EMDR-treatment for her PTSD, but there was no effect possibly due to her dissociative and addictive behavior. She also received treatment for dissociative symptoms, which did not help. When Mary was in treatment at an addiction clinic, they referred her for trauma-focused treatment. This trauma-focused treatment was designed to help her process all her traumatic experiences through repeated but gradual exposures – so that she is exposed to her traumatic memories in tolerable doses, with the instances that caused the most

distress being addressed first. Because she was afraid of expressing her trauma-related feelings, Mary shut down during her first exposure session, which is when she addresses her traumatic memories. Mary believed it would be better to not remember everything that she had experienced. The therapist had a technique, which was to explain the dissociative symptoms as avoidance and treat the maladaptive beliefs that accompanied them. The therapist would then inform Mary that she is dissociating because she is experiencing fear when discussing her traumas, and this is what happens as an avoidant reaction. The therapist insists Mary to disregard avoiding and be open to her traumatic memories to be free of being in fear while doing so. She lets her know that the avoidant reactions were helpful at the time of her traumas, but it is no longer helpful. The therapist then gives her time to recuperate and tells Mary to let her know when she is ready. The therapist emphasizes that Mary has control over her dissociative symptoms rather than them being an automatic reaction, and that she actively uses dissociation as an avoidant coping strategy to keep herself from becoming overwhelmed by strong emotions.

Mary wore four bracelets to represent each alter, and her therapist advised her to remove the bracelets on the second day of exposure to her traumatic memories. The therapist advised Mary to take off the bracelets because it interferes with the goal of exposure, which is to face the feared stimuli without avoidance of safety behavior, so Mary can learn that her dysfunctional beliefs (ex. ‘when I remember the details of my trauma, I will lose control’) are not correct (van Minnen & Tibben, 2021, p.3). She immediately felt relieved and at ease. Her therapist informed her that the bracelets were most likely a safety measure to make her feel in control, and that they were no longer required. The therapist informs Mary once more that dissociation is an avoidant behavior that can interfere with therapy. After the therapist reminded Mary, she confessed to holding onto two stuffed animals, and that she and the young alters would play with the stuffed

animals in between therapy sessions. Her therapist then advised her to give her the stuffed animals until she goes home, so Mary did. After that, Mary began to feel some emotions throughout the exposure, but only for a short time before dissociating again. After the third day of exposure to her traumatic memories, Mary was able to function normally for about 10 minutes without dissociating, and on the fourth day, she was no longer dissociating during sessions, but she was still dissociating between them. Mary discovered that engaging in physical activity helped her overcome her dissociation even more, and therefore she started doing so. On the sixth day of treatment, Mary had a session to say farewell to her identities. During this specific session, Mary acknowledged each identity in the order they had developed. She thanked each alter for the function they served during her traumas.

At the start of her treatment, Mary was diagnosed with PTSD with a dissociative subtype. She no longer met the diagnostic criteria for PTSD after repeated exposures to her traumatic experiences and at the three and six-month follow-ups. Mary also no longer met the diagnostic criteria for DID based on the DSM-5 criteria. In this treatment, dissociative symptoms were seen as a maladaptive avoidant coping technique to deal with feelings and distress elicited by trauma-related stimuli and patients had dysfunctional beliefs regarding trauma and dissociation. This psychotherapy case study showed that short CBT treatments was beneficial for Mary, who had complicated dissociative and trauma-related disorders. However, the significant limitation of Mary's case study is that the author does not go into detail on what actually occurred in the therapy sessions. This is not uncommon in CBT case studies because CBT is a highly structured and even standardized treatment. Nonetheless, the researcher should have described what happened during the sessions in detail. Otherwise, it is impossible to say what was therapeutic – what enabled Mary to make such tremendous improvements. The second obvious limitation to

this study was that only one patient was treated. Thus, this treatment may not be effective for people with PTSD and DID generally. The only way to find out is by conducting a randomized controlled trial (RCT). That, although will be extremely difficult to do for a disorder like DID because the patients are very hard to find, and then clinical researchers have to convince them to go into treatment. Most of them do not want to because they would rather avoid than confront their traumatic memories.

Psychodynamic Psychotherapy

Psychodynamic psychotherapy is a much more complex and "in depth" therapy than CBT. The goal of psychodynamic psychotherapy is to facilitate integration of the person's various alters. It is the therapist's duty to create a setting of safety to make the patient feel comfortable to identify, recognize, and connect all their alters as one whole, to touch on unspoken traumatic feelings, thoughts, and past experiences. The job is to make the patient feel as if they have the power to be effective in the face of DID – to overcome the dissociation they experience.

According to Kluft (1999), there are nine stages in psychodynamic psychotherapy: (1) establishing the psychotherapy relationship; (2) preliminary interventions; (3) history gathering and mapping; (4) metabolism of the trauma; (5) moving toward integration/resolution; (6) integration/resolution; (7) learning new coping skills; (8) solidification of gains and working through, and (9) follow-up. Each of these stages is described in turn.

Establishing the psychotherapy is where the therapist creates a safe, empathic setting for the patient and discusses the purpose of treatment, the benefits and risks, an indication of alternative options and their likely outcomes, a review of techniques likely to be used, including

proposed benefits and drawbacks, and provides the patient with appropriate cautions. The process of informed consent begins. Attempts are made to alleviate the patient's depression and instill hope (Kluft, 1999). As an example, Kluft (1993) explains from a case study example in one of his books. A DID patient had been so decompensated, that she had to be hospitalized. Kluft's evaluation revealed that the patient had developed an affectionate bond to her therapist and had prepared a powerful regressive transference phenomenon, but she was completely unaware of the therapeutic procedure in which she was participating. Her education on how to be in therapy was the emphasis of her hospital-based treatment. Kluft would focus on the therapeutic partnership for months before moving on to the treatment material. He feels that a psychotherapy venture needs a comparable level of readiness and desire to cooperate toward a desirable objective (Kluft, 1993).

Preliminary interventions are made to strengthen the patient and their alters in order to preserve and enhance the patients functioning and to demonstrate the coping skills that will be needed to begin the complex therapy. In this stage access to the easily reached alters is gained, agreements are settled across as many alters as possible against interrupting the therapy sessions, and against suicide and self-harm. Any symptomatic relief that is possible are provided, and techniques for dealing with some of DID's disruptive symptoms are instructed. As the DID patient gains the ability to process and apply these techniques between sessions, they will feel more empowered and in control of the DID they are dealing with (Kluft, 1999). Kluft's (1993) described an example of how this failed to occur. Several personalities persuaded a therapist during a therapy session that they should have nothing to do with particular other alters since they were "so different." The therapist concurred, establishing the inner myth of the alters as a tangible reality and hindering progress in treatment.

History gathering and mapping allows the therapist to investigate the alters on a deeper level. The therapist learns more about the personalities, where they came from, their concerns, and their relationship with one another during this stage. This allows the therapist to understand and respect the personalities' points of view, as well as how each alter responds to specific issues (Kluft, 1999).

Metabolism of the trauma is about reaching and processing the overwhelming situations associated with the emergence and maintenance of the DID patients psychopathology (Kluft, 1999). This stage is useful in moving toward integration because any past situations that were considered traumatic, must be addressed.

Moving toward integration/resolution is the stage where attempts are made to successfully reach working through the traumatic experiences between all alters, and to motivate more cooperation, communication, empathy, and identification across the alters. With the effort of working to the goal of integration, the alters begin to slightly lose character and some face identity confusion (Kluft, 1999). Kluft's previous work (1993) described an example of a failure to do so. A therapist spent a lot of time with alters who were believed to be cooperative, and he paid little attention to those that caused him trouble. Eventually, the neglected alters took control and abandoned treatment.

Integration/resolution is when the patient achieves a workable mentality, either as a single personality or as a stable collaboration of alters. This stage is achieved by allowing the alters to engage with one another over a period of time, usually at least a year. If the alters are to be integrated, they must communicate with one other and break down the dissociation barriers

that separate them. According to Kluft, a smooth collaboration is a resolution; the alters' blending into a unity is an integration.

Learning new coping skills has occurred throughout the treatment but is particularly critical in this stage of therapy because the patient requires assistance in dealing with events that were previously addressed in a dissociative manner, in a more constructive manner (Kluft, 1999). Examples of coping skills a patient may learn in therapy are meditation, processing or releasing their difficult emotions, practicing self-monitoring (awareness of a problem), cognitive restructuring (changing the way you think about a problem), and rewarding yourself after a task completion/goal achievement.

Solidification of gains and working through may be a long stage and this is when the patient needs to learn how to live through struggles without dissociative coping. It is the continuing process of integrating the alters – of facilitating communication between them – so that eventually they do not exist as separate selves. Follow-up is the stage where the patient is assessed on his/or her stability. This is an important stage, especially for patients who chose resolution rather than integration (Kluft, 1999).

CONCLUSION

Dissociative Identity Disorder is a based on the defense mechanisms of dissociation or splitting up into various identities. This mental condition is distinguished by the persistence of at least two different and reasonably persistent personality states. To deal with horrific, repetitive trauma, people with DID actually divide themselves up - psychologically separate themselves - into several identities. These several identities 'assist' the individual in coping with prior trauma, which they created in order to avoid this pain.

DID is a one-of-a-kind psychological disorder. In no other mental illness does a person have several, fragmented identities, or selves, each with its own psychology. Because of the etiology – DID is generally the outcome of horrific trauma that produces disintegration, a splintering of the individual into numerous selves in order to cope with the horrific traumas. DID sufferers have had recurrent chronic trauma in their earliest relationships, in which they were physically and/or sexually abused by someone they looked up to as a protector. These severe traumatic events caused these unfortunate individuals to disassociate and construct multiple identities who make them feel protected.

DID has its own specific diagnostic criterion that therapist follow to evaluate their patient. In the phenomenology section of this paper, it is reported that the DSM-V lacks an important number of dissociative-related symptoms in DID. More than 10 dissociation-related symptoms in DID identified by Dell (2002) and other researchers are not acknowledged in the DSM-V, and this can be very misleading when diagnosing a patient. Dell (2006) suggested that the Subjective/Phenomenological Model of Dissociative Identity Disorder is a much more accurate model of DID that should be a used for the diagnosis of this disorder.

DID is associated with internal preoccupation, internal self-regulation of consciousness, orbitofrontal and left temporal brain region abnormalities, and hippocampus and amygdala abnormalities, according to structural and functional brain imaging studies. Internal preoccupation causes decreased blood flow in the orbitofrontal area of the brain. A bilateral increase in rCBF to the medial and superior frontal regions, as well as the occipital regions, is likely indicative of internal preoccupation with self-regulation. Although a person with DID may have many distinguishing characteristics, the consistency of these structural and functional brain imaging results suggest they are indicative of DID.

CBT and psychodynamic psychotherapy are the two typical forms of treatment DID sufferers get. CBT and psychodynamic psychotherapy are distinct in that CBT focuses on assisting patients with DID in developing coping skills, whereas psychodynamic psychotherapy aims to enable integration of the person's numerous alters. Psychodynamic psychotherapy is more likely to be effective than other types of psychotherapy for DID because it is the only treatment that includes an explicit strategy for dealing with the person's numerous alters, with the objective of integrating them and building a more cohesive sense of self. Kluft (1999) believes a smooth collaboration is a resolution; the alters' blending into a unity is an integration.

There are many limitations of the current state of research on DID. More comprehensive scientific testing of therapies is desperately needed. There have been no randomized controlled trials (RCTs) in which patients/participants are randomly assigned to an active treatment (dramatherapy) group and a matched control treatment. An RCT is the best model of clinical research since it is the only way to determine if a certain treatment is beneficial, and if the therapy is responsible for the observed therapeutic improvements in symptoms. Research may address the significant challenges of obtaining enough DID patients for an RCT trial by gaining the attention of patients and convincing them that therapy is in their best interests – it is the only way they will get better.

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